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International committee for
documentation and conservation
of buildings, sites and neighbourhoods of the
modern movement

Restoring Le Corbusier's La Roche-Jeanneret Houses

POSTWAR
MASS HOUSING

September 2008 N°39

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Cover: Contemporary mass housing regeneration in the 'postwar spirit.' Parkrand Osdorp, Amsterdam, designed by De Nijl Architecten. Photo Jannes Linters

At a time when the American crisis of subprime loans has spread a feeling of instability to people at the global level, we—architects, town-planners, historians and the many professionals involved in the management of the housing market—have finally understood that dwellings remain the priority of our contemporary culture.

Born as the major task for architects in the heroic years of the modern movement, mass housing went through a wide range of transformations and changes in reception. "New Dwelling Equals New Architecture" became the credo for a generation of designers all over Europe and beyond. It is worth acknowledging that just a few of these interventions are regarded to be of heritage value. Surprisingly, the World Heritage Center in summer 2008 has included the Berlin Siedlung complexes in the WHL. We like to think that Docomomo has contributed to this result.

Reconstruction after WWII responded to housing large sections of the population, developing the city towards the outskirts, colonizing new territories, and moving the borders. Out of the debris the society grew with new needs and new desires. It created a delicate equilibrium, whose benefits lasted for, at most, half a century. The recent phenomena of social exclusion, discrimination, poverty and crime are largely born out of the deficiencies of the reconstruction policies.

It will be a true challenge for us all to take responsibility for answering to these inequalities though a policy of renovation of the dream of post-WWII mass housing. Miles Glendinning has agreed to look closely at this complex and problematic subject, contributing under another perspective to the theme of the 10th conference, offering a wide spectrum of intervention policies.

MARISTELLA CASCIATO, chair of Docomomo International

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Au moment où la crise américaine des subprimes a répandu un sentiment d'instabilité à une échelle globale, nous – architectes, urbanistes, historiens et professionnels impliqués dans la gestion du marché du logement – avons enfin compris que le logement est la priorité de notre culture contemporaine.

Apparu comme la tâche première des architectes pendant les années héroïques du mouvement moderne, le logement de masse a connu une série de transformations et de changements dans sa perception. « Nouveau logement égale architecture nouvelle » devint le credo d'une génération de concepteurs à travers l'Europe et au-delà. Il faut rappeler que seules quelques-unes de ces interventions sont considérées comme ayant une valeur patrimoniale. Étonnamment, le Centre du patrimoine mondial a inscrit à l'été 2008 les ensembles des Berlin Siedlung sur la liste du Patrimoine mondial. Nous nous plaisons à penser que Docomomo a contribué à ce résultat.

La Reconstruction a répondu au besoin de logements du grand nombre en étendant la ville vers ses confins, en colonisant de nouveaux territoires, en déplaçant ses limites. Sur ses décombres, la société a grandi avec de nouveaux besoins et de nouveaux désirs, en trouvant un équilibre fragile dont les bienfaits durèrent tout au plus un demi-siècle. Les phénomènes récents d'exclusion sociale, de discrimination, de pauvreté, de crime, sont pour beaucoup nés des failles des politiques de reconstruction.

Répondre à ces inégalités par une politique de rénovation de ce que fut le rêve du logement social d'après-guerre constitue pour nous un véritable défi. Miles Glendinning a accepté de regarder de près de ce sujet complexe et problématique ; il contribue ainsi, sous un autre angle, au thème de la 10ᵉ conférence, en offrant un large éventail de politiques d'intervention.

MARISTELLA CASCIATO, *présidente de Docomomo International*

MILES **GLENDINNING**

ENNOBLING THE ORDINARY
POSTWAR MASS HOUSING AND THE CHALLENGE OF CHANGE

This special issue is dedicated to postwar mass housing—a vast, dense, multi-faceted subject— whose relationship to the concerns of Docomomo, in both its history and its contemporary challenges, is about as complex and problematic as can be imagined. *Docomomo Journal* 39 is intended as a second installment in the initiative by the International Specialist Committee on Urbanism and Landscape (ISC/U+L) to open up the subject of mass housing for debate within Docomomo, following our 2007 conference, 'Trash or Treasure' (www.archi.fr/DOCOMOMO/ docomomo_electronic_newsletter7.htm).

In one sense, there can be no more appropriate theme than mass housing for a special *Journal* issue to accompany a conference dedicated to the future of the modern movement's built legacy, as postwar housing is arguably the foundation of that legacy. Yet, at the same time, as we will see in the following pages, there can hardly be a theme more controversial and difficult for us to tackle.

THE FUNDAMENTAL DIFFICULTY presented by the subject of postwar mass housing for a modernist architectural heritage group such as Docomomo is not simply that it concerns a building type afflicted by large-scale redundancy and unpopularity. In the past, after all, conventional architectural conservation societies have been able to effectively address problems of mass obsolescence in pre-twentieth century building types as diverse as farms, churches or early workers' housing, without undue soul-searching. The relationship of these types to 'heritage' is a relatively detached one: they were designed a long time ago, at a time when 'architecture' was something added to the carcass of a building, in keeping with the Vitruvian segregation of aesthetic and practical aspects. Even building types once bitterly stigmatized as oppressive and unjust, such as nineteenth century factories or workhouses, can be re-appropriated relatively easily today.

THE POSITION with postwar mass housing could not be more different, with 'design,' 'production,' and 'reception' inextricably tangled together. Unlike old-style preservation societies, Docomomo is dedicated explicitly to a relatively recent architectural movement. Modernism voraciously launched itself outwards in all possible directions, discarding the old, stolid Vitruvian framework in favor of an all-embracing utopian approach. Time after time, from the 1920s to the 1970s, we witness claims by architects, both avant-garde and everyday, that architecture was indivisible from various social, economic, technological, or psychological factors—and that, because of that indivisibility, architects had the right and the duty to pronounce on and intervene in areas (such as structural engineering) they had previously avoided or which were newly invented (such as 'user studies'). Often, they called on the powerful mid-twentieth century state to help them in these efforts.

AT THE CORE of all these endeavors, especially in Europe and the wider Socialist bloc, was the new area of mass social housing. This was a field of the most burning political concern to twentieth century regimes of all hues, and at the same time a central focus of agitation to the socially-minded intelligentsia, including architects, city planners, sociologists, and public health reformists. Within this world, modernist architects set out to establish and enlarge their position through theories of community that aggressively invaded adjoining disciplines, especially that of town planning. Yet the outcome of those efforts was sometimes very different from the grandiose aspirations. These results were owed both to architects' often weak or marginal position within the establishment—by comparison, for example, with powerful industrial contractor organizations and local politicians dedicated to maximum output—and also to their lack of interest in communicating with and influencing these groups, rather than pursuing their own elite debates.

THE PARTISAN, contentious status of architectural modernism within mass housing was only reinforced when the phase of creation shaded into that of reception. In some places, such as

Western Europe and North America, there was the further complication of a subsequent violent rejection by 'public opinion' of mass housing as a whole—a rejection that lumped together all its creators: 'sensitive' architects, mass-building contractors, engineers, and politicians. In those places, this rejection, and the consequent drastic surgical attacks by demolition or postmodern re-styling, has today left the often still substantial built legacy stranded in a fog of incomprehension, on the part both of the general public and of the new professional groups (mainly social housing managers and real estate capitalists) charged with the fate of that legacy. Yet in other places, such as the former USSR or the Asian Chinese city-states, a more consistent and all-embracing program of mass housing—often, however, involving a high degree of production—led standardization away from conventional concepts of architectural originality, and allowed a different, far less violently polarized outcome. Elsewhere again, for example in Brazil, large-scale mass building of apartment blocks was chiefly the work of the private sector, usually without the politicized fluctuations of fashion associated with some European housing programs.

THUS, it is no simple matter for an organization such as Docomomo, with its overwhelmingly strong allegiance to modernist architectural values, to embark on a 'reassessment of mass housing,' launching itself gaily into a battlefield of conflicting modes of reception within which almost any conceivable 'architectural' position is overburdened from the beginning with potential biases and limitations. Of course, it would be all too tempting for an organization of architects and architectural historians to try to shortcut this quandary by putting forward showy 'solutions' for the housing problem based on the supreme power of 'architectural quality.' The elitism of the original 1980s–1990s Docomomo love of the 'heroic interwar pioneers' (which originally denied postwar modernism was 'real MoMo' at all), could very easily be extended into the postwar period, showcasing elite housing designers who fought against supposedly prevailing mediocrity. One could then keep going into the present, picking out for praise the regeneration projects of present day 'iconic

modernist' designers. But the result of that would be a disastrous further layer of bias and confusion, not least in the way that the stylistic resemblances of 'MoMo housing past and present' obscure the disparity between today's profit-motives and the social-democratic values of yesteryear.

IN THE PRESENT SERIES of ISC/U+L initiatives, including *Docomomo Journal* 39 as well as 'Trash or Treasure?' and the Pilot U+L Inventory, our aspirations are more modest but hopefully more achievable and constructive. Taking our cue from the established Docomomo formula of documentation followed by conservation, as seen most recently in *Journal* 38 on Canada, the present issue of the *Journal* is structured under these two main headings.

THE FIRST SECTION, 'Documentation,' comprises two main groupings of papers. The first, 'International Survey,' contains a broad overview of the global diversity of the postwar mass housing legacy and its present-day problems, focusing particularly on case studies featuring forceful, large-scale building of high flats. It begins in the 'heartland' of social housing,

Western Europe, with its mosaic of individualized policies and solutions, political and socio-architectural, some of which feature dramatic clashes between intellectually high-flown initial aspirations and extreme rejection or alienation on the part of inhabitants.[1]

TO REPRESENT this approach, we take the specific case of Émile Aillaud's famous Les Courtillières development near Paris, in an article by members of the research group 'Pour une histoire du logement contemporain' (For a History of Contemporary Housing) that traces the project's vicissitudes at the hands of a plethora of municipal and other public agencies. At the opposite extreme of full-blooded standardization, Florian Urban's paper deals with the mass prefabrication programs of the post-Khrushchev era in the USSR. Here, paradoxically, although there was vast standardization and a drastic post-1991 economic polarization, especially in Moscow, the perpetuation of a wide social mix within the Soviet mass housing legacy means that it lacks the 'wholesale disrepute' of its western counterparts.

BUT BOTH 'EAST' AND 'WEST' in Europe were in agreement that housing was a matter of all-embracing community concern—a worldview not generally accepted in the Americas. There, social housing was a far less central concern of the state, and while straightforward public housing was often reserved for a residuum, the largest-scale developments were built by hybrid private-public or philanthropic agencies. Most famously is the case of New York City's gigantic middle-income 'Mitchell-Lama' and 'Title 1' housing projects of the 1950s–1970s, such as 'Co-op City,' 1965–72, with over 15,000 apartments in 35 towers of 24–33 storeys.[2] But intriguingly—as Graeme Stewart's paper shows—it was not in New York but in the planned townships of North America's 'other' metropolitan region (from 1954), Toronto, that the continent's private enterprise-dominated housing system, when coupled with a structure of strong regional planning dedicated to the fostering of high-density 'hot-spots' in the center and periphery, succeeded in generating a landscape of massed towers and slabs in open space, almost rivaling the USSR in consistency and grandeur.[3]

In South American countries such as Brazil, the private sector was yet more dominant, although, as Richard Williams describes in the case of the Brasilia superquadras, its operations could be reconciled at times with strong planning and architectural frameworks: his paper notes how Lucio Costa's renowned Pilot Plan, designated a World Heritage Site in 1987, has now taken on a somewhat 'museum-like character,' divorced from the mainstream of life and progress in the city.

BUT THE MOST EXTREME JUXTAPOSITIONS of capitalism and welfare-socialist housing occurred in those dynamic Asian city-states, Hong Kong and Singapore—the latter being the subject of Belinda Yuen's paper. From the late 1950s onwards, their free-enterprise economies were supported by colossal programs of state-planned mass housing, including both rental blocks and—more novel—publicly-built flats for home-ownership. Singapore's program, supported over half a century by a dirigiste government through a consistent range of fiscal incentives and strong regional planning, achieved consensual political support

unequalled in any other twentieth century public housing program. Hong Kong has followed a more exciting and radically fluctuating course, with sharp swings in emphasis from rental to home-ownership and back again, and blocks of often gigantic scale.

THE SECOND GROUP of 'Documentation' papers, 'Inventorization and Recording,' considers the need for careful recording as a prelude to any conservation efforts. Here, too, a great diversity of approaches are available. As Diane Watters and Jessica Taylor's paper argues, the traditional approach of area-based, factual inventorization has received a great shot in the arm from the new, easy availability of digital databases and the simplicity of linking them to GIS frameworks. Their paper outlines a pilot recording initiative grounded in PhD research, and tied into both the Docomomo fiche inventorization philosophy and official government heritage survey work, as represented by the recording programs of the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS). Mart Kalm's paper reports on an equally innovative strategy, in the Baltic region of Europe, of using international study grant programs to allow students to record the often vast relict landscapes of Socialist mass housing, focusing in this case on a boldly designed prototype collective farming settlement outside the town of Pärnu, Estonia. Stephen Cairns and Jane Jacobs relate how the adoption of unconventional, artistic-cum-poetic survey approaches can make possible bolder inventory strategies, comparing, for example, multi-storey slab blocks in Glasgow and Singapore. Their paper, along with those by Watters and Taylor, Gilroy, Pendlebury and Townshend, formed part of a joint recording seminar on 14 May 2008 in Edinburgh, organized by Docomomo ISC/U+L and RCAHMS, with support from the Royal Society of Edinburgh. Material from this seminar is available at www.centenary.rcahms.gov.uk

THE 'CONSERVATION' SECTION is also sub-divided into two groups of papers. The first focuses on approaches that emphasize preservation of entire areas of mass housing while

the second is orientated towards interventive, surgical solutions. In the first group, Vincent van Rossem outlines the Van Eesteren Museum project for a preserved microcosm within the post-1945 western extension areas of Amsterdam. Rose Gilroy, John Pendlebury and Tim Townshend outline a more extreme heritage preservation solution, comprising the 'listing' of an extensive and architecturally renowned complex of several thousand dwellings (multi-storey and low-rise) in northern England (Byker, Newcastle upon Tyne, by architect Ralph Erskine, 1969–82). The complication arises because the development's original intellectual concept included strong elements of user participation. The second group of 'Conservation' papers, all drawn from the Netherlands, is very different in approach. It emphasizes radical rebuilding solutions, in some cases for the 'Westelijke Tuinsteden' zone of Amsterdam but also for areas of Rotterdam, Groningen and Zwolle. Successive papers by Wouter Veldhuis, Arjan Hebly and Endry van Velzen demonstrate the great diversity of careful, sympathetic initiatives of housing regeneration in the 2008 Docomomo conference host country, the Netherlands.

CHIEFLY owing to the European location of the 2008 Docomomo conference, these conservation case studies are clustered un-representatively in one corner of the world. At first glance, it might seem that the global diversity of the mass housing phenomenon revealed in Part 1 must result in irreconcilable differences in conservation possibilities. What, for example, could the gently rotting prefabricated housing stock of a socio-economically redundant 1960s industrial town in Siberia have in common with the lovingly manicured living-heritage landscapes of setpiece northern European projects such as Tapiola or Roehampton? Or either of these with the frenzied pace and extreme site constraints of repeated redevelopment and renewal, ongoing today, in Hong Kong's rental housing?

YET THESE DIFFERENCES are not necessarily unbridgeable in practice: with time, echoes and resemblances begin to emerge in the most unlikely places. In Hong Kong, for example, the relentless flow of self-consuming housing progress, once happy to consign everything old not just to the scrapheap but to oblivion, is now slowed by the first islands of popular nostalgia. This is strikingly demonstrated in the 2005 project to preserve a specimen survivor of the city's first, elemental 'Resettlement' shelter blocks for fire-displaced squatters: the famous 'Mark 1' blocks of Shek Kip Mei.[4]

WITH THE GROWING RARITY/VALUE ratio that stems from the passage of time, even the worst collective psychological scars of enforced redevelopment can begin to heal. As previously occurred around 1960–1970, on a national rather than global scale, the once utterly reviled nineteenth century urban landscape of Europe suddenly became accepted as much-loved 'vernacular heritage.' Of course, the position of modernist housing is subtly different, given the confusing fact that 'modernist architecture' of a kind is once again dominant today. But even here, there are subtle differences that keep open the possibility of an effective distancing of the previous phases. The new 'iconic' modernism, in its insistence on front-and-back segregation of façades and spaces, and its flamboyantly individualistic

and anti-egalitarian styling, is subtly different in configuration from all the varieties of 'our' social mass housing. Wherever the latter occurs or survives, throughout the world, it serves as a reminder that there once existed an approach to city building that actively tried to reconcile the twentieth century forces of democratic collectivism and individualism, within a landscape that combined open-ended freedom with a restrained urban monumentality.

MILES GLENDINNING is director of the Scottish Centre for Conservation Studies and reader in Architecture at Edinburgh College of Art. He has published extensively on the history of twentieth century architecture and housing. Publications include the award-winning *Tower Block* (with Stefan Muthesius). He is currently completing a monograph, *Modern Architect*, on the life and times of Sir Robert Matthew, the foremost postwar Scottish architect. *Modern Architect* will be published by RIBA in late 2008.

NOTES
1 See Miles Glendinning and Stefan Muthesius, *Tower Block: Modern Public Housing in England, Scotland, Wales and Northern Ireland* (London: Yale University Press, 1994).
2 Hilary Ballon and Kenneth T. Jackson (eds.), *Robert Moses and the Modern City: the Transformation of New York* (New York: W. W. Norton, 2007), 306–7.
3 See also Michael McClelland, Graeme Stewart (eds.), *Concrete Toronto: a Guidebook to Concrete Architecture from the Fifties to the Seventies* (Toronto: Coach House Books, 2007), 212–5.
4 Cecilia Chu, 'Heritage of Disappearance? Shekkipmei and Collective Memory in Post-Handover Hong Kong,' *Traditional Dwellings and Settlements Review*, vol xviii, no. ii (2007): 43–55.

The 150,000th Home

ВАШ ИНДЕКС
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All pictures © Miles Glendinning

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p. 5, left to right. Rental 1970s housing in the Hong Kong New Towns: Tai Hing Estate, Tuen Mun New Town, six 30-storey cruciform blocks built 1977–8 by the HKHA; 1983 photo. / Prestige socialist housing in a 'new-old' capital: Block 23, Novi Beograd, Yugoslavia; 1982 view. / The Virgin Lands: newly completed low-rise Development Corporation flats in Glenrothes New Town, Scotland; seen in 1967. / Geometric planning in the Brezhnev era: 2006 view of one side of the grandly circular Väike-Oismäe development, Tallinn, Estonia (a 45,000-dwelling development built by the Eesti Projekt state agency from 1973 to the designs of architects M Port and M Meelak): the nearest block is the 9-storey Oismae tee 124.

p. 6–7, left to right. Leningrad Sublime: late 1970s multi-storey housing at Ulitsa Pionerstroy, Sasnovaya Polyana: in the foreground, seven 16-storey towers with 98 flats each. / Cutting the first sod at Co-Op City (see also next caption). / Philanthropic mass housing in the States: 1982 view of the vast Co-op City Development, Bronx, New York City: 15,373 dwellings in 35 cruciform blocks of 24 - 33 storeys, built as a limited equity cooperative in 1965-73 by the United Housing Federation at the instigation of New York's housing 'czar', Robert Moses. / Edge of the Empire: 1980s public housing and shopping centre at the NW edge of Ulan Bator, Mongolia; 1990 view. / National and municipal: the opening of the '10,000th house' built by Enfield Borough Council, a London outer suburb, in 1967, with the English Minister of Housing (Anthony Greenwood, second from right) and local politicians in attendance. / 1970s 'British-style' estate layout sign at HKHA's Ping Shek multi-storey estate, Kowloon, built from 1971; 1983 view.

p. 8–9, left to right. Zeilenbau no more? Glasgow Corporation's inner-suburban Sighthill development, ten 20-storey Crudens slab blocks built on a reclaimed chemical wasteground in 1962–9, and now slated for piecemeal demolition (beginning with the nearest block). / The Hong Kong public housing colossus in action: 1983 view of contract sign for a section of the HKHA's Sun Chui Estate, Sha Tin New Town—a mainstream rental development of tower and slab blocks. / Public housing palimpsest: redevelopment of Hong Kong's pioneering Mk 1 Resettlement estates (one-room emergency dwellings in 7-storey slab blocks) under way in 1983—here at Lei Cheng Uk, West Kowloon, with taller blocks rearing up behind. / Mikrorayon planning in the 'years of stagnation:' 1983 view of layout sign, Marino housing development, Moscow. / The 'art' of public housing: 2006 view of the Danviksklippan project, on the south-east edge of Stockholm, a pioneering mid-1940s development of tower blocks in dramatic wooded landscaping. / The 'localisation' of socialist mass housing: 1980s 1-storey slab blocks at Nikolai-Kusnezow-Ring, Rostock-Schmarl, German Democratic Republic, showing the red tiled facing and stepped profile, intended perhaps to evoke the North German Backsteingotik tradition. / Pragmatic progress: 1983 view of a 1969s HKHA Mk IV Resettlement estate at Shek Pai Wan, Aberdeen, Hong Kong Island—by comparison with the Mk Is, a more 'advanced,' enclosed, highly serviced design, but still consisting essentially of one-room dwellings; all these estates have since also been redeveloped.

p. 10, left to right. Pride in Progress: page from brochure commemorating the 1968 opening by Prime Minister Harold Wilson of the '150,000 council house' built by Glasgow Corporation—a flat in a 26 storey point block at Springburn C.D.A. Area B. / Municipal grandiosity: Glasgow Corporation's Red road development (1,350 flats in eight blocks of 27–31 storeys), under construction in 1966, showing the idiosyncratic steel-framed and asbestos-clad building system. / Tenants' post boxes in the ground floor lobby of a newly completed tower block in Marino Area 14, Moscow; 1983 view.

DOCUMENTATION

1- INTERNATIONAL SURVEY

Les Courtillières
Ordinary Housing Project—Extraordinary History?

■ NICK **BULLOCK**, CLAIRE **CARRIOU**, HÉLÈNE **FROUARD**, PATRICE **GOURBIN**, LUCIE **HAGUENAUER-CÁCERES**, PAUL **LANDAUER**, CLAIRE **LÉVY-VROELANT**, BENOÎT **POUVREAU**, DANIÈLE **VOLDMAN**

The Courtillières housing project—in the suburban municipality of Pantin, just outside of Paris— was built to the designs of architect Émile Aillaud at the peak of the housing crisis which plagued the Fourth Republic. At its inauguration in June 1958, the Courtillières was considered to be an exemplary demonstration of the manner in which public authorities hoped to resolve the housing crisis, through the construction of high quality housing projects.

THIRTY YEARS LATER, it had, in the eyes of some, become a problematic urban estate which was stigmatized as a breeding ground for all problems and unhappiness. How, within the course of a few decades, did the architectural utopia of Aillaud's Serpentine degrade into an irreparably blighted housing scheme?

BIRTH OF A HOUSING PROJECT

In 1954, the decision was made to construct three thousand dwellings over a fifty-seven hectare zone, just outside of Paris. The project stemmed from the initiative of three major housing organizations: the Société Centrale Immobilière de la Caisse des Dépôts et Consignations (a housing society created in June 1954 by a major public housing financer); the Office Central Interprofessionnel du Logement (Central Inter-professional Housing Office, an organization responsible for the collection of business contributions towards housing construction, obligatory since 1953); and the Société d'Économie Mixte (SEM) du Conseil Général de la Seine (the Mixed Economy Society of the Seine General Council, later renamed SEMIDEP, a public society which brought together public powers and private interests). The urban-design coordination of the

L'EUROPE OCCIDENTALE, FERMENT DU LOGEMENT SOCIAL, A DÉVELOPPÉ UNE GRANDE DIVERSITÉ DE SOLUTIONS ET DE PRATIQUES POLITIQUES ET SOCIO-ARCHITECTURALES, QUI ONT PARFOIS DÉGÉNÉRÉ EN CONFLITS OUVERTS OPPOSANT LES ASPIRATIONS IDÉALISTES DES CONCEPTEURS AU REJET MASSIF DES HABITANTS. DURANT LES DERNIÈRES DÉCENNIES, CONJOINTEMENT AU DÉCLIN DU SYSTÈME SOCIALISTE D'AIDE PUBLIQUE, UNE RÉFLEXION SUR LES CONCEPTS ET ÉVOLUTIONS DU LOGEMENT SOCIAL A VU LE JOUR. LE GRAND ENSEMBLE DES COURTILLIÈRES, CONÇU EN BANLIEUE PARISIENNE PAR ÉMILE AILLAUD, ILLUSTRE TRÈS PRÉCISÉMENT LES AVATARS ET VICISSITUDES D'UN PROJET ARCHITECTURAL GRANDIOSE LIVRÉ AUX MAINS D'UNE PLÉTHORE DE RESPONSABLES MUNICIPAUX ET INSTITUTIONNELS, DEPUIS SA CONCEPTION JUSQU'À NOS JOURS.

zone was entrusted to the architect Émile Aillaud. It was Aillaud's conception of social housing, based on the concept of a garden suburb suitable for large numbers, which led to his selection. He proposed a mixture of high towers and low-rise flats arranged on a human scale, with the passer-by integrated into a harmonious landscape of mineral and vegetal unity.
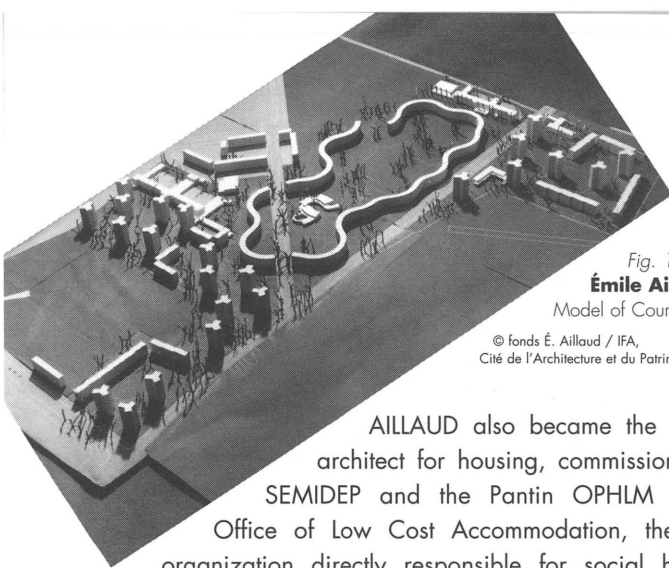
Fig. 1.
Émile Aillaud,
Model of Courtillières

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Cité de l'Architecture et du Patrimoine

AILLAUD also became the project architect for housing, commissioned by SEMIDEP and the Pantin OPHLM (Public Office of Low Cost Accommodation, the local organization directly responsible for social housing construction). He united both projects within a single overall landscape conception. A sinuous or 'serpentine' building was constructed for SEMIDEP, consisting of three distinct sections traversed by a road. Four additional buildings surrounded the market place, while the park opened outwards to its surroundings. For the OPHLM, Aillaud designed nine star-shaped tower blocks, thirteen-floor, and two lower buildings. In 1957, again for the OPHLM, he added seven star-shaped tower blocks, and four lower buildings of the same type as those already built.

WHILE THE SEMIDEP housing was constructed using in-situ concrete construction, the OPHLM followed the Camus prefabrication process, as imposed by the "Economic Workforce" program. This involved the use of large concrete panels, particularly on the façades, which were precast and fitted in advance in the factory. In 1958, the construction of a kindergarten, day-care center and a mother-and-child protection center was once again entrusted to Aillaud. In 1959, the Seine OPHLM commissioned him to design 335 dwellings to replace those built during a state of emergency in 1954. Aillaud built seven star-shaped tower blocks and two blocks of forty-eight dwellings. Having furthered his studies of

urban landscape in the meantime, the architect strongly reaffirmed his own individual approach in contrast to the functionalist rigor which dominated the production of large-scale housing schemes of the time. His choice of colors was particularly unique: while modernist architects had normally favored primary colors, he boldly used pink and sky blue for the flats, and green and bright yellow for the schools. The first dwellings were completed in summer 1958, and the last block was finished in 1966.

PARISIANS and Pantin residents formed the core group of the new tenants, mixed with individuals from the Paris periphery and countryside, and foreigners (in particular, Spaniards, North-Africans and repatriates from Algeria and Tunisia). Laborers, white-collar workers and civil servants lived side-by-side with executives and the self-employed. Children under the age of fourteen represented almost half of the population.

A GOOD REPUTATION:
THE NEWLY-COMPLETED COURTILLIÈRES

Life in the Courtillières was appreciated by its early inhabitants. The modern conditions, including running water, bathrooms, brightness of the transverse apartments, and under-floor heating, compensated almost entirely for the raw starkness of the newly-finished accommodations. The project also benefited from a good reputation amongst professional circles and the national press. Aillaud's work was hailed for its high quality and avant-gardism, earning him an international reputation which reinforced his status of "architect poet." The SEMIDEP, which wished to surpass the achievements of the Seine OPHLM, reveled in this success. Aillaud's positive reception was shared by Pierre Sudreau, former commissioner of Construction and Urbanism within the Paris region, and Construction minister beginning January 1959, who had supported the project from its

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Fig. 2. Aerial view of Courtillières today

© M. Couronné / Département de la Seine-Saint-Denis

earliest stages. Praising this architectural creation, while condemning certain urban estates as "machines of repeated errors and horrors," he enthusiastically supported the decision to give the Grand Prix of the Cercle des Études Architecturales (CEA, Circle of Architectural Studies) to Aillaud in 1960.

THIS PRAISE was, however, tempered by the results of an inter-ministerial inspection requested by Sudreau to evaluate the urban estates. Carried out at Courtillières during 1959–1960, the evaluation concluded that land had been wasted, estimating that between seven and eight thousand dwellings could have been constructed on the site. This conclusion highlighted the hiatus between the architect's aspirations and the necessities of economic and political profitability. The report also underlined the delay in providing communal facilities, attributed to the lack of cooperation between the contractors. Although not highlighted by the evaluation, the lack of public transport to the area was a major sore point for workers. The subway had not yet reached the Parisian suburb, and the limited bus service did not reach the estate. Furthermore, within the tower blocks, seepage due to the malfunctioning Camus façade panels led to discontent. These technical issues were due as much to the budget constraints imposed on the constructors as to the process

itself. From February 1957, in order to save ten percent of the overall cost, Aillaud's plan had, in fact, been scaled back (e.g., hot water and baths for all replaced by individual water-heaters and showers, and the removal of the balconies on the first ten floors of each tower block). Even from the very beginning, the overcrowding of certain dwellings was a problem.

AFTER having raised as many hopes among architects as among the tenants and public authorities, was the Courtillières now becoming an urban development just like any other?

POLITICAL AND SOCIAL STORM-CLOUDS

Over and above the problems with construction and public transport, the inhabitants of Courtillières were most of all the victims of the consequences of the politico-administrative imbroglio between Paris and its surrounding belt of small municipalities. In March 1959, the Communists won the Pantin local election, after a confrontation with the Socialists. They were, however, in the minority within the governing board of the town's Low Cost Accommodation Office (HLM), the president of which was nominated by the prefect. From then on, the town council and HLM office were in conflict. The Town Hall criticized the distribution of housing, claiming that,

Fig. 3. Plan for Émile Aillaud's social housing project in Pantin; commissioned by l'Office d'HLM de Pantin and SEMIDEP for the public good
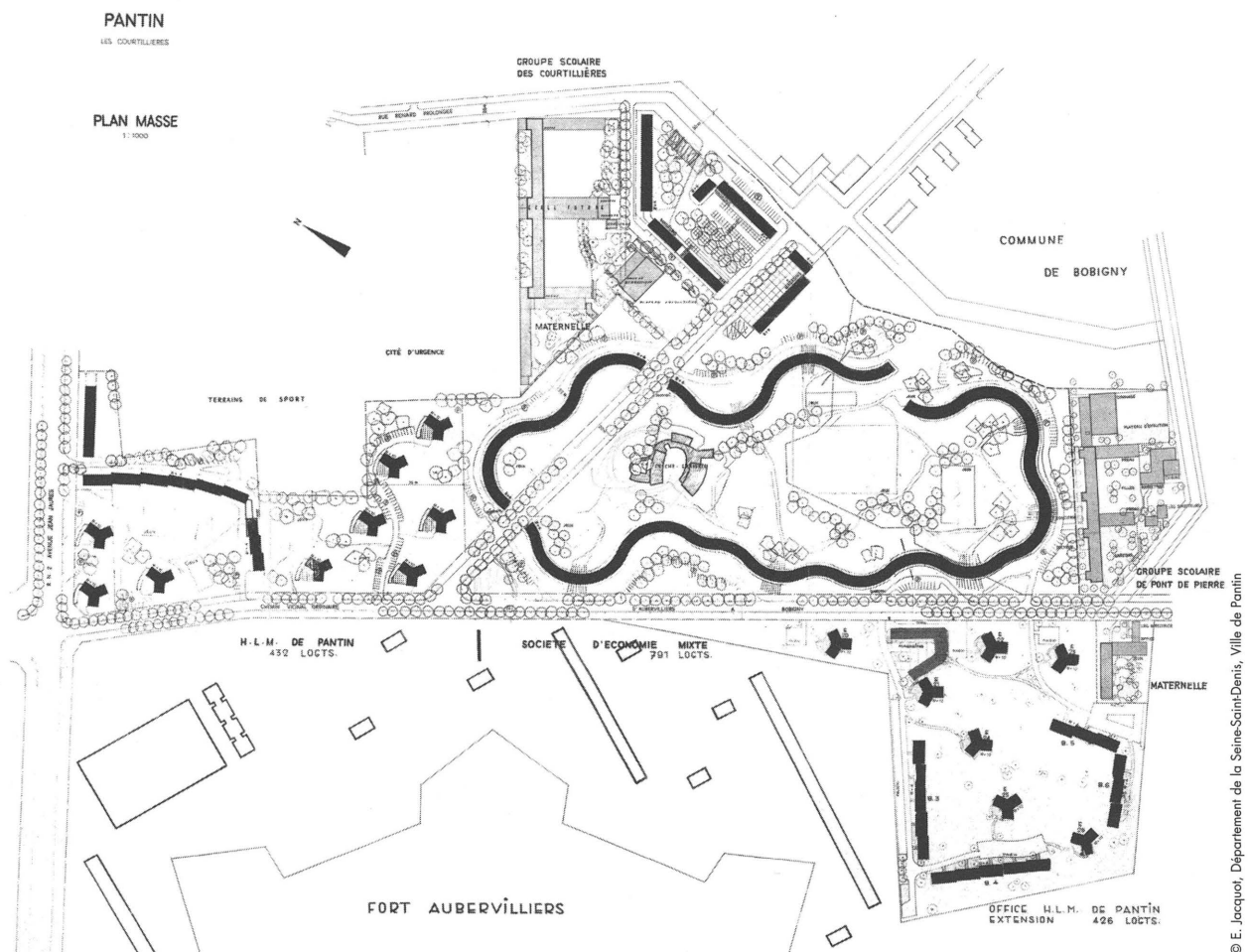
Fig. 4. Street-view of the Serpentine

Fig. 5. Interior of the Serpentine

since 1962, Algerian repatriates had been overly favored, in comparison to the local population. Additionally, along with the other Communist elected officials in the Paris region, the Pantin town councilors notably denounced the desire to "empty Paris of the worker population" in the name of an urban renovation of the capital.

THE CONSEQUENCES of the administrative reorganization of the region were added to this symptomatic confrontation in relations between Paris and its "red" suburb. On 1 January 1968, Seine and Seine-et-Oise were replaced by six new departments. This transformation had direct consequences for Courtillières. The housing stock of the Seine OPHLM was, from 1968, temporarily cared for by the region of Paris interdepartmental OPHLM (OIRP), during the organization period of the departmental offices. In reality, however, the Seine-Saint-Denis OPHLM, although created in 1970, only became fully autonomous following the 'decentralization law' and dissolution of the OIRP in 1983. In the same manner, the assets of SEMIDEP were divided between the City of Paris and the departments of Hauts-de-Seine, Val-de-Marne and Seine-Saint-Denis. In this new form, the shareholders of SEMIDEP were principally from the City of Paris.

WHEN the time came to undertake the first rehabilitation scheme, such a context complicated the upkeep of Courtillières, and directly affected the estate. In autumn 1960, when a report in *Le Parisien Libéré* associated the estate with the "blousons noirs" (the "black jackets," a youth phenomenon associated with rock music and anti-institutionalism), indulging in "moped rodeo" and petty crime, the situation could still be blamed upon the chronic boredom of unemployed youths. As the 1960s and 1970s progressed, however, the life of Courtillières inhabitants degraded considerably. Better-off tenants left,

encouraged by the estate's increasingly bad reputation, the estate's administrators lack of interest, and the possibilities offered by assisted individual home purchase schemes were appealing. At the beginning of the 1970s, the increase in unemployment, reinforced on a local scale by de-industrialization and the beginnings of hard drug abuse, further accentuated the problems. Delinquency became firmly entrenched in Courtillières. All administration and maintenance of the buildings was abandoned by lessors, fuelling an upsurge in tenant complaints to Health and Safety Services.

IN 1977, the election of the Communist Jacques Isabet as mayor put an end to the crisis which had placed the town council and its office in conflict for almost twenty years. Renewed dialogue allowed hopes of true cooperation. The arrival of the subway at Fort d'Aubervilliers, in 1979, also helped to ensure that the decade ended on a positive note. At the beginning of the following decade, rehabilitation projects finally began on the Courtillières estate. Although the town and departmental councils renewed their efforts considerably for the administration and upkeep of the estate, SEMIDEP disengaged itself from its own project. Squats of drug addicts and misfits multiplied within basements and empty flats which had been left to fall into neglect.

IN HIS BOOK *Désordre Apparent, Ordre Caché* (Paris: Fayard, 1975), Aillaud explained that the most important aspect of a place is its capacity to age well. Even if the general evolution of the situation in Courtillières was not radically different from that which was taking place in other developments all across the country, its destiny followed a path diametrically opposed to the architect's desire. Due to the conjunction of the economic crisis, the pauperization of those passed over by development and the overlapping of political machinations between the

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State, the region and the municipal authorities of Paris and Pantin, the estate deteriorated with the passing of time.

IN SEARCH OF A NEW IDENTITY

During the 1980s, the Pantin municipality attempted to launch several initiatives of "désenclavement du quartier" (urban reintegration), within the context of the Développement Social des Quartiers (DSQ: Area Social Development) initiative. The objectives set out focused on the physical transformation of Courtillières: partial demolition; construction of accommodations; creation of

AFTER a 1996 legal procedure brought against SEMIDEP because of various cases of embezzlement, the mayor demanded that the SEMIDEP housing stock should be transferred to the town's OPHLM, hoping that this would help his efforts to control the regeneration of the estate. In reality, delinquency only continued to flourish, and the decline of local businesses accelerated. In autumn 1999, the City of Paris finally announced the sale of the Courtillières flats to the Pantin municipality. The mayor of Pantin returned to the proposal of a North-South axis across the Serpentine, and commissioned the architect Paul Chemetov to carry out studies on the subject. In his

Fig. 6. Current-day view of park

Fig. 7. Star-shaped brick tower group, rehabilitated 1983

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Département de la Seine-Saint-Denis, J.B. Vialles, ADAGP, 2002

new public facilities. However, with the exception of the demolition of a twenty-four dwelling building in the north of the area, in 1989, no complete project was brought to fruition. The creation of a "town contract," signed in 1994 for four years, failed to rectify the impasse. Nevertheless, for the first time, the town contract aimed to renew those areas in difficulty through a concerted effort on all fronts: construction, business, employment, public services, security and crime prevention. With regards to Courtillières, the mayor proposed to finance the rehabilitation of the SEMIDEP estate, the institution of a maintenance and security service, the upkeep of the green areas and the guarantee of a direct link with the center of town. On a social level, projects were both multi-faceted and ambitious. The indispensable financial engagement of the State, however, failed to materialize.

A DEBATE began as to the possibility of demolishing a section of Courtillières. The town of Pantin urged the lessor to accept the construction of a North-South axis, running across the Serpentine. The project's justification was based upon a social study which provided detailed statistics, showing the attachment of inhabitants to their area: while half (forty-seven percent) wanted to stay in their dwellings, another half (forty-six percent) preferred to be re-housed, with twenty-eight percent of these wishing to leave the area.

report of May 2000, the historic value of Courtillières took on new significance. The architect recalled the ambition and originality of its first conception, and evoked the enthusiasm of its first inhabitants. He concluded with a wish for a "return to the memory of a promise," to help transform the area. At the same time, he questioned the exclusively collective nature of Émile Aillaud's conception, and endorsed the plans to restructure the Serpentine. These plans rested upon the idea of creating semi-private gardens in front of the ground-floor flats. While taking up the suggestion of closing off the central green area, the architect strongly opposed that of the construction of a transversal axis to bring the area out of its isolation. On the contrary, he advocated the creation of a speed-restricted road, running along the sinuous boundaries of the park. Looking once again to the layout inherited from Aillaud for guidance, he suggested, in the place of demolition, interventions on the façade, roofing and communal areas of the Serpentine.

IN FEBRUARY 2001, putting up strong resistance to proposals of demolition, Paul Chemetov's team proposed a rehabilitation scheme consisting of the refitting of the Serpentine flats to the inhabitants. In association with IKEA, the architect enlarged the flats, and equipped them with balconies. This step—which was highly publicized in

the media—was supported by the mayor, and became a tense electoral context of renewed Communist/Socialist conflict. After the Socialist victory, the municipality launched a consultation which favored, from then on, the demolition/reconstruction option, and the purchasing of property. The debate on the status of the central park remained inconclusive. The project dossier on the global transformation of Courtillières, presented to l'Agence Nationale de Rénovation Urbaine (ANRU, the National Urban Renovation Agency) in November 2004, bore witness to the difficulty of resolving the two contradictory opinions. Within the dossier, the demolition of two segments of the Serpentine was presented as one of the conditions necessary to renew the dynamic of the site, while the arguments justifying the opposing concept called for respect for the "real foundations of the identity of the area." These foundations, however, were never clearly described. The history of Courtillières was only evoked in the chapter describing the Serpentine's rehabilitation program, which recalled the exhortation by the Architectes des Bâtiments de France (Architects of French Buildings) to preserve the patrimony of the estate by limiting demolition to a bare minimum. The patrimonial values described centered far more upon the sinuous building forms—so different from other housing development constructions of the same period—than on the overall coherence of the original conception. The relationship between mineral and vegetal which was so important to Aillaud, influenced by the eighteenth century Thermal Spa of Bath, England, had been erased by residential priorities.

UNLOVED housing estates are still paying for the urgency with which they were created, and for the voluntarism which allowed their creation in the first place. If Courtillières distinguished itself from the norms of mass production of accommodation at the time, the project was nonetheless unable to avoid the general decline in the fortunes of mass housing. Émile Aillaud designed an estate which is still remarkable today, but he had been equally forced, from the very beginning, to accede to cost limitations, to the detriment of the inhabitants' comfort. Even though the estate is now served by both subway and tramway, and is finally benefiting from a long-delayed process of regeneration, it remains a symbol of that compromised ethos distinctive to the "Trente Glorieuses" (the thirty years of optimistic postwar reconstruction in France)—an ethos which is, today, widely seen as incomprehensible, if not entirely rejected.

translated by Kitty Horsey

This paper has been prepared by the Groupe de recherche sur l'histoire du logement contemporain (research group for a history of contemporary housing) based at the University of Paris 1–Panthéon-Sorbonne.
The Group has brought together art historians, historians, architects and sociologists in collaborative research on the history of housing over a period of several years. The members of the Group are Nick Bullock

Fig. 8. Star-shaped brick tower façade

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17

Prefab **Russia**

FLORIAN **URBAN**

A classic view of mass housing apartments is shown on Russian television every New Year's Eve. In Eldar Ryazanov's 1975 movie *Ironiya sud'by* (Irony of Fate), a man wakes up in what he believes to be his bedroom and suddenly finds himself surrounded by strangers. It turns out that after a vodka-soaked night and an unplanned flight on the wrong airplane he had mistaken his Moscow tower-block apartment for a similar one in Leningrad.

THE FILM is a typical comedy of errors and a not-too-subtle satire on the drab standardized apartment blocks where not only streets, buildings, and entrance doors looked the same, but equally kitchens, bathrooms, and furniture. The film ridicules the state-sponsored one-size-fits-all architecture in a far more open way than one would expect in a Socialist country, and at the same time offers a tongue-in-cheek portrait of the average Soviet living environment. The shabby mass-produced apartment block, decaying almost since its completion, has come to be a cipher not only for the Soviet Union's peculiar housing policy but also for daily life under the dictatorship of the proletariat.[1]

L'URSS, EN PARTICULIER DURANT LA PÉRIODE DE PRÉFABRICATION DE MASSE DE L'ÈRE POST-KHROUCHTCHEV, S'EST FERMEMENT OPPOSÉE À LA MULTIPLICITÉ DES SCHÉMAS SOUVENT CHAOTIQUES QUI ONT PRÉVALU POUR LE LOGEMENT SOCIAL EN EUROPE DE L'OUEST. FLORIAN URBAN DRESSE ICI LE PORTRAIT D'UN HÉRITAGE PARADOXAL. BIEN QUE LA STANDARDISATION FUT SUIVIE APRÈS 1991 D'UNE POLARISATION ÉCONOMIQUE RIGOUREUSE (EN PARTICULIER À MOSCOU), LA PERSISTANCE D'UNE VASTE MIXITÉ SOCIALE DANS LES GRANDS ENSEMBLES DE L'ÈRE SOVIÉTIQUE CONTRASTE SINGULIÈREMENT AVEC LA STIGMATISATION DE SES ÉQUIVALENTS EN EUROPE OCCIDENTALE.

THE INDUSTRIALIZED APARTMENT

Starting in the late 1950s, the Soviet Union experienced a wave of unprecedented residential construction. Almost all new housing was built from prefabricated parts. In the 1970s, the authorities proudly declared that half of the industrialized housing construction in the world was carried out in the Soviet Union;[2] currently mass-produced prefab buildings make up half a billion out of 2.8 billion square meters that constitute the housing stock in the Russian Federation.[3] The Soviet Union has been among the pioneers of industrialized construction. In the 1920s, progressive architects such as Moisei Ginsburg and Andrei Burow carried out numerous projects, and Stalin's oppression of the architectural avant-garde since the early 1930s did not entirely stifle the experiments with this new technology.[4] During the Stalin era, however, housing was mostly produced in a traditional manner. The Stalinist multistory buildings with thick brick walls, spacious apartments, and neoclassical façades were built for a group of privileged few. They did little to relieve an exacerbated housing shortage provoked by a dramatic country-to-city migration, which had led to living conditions unimaginable in most industrialized countries.[5] The average square meters per capita decreased from 8.2 in 1926 to a lamentable 7.4 in 1955.[6] Given that these figures included kitchens, bathrooms and corridors,

and represent a national average, one has to assume that up to the 1960s the majority of Soviet citizens had only the personal space that a single bed would occupy, and in many cases even less. For the party leaders, there was only one solution to this situation: increase the efficiency of construction at all costs.

It was Nikita Khrushchev who triggered the turn towards industrialization. In 1950, when he was still the party leader of Moscow, he directed a convention of architects in Moscow that declared low cost construction to be of high priority. When he succeeded Stalin as head of state in 1953, he pushed housing to the top of the agenda. On the basis of sheer need, he bluntly rejected calls for higher quality. In his own words: "Do you build 1,000 adequate apartments or 700 good ones? And would a citizen rather settle for an adequate apartment or wait ten to fifteen years for a very good one?"[7]

IN 1955, the Central Committee officially announced the industrialization of the construction industry.[8] The first Domostroitel'nyie Kombinaty (DSK, state-owned residential construction companies) were set up in the late 1950s, starting the production of serially prefabricated homes.[9] The engineer Vitali Lagutenko (1904–1967), Moscow's chief planner since 1956, guided Khrushchev's efforts to increase efficiency.[10]

Lagutenko designed several series of mass-produced housing types that were subsequently built in large amounts all over the country, such as the famous K-7 series, a five-storey walkup building with tiny, self-contained apartments. In these buildings, a two-room unit had forty-four square meters and included a small entrance hall, a six-square-meter kitchen, and a cubicle bathroom with a 1.2 meter long "sitting bathtub" that was assembled at the factory and connected to the main pipes on the construction site. Originally designed for a nuclear family with one or two children, such apartments were not uncommon to pile up six or more people. For families who previously had to share a room or even an *ugol* (curtained-off corner) in a *kommunalka* (apartment inhabited by several families), it was nevertheless considerable progress. Hence, many inhabitants

but even these structures were built from comparably cheap and low-quality materials. Given the continuing need for housing, many of these buildings, of course, still linger. The new environments were mostly built on the fringes of existing cities. Residential buildings were jointly constructed with communal facilities such as schools, grocery stores, nurseries, and sports fields. Such a *mikrorayon* (residential complex) was defined as combining "both familiar and societal character."[14] When Khrushchev was removed from power in 1964, his successor Leonid Brezhnev continued the policy of increasing construction, and repetitive *mikrorayony* mushroomed all over the country, becoming the most common form of housing in Soviet cities. They were built with similar regularity in downtown Moscow, in the Kazakh steppe, and on the shores of the Arctic Ocean.[15]

Fig. 1. Brick khrushchyovka on Ulitsa Malye Kamenshchiki, Moscow, built in the 1950s

Fig. 2. Panel khrushchyovka in Tomsk, built c. 1960

Fig. 3. Panel khrushchyovka on Tramvayniy Prospekt, St. Petersburg, built c. 1960

perceived these buildings as a new kind of freedom; to date, some first-generation residents see them as signs of an enormous progress for Soviet workers.[11] While the monotony of these buildings did not go unnoticed to either politicians or inhabitants, the mass-produced slab buildings were successful in relieving the most urgent need, and provided self-contained apartments for a greater number of the population than ever before. For large parts of the population they were virtually a "dose of oxygen."[12]

THE MASS-PRODUCED, five-storey walkups of the 1950s and 1960s, and particularly the K-7 buildings are—to date—known as *khrushchyovki* (Khrushchev buildings, singular *khrushchyovka*). Inhabitants soon derided them as *khrushchoby*, a term composed from *krushchyovka* and *trushchob* (slum).[13] In the beginning, they were occasionally made from bricks, but the most popular construction method soon became the on-site assemblage of prefabricated concrete panels. According to Lagutenko's schedule, such a *panyelni dom* (panel building) could be assembled without mortar and topped out in twelve days. The buildings were meant to be temporary and demolished in the following decades. For so-called *snosimye serii* (disposable series) a life span of twenty-five years was projected. There were also the longer-lasting *nesnosimye serii* (non-disposable series),

STRATIFIED MOSCOW

In the eyes of Soviet officials, there was also a particular ideological quality of tower-and-slab buildings related to their making. Standardization and mass-production responded to a goal that determined socialist rhetoric since the times of Friedrich Engels: the quality of housing should be uniform, and the size of accommodation only related to the inhabitants' need. Of course this noble principle was counteracted from the very beginning. In practice, privileged groups were always allocated better housing. Sometimes these differences were officially recognized as rightful, as in the case of artists and architects, who were perceived as needing more space, or deserving workers, party officials and veterans, who were rewarded with larger apartments for their merits.[16] In other cases, a spacious apartment was simply the result of individual power and personal connections. The mass-produced housing of the post-Stalin era modified this visible distinction. While the members of the elite were allowed to hold on to their privileges, and often continued to live in Stalinist buildings, the newly constructed panel homes now conformed to the rhetoric of similar housing for everyone. At least new construction became more equal. In addition, citizens who had been assigned a state-owned apartment were in a much more stable situation than tenants under capitalism. They paid

*Fig. 4.
Brezhnev-era
panel building
on Ulitsa
Mosfilmovskaya,
Moscow, built in
the 1960s*

extremely low rents, and they could hardly be evicted. This situation changed dramatically after the end of the Soviet Union. In the late Soviet period the government had already started a kind of privatization. A decree passed in 1988 permitted each tenant to purchase his or her apartment from the state. This meant that against a token processing fee he or she was granted the right to use the apartment for life, pass it on to his or her heirs, pay no rent, and, in turn, become responsible for the cost of maintenance.[17] With the introduction of market capitalism in the 1990s this meant that the new owner could also sell these rights and in this sense "sell" the apartment. Thus, a housing market comparable to that in Western countries was created. By the late 1990s, about twenty-five percent of Russian households had "bought" their apartments, while another twenty-five percent already lived in private homes.[18] Of course, this measure did not go without criticism, since it favored the members of the Soviet elite who occupied the most prestigious apartments. Many high-ranking party officials were given spacious luxury apartments in the center of Moscow practically for free, while the less privileged, if anything, were eligible for a tiny flat in the outskirts. While a consistent legal framework for this growing private housing market remains to be completed, privatization continues.

AT THE TURN of the twenty-first century, approximately half of the apartments in Moscow were on the new housing market, that is, the rights of their use could be bought and sold.[19] On the other hand, fifty percent of Russian households still hold rental agreements from the Soviet period and have not yet made use of their right to privatize. Most of them still occupy their apartments on

the basis of *sotsialni nayom* (social tenancy).[20] They pay very little rent and unlike tenants-turned-owners do not have to carry the expenses of maintenance. For the state, this constitutes a problem, since the low rents do not pay for necessary renovations, and during Soviet times investments into the buildings already tended to be poor. At the same time, the municipal authorities still keep a long list of those who wait for their turn (*ocheredniki*) to move into such an apartment, although vacancies are very rare and basically only occur in the case of a tenant's sudden death—in all other cases he or she is likely to make use of his right to buy. In general, Soviet and post-Soviet privatization granted a significant share of the population the security that they already enjoyed under Soviet rule, that is, low housing costs and protection against eviction. For the rest, however, the situation became precarious. Anybody who is from out of town or too young to keep a rental agreement from the Soviet period has to depend on the free market and face a rent level that in the large cities is far out of reach for the average wage earner.[21] This situation is particularly grim for the weakest groups, migrants and refugees, in the housing market. Homelessness, which was small under Soviet rule, is on the rise.[22]

IN THIS RESPECT, the mass-produced residences reflect a general development of Russian society. Since the end of the Soviet Union, there has been an increasing gap between a small group of very rich and a large amount of very poor. Although the average wage has almost tripled from 112 to 302 US-dollars per month between 2001 and 2005, this barely allows an average wage earner to survive in Moscow, which ranks among the

world's most expensive cities.[23] A considerable share of Russians live in deep poverty.[24] On the other side of the social divide are the "New Russians," the winners of capitalism and subjects of the same kind of popular jokes that were once told about the party elite. Their total amount is the subject of many speculations; most likely they constitute less than five percent of the total population.[25] They are concentrated in Moscow and St. Petersburg, where their presence sets the parameters of the housing market and accounts for an increasing segmentation. In light of this development, the tower-and-slab buildings are emblematic for the post-Soviet society. They are a safe harbor for many poor who at least own their apartment and are thus not threatened by homelessness. At the same time, the very structures that afford this refuge for some sharply exclude others who are equally poor and in need of such a form of housing. One way or the other, the slab buildings are among the aspects of Socialist heritage which most strongly influence the daily life in post-Socialist Russia.

PANEL BUILDINGS IN RUSSIA TODAY

In contemporary Russia, prefab high-rise blocks lack the wholesale disrepute from which they have suffered in Western Europe and North America since the 1970s. The reasons are particular to any country with limited resources and strong state-involvement over decades: unlike in the capitalist West, panel buildings in Russia are not the home of the marginalized, but are socially mixed environments.[26] And unlike in many other countries, they are far from being considered obsolete. The Russian government continues their construction, and also invests in research and development of panel technology. This has to be seen in the context of the Russian state's continuing involvement in the provision of housing. In the late 1990s, the country spent three percent of its gross domestic product on housing and utility subsidies—far more than on its military. At the same time, state authorities and former Soviet enterprises still owned forty percent of the housing stock.[27] The priorities have nevertheless shifted since the end of the Soviet Union. This is most evident in Moscow, where the wealth of Russia is concentrated and where soaring real estate prices create an immense pressure on the housing market. The city administration plans to replace the 'disposable' khrushchyovki with higher, more soundly built, dense blocks. By 2010, all five-storey khrushchyovki, including those from Lagutenko's famous K-7 series, are to be demolished.[28] The Soviet promise that the khrushchyovki are meant to last no longer than thirty years, ironically, has become a mandate of the market—albeit in a very different way than Soviet theorists had foreseen. They are not being demolished because the housing standards for the entire population have risen, but because society has become extremely polarized. Despite its close ties to the privileged few, the city administration promised to provide substitute apartments, which are likely to be situated in far less attractive neighborhoods, for the displaced tenants.[29] It still investigates cheap methods to provide housing. It has launched a pilot program to recycle the panels from demolished khrushchyovki and use them, technically modified, for new construction. A handful of prototypes are currently being constructed according to this method.[30]

GENERALLY, the Soviet-period slab buildings are subject to an ambiguous policy. On the one hand, the Moscow municipality is eager to sell dilapidated panel buildings in attractive areas to private firms for demolition and redevelopment. In many cases these transactions sparked allegations of corruption or dubious practice.[31] On the other hand, the city shows a certain degree of responsibility towards the inhabitants, who in most cases cannot afford free market rents, and negotiates the provision of substitute apartments with the developers. This responsibility, though, has diminished. Until 2006, Moscow city authorities required developers to construct a certain number of substitute apartments for every demolished khrushchyovka. Now they only have to pay the city a fee, and it is up to the city whether or not to invest these funds in housing. In those cases where substitute buildings are being provided, the distribution is clear: cheap and low-quality panel-buildings are constructed for (poor) renters, brick buildings for (wealthy) buyers.

WHILE the share of Russians who are able to choose between different forms of housing has increased since the end of the Soviet Union, most are still stuck in their Soviet-era apartments, of which a large portion are built from prefab panels. Since the tenants cannot afford to move, they adopt a rather pragmatic view on the high-rise blocks. To conceive of a city without these buildings is out of question; the economic constraint forestalls any public vision for a different form of housing. With the few rich living elsewhere, slab buildings continue to be the dwellings of ordinary people—a situation that is not likely to change any time soon.

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Fig. 5. Brezhnev-era panel building in Vladivostok, built in the 1960s

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NOTES

1 The dual nature of the slab building as both home and symbol for the Socialist system has been analyzed in the East German context by Christine Hannemann, *Die Platte* (The Slab) (Berlin: Schelzky und Jeep: 2000). For a history of housing in the Soviet Union in general and in Moscow in particular see Timothy Colton, *Moscow: Governing the Socialist Metropolis* (Cambridge, MA: Harvard University Press, 1995), R. Antony French, *Plans, Pragmatism, and People – the Legacy of Soviet Planning for Today's Cities* (Pittsburgh: University of Pittsburgh Press, 1995), and Henry Morton, "Who Gets What, When and How? Housing in the Soviet Union," *Soviet Studies* 32 n. 2 (April 1980): 235–59.

2 This was stated by the director of Central Research and Design Institute for Dwelling, quoted after Robert McCutcheon, "Technology and the State in the Provision of Low-Income Accommodation: The Case of Industrialized House-Building, 1955–77" *Social Studies of Science* 22 n. 2 (May 1992): 360.

3 "Deshevle skinut'sia na rekonstruktsiiu chem platit' po schetchiku," *Rossiiskaia Gazeta* (March 4, 2004), quoted in Thomas Lahusen, "Decay or Endurance? The Ruins of Socialism," *Slavic Review* 65 n. 4 (Winter 2006): 736–46.

4 Selim Chan-Magometow, *Pioniere der sowjetischen Architektur* (Dresden: Verlag der Kunst, 1983), 398.

5 Between 1926 and 1959 the population of the USSR rose from 148.7 to 209 million, reaching 241.7 in 1970 and 293.1 million in 1991. E. M. Andreev et al., *Naselenie Sovietskogo Soiuza, 1922–1991* (Moscow: Nauka, 1993). At the same time, the urban population had risen from 17% of the total population in 1926 to 47.9% million in 1959 and 56.3% in 1970—in 1989 it was 65.8%. Cp. French, *Plans, Pragmatism, and People*, 52.

6 It had been 6.4 square meters in 1913. By 1970 it rose again to 11.2 square meters. These figures apply for the entire Soviet Union. *Narodnoye Khozyaystvo SSSR 1956* (Moscow: Gosudarstvennoye Statisticheskoye Izdatel'stvo, 1956), 163 and *Narodnoye Khozyaystvo SSSR v 1970g* (Moscow: Statistika), 7, 68, and 546, quoted after French, *Plans, Pragmatism, and People*, 58.

Statistics from Soviet sources deserve a general caveat. It is one of the ironies of real existing Socialism that despite the socialist bureaucrats' obsession with hard numbers reliable data remains scarce. Censorship made detailed censuses for towns unavailable to researchers for most of the Soviet period and even afterwards. In politically sensitive contexts, such as the state-provoked famine of 1931–32 leading to millions of deaths, it is almost certain that the census data has been falsified. Gathered in 1939, these data were only published twenty years later together with the new census of 1959, thus allowing an inclusion of the dead from hunger and collectivization with the victims of the Second World War. The post-Stalinist censuses, thus, are likely to be more reliable. Cp. Paul R. Josephson, *New Atlantis Revisited. Akademgorodok, the Siberian City of Science* (Princeton: Princeton University Press, 1997), 6 and 52.

7 Nikita Khrushchev, *Khrushchev Remembers: The Last Testament* (Boston: Little, Brown, and Co., 1974), 102.

8 Postanovlenie TsK KPSS i Soveta Ministrov SSSR, "O merakh po dal'neiyshey ey industrializatsii, uluchsheniyu kachestva i snizheniyu stoymosti stroitel'stva" (23 August 1955), in E. Tyagay (ed.), *Resheniya Partii i Pravitel'stva po Khozyaystvennym Voprosam 1917–1967 g.* (Moscow: Izdatel'stvo politicheskoy literatury, 1968) (Resolution of the Central Committee of the KPSU and the Council of Ministers of the USSR "On the measures for a future industrialization, improvement of the quality and decrease of cost of construction"). The resolution was specified and extended two years later, on 31 July 1957. Ibid. See also *Postanovleniya Partii i Pravitel'stve ob Arkhitekture i Stroitel'stve. Krotkij Istorikobibliograficheskiy Spravotchnik* (Moscow: 1974) (Resolutions of the Party and the Government on Architecture and Construction. A short historical-bibliographical handbook).

9 Isabelle Amestoy, "Les grands ensembles en Russie, de l'adoption d'un modèle à la désaffection. Le cas de l'habitat khrouchtchévien" in Frédéric Dufaux and Annie Fourcaut, *Le Monde des Grands Ensembles* (Paris: Éditions Créaphis, 2004), 130.

10 Colton, *Moscow*, 371.

11 This sentiment is still noticeable to date. Nicolai Ouroussoff, "Russian Icons," *New York Times* (15 May 2005). See also Barbara Engel, ",Blaue Städte' in Sibirien" *Der Architekt* 4/2001: 50.

12 Starting with the 5-year plan 1956–60, close to 300 million square meters of residential space were completed in the Soviet Union per five-year plan, a number that remained approximately the same until 1990. In the preceding five-year plans the number was only half to one third: approximately 150 million square meters in 1951–55 and approximately 100 million square meters 1946–50. In all preceding five-year plans, the number oscillated around 50 million square meters. Amestoy, in Dufaux and Fourcaut, *Le Monde des Grands Ensembles*, 131.

13 See for example Amestoy, in Dufaux and Fourcaut, *Le Monde des Grands Ensembles*, 137.

14 Ministerium für Bauwesen der DDR and Gosgrazhdanstroi (State Committee for Civic Construction), (eds.), *Neue Wohnkomplexe in der DDR und der UdSSR* (East Berlin: Verlag für Bauwesen and Moscow: Strojizdat, 1987), 41.

15 Barbara Engel, *Öffentliche Räume in den Blauen Städten Russlands* (Berlin: Wasmuth, 2004), 72–3.

16 French, *Plans, Pragmatism, and People*, 135–6.

17 French, *Plans, Pragmatism, and People*, 150.

18 Michael Gordon, "Yeltsin Attacks Soviet-Era Housing Benefits," *New York Times* (13 July 1997).

19 The figure is from 1997. Robert Rudolph, "Segregation Tendencies in Large Russian Cities: The Development of Elitist Housing in St. Petersburg" in Isolde Brade (ed.), *Die Städte Russlands im Wandel* (Leipzig: Institut für Länderkunde, 2002), 205.

20 Aleksander Rakhlin (member of European Net of Housing Research), *Social Housing in Russia* (written in 2002), http://www.hic-net.org/articles.asp?PID=226

21 Raymond J. Struyk, "Housing Privatization in the Former Soviet Bloc to 1995" in Gregory Andrusz, Michael Harloe and Ivan Szeleny (eds.), *Cities after Socialism* (Oxford: Wiley-Blackwell, 1996), 196–8.

22 Ibid.

23 World Bank Data, available on the World Wide Web, June 2007. http://siteresources.worldbank.org/INTRUSSIANFEDERATION/Resources/macromay2006.pdf

24 Based on the calculation of the national food basket, in 2005 15.8% of the Russian population lived below the poverty line. Based on national averages, the statistics does not reflect the immense gap in living expenses between urban and rural areas.

25 Rudolph, in Brade, *Die Städte Russlands*, 237.

26 French, *Plans, Pragmatism, and People*, 78.

27 Gordon, "Yeltsin Attacks," *New York Times*.

28 Ibid.

29 Ibid.

30 The buildings are situated on n. 24 and 30, Ulitsa Mezhdunarodnaya and on 12/1 and 18/1 Ulitsa Khodynskaya; panels are taken from the P-32 series. Anna Svetlichnaya, "Panel'nye pyatetazhki stanovyatsya redkost'yu," *Kommersan,t* (12 December 2005) (5-storey panel buildings are becoming rare), online version http://www.irn.ru/articles/5611.html, accessed in March 2007.

31 Ibid.

The Suburban Tower

and Toronto's Legacy of Modern Housing

■ GRAEME **STEWART**

"In Toronto, an unusually large number of high-rise apartments poke above the flat landscape many miles from downtown . . . this is a type of high density suburban development far more progressive and able to deal with the future than the endless sprawl of the US. . ." Richard Buckminster Fuller, 1968 [1]

SUR LE CONTINENT AMÉRICAIN, LE LOGEMENT SOCIAL EST MOINS LE FRUIT D'UNE POLITIQUE ÉTATIQUE QUE D'UN ENSEMBLE D'INITIATIVES SEMI-PRIVÉES OU PARFOIS PHILANTHROPIQUES. LE CAS DE LA RÉGION MÉTROPOLITAINE DE TORONTO APRÈS LA SECONDE GUERRE MONDIALE A MONTRÉ QUE LES ENTREPRISES PRIVÉES DOMINAIENT LE SYSTÈME DE CONSTRUCTION D'HABITATS. CELLES-CI, LORSQU'ELLES ÉTAIENT ASSOCIÉES À DES POLITIQUES URBAINES LOCALES, GÉNÉRAIENT SOUVENT DES PAYSAGES DENSES DE TOURS, RIVALISANT PRESQUE AVEC CEUX DE L'URSS. NÉANMOINS, À TORONTO C'EST UN PAYSAGE MIXTE QUI A VU LE JOUR, OÙ BUNGALOWS INDIVIDUELS ET BARRES COHABITENT, COMME LE DÉMONTRE ICI GRAEME STEWART.

MUCH OF the mythology surrounding Toronto is focused on the image of a "city of neighborhoods," enabled by the city's early rejection of modernism through citizen groups and the Reform council. Yet what is perhaps of equal interest is the thoroughness and completeness with which Toronto accepted the modern project prior to this point.

Contrary to the common notion of the North American City, the legacy of outward expansion in Toronto was, for the most part, multiple dwellings of high density. Organized by a regional planning body during the period of explosive postwar growth, the area contains many experiments in modern planning, most significantly, nearly one thousand high-rise "tower in the park" apartment buildings spread throughout the region. A result of influences including the US and Welfare State Europe, Toronto's postwar communities represents a hybrid form shaped by top-down regulation implemented through the private market and financed by the boom of the 1960s and 1970s.

TODAY, inside the boundaries of the City of Toronto, the prewar typology popularized by the late Jane Jacobs represents a minority within a city of predominantly modern conception. The influence of Metropolitan guidelines has resulted in a dominant fabric both typologically and organizationally at odds with the historic city, and with many of its North American counterparts.

This poses some interesting questions, in terms of Toronto's developmental relationship within the North American city system, and in assessing contemporary planning issues facing the region. Specifically: how did this form come to be and what does it mean for Toronto's future?

METROPOLITANIZATION AND A MODERN PLANNED REGION

Although apartments were considered by local administration as a detriment to society prior to the Second World War,[2] the modern high-rise became a significant feature in the postwar urbanization of Metropolitan Toronto. This typology was first introduced to the city through City Park apartments in 1954. Built downtown in response to density allowances as a result
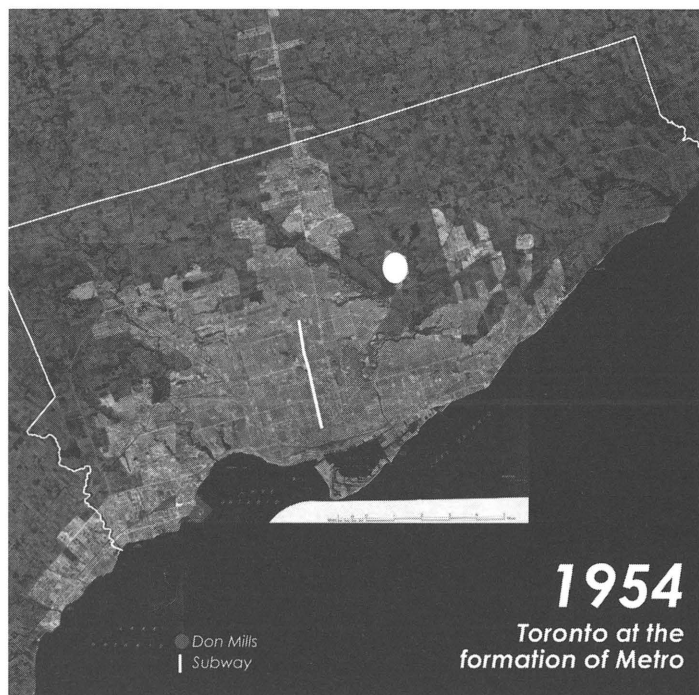
23

1954
Toronto at the formation of Metro

Don Mills
Subway

Fig. 1. Metro 1954: The borders of Metropolitan Toronto at the time of its formation in 1954, with urbanized area (light grey), agricultural areas (dark grey), subway (white line) and Don Mills Satellite community (white central oval)

for the region. Regional administrative consolidation officially took place on 1 January 1954, when Metropolitan Toronto was established. This was the first regional government of its type in North America since New York City.[5]

METRO'S mandate was to encourage growth through the harmonization of private development and public infrastructure through effective planning. Premier Frost stated, while tabling the new legislation that created Metro, "The solution of the housing problem is dependent . . . on arterial roads, credit . . . water sewers and co-operations of municipal governments."[6] It was felt the unification of services and planning was a key process in fostering new development and economic growth.

The borders of Metro contained Toronto, as well as several adjacent townships and villages, allowing for coordinated planning of the urban center, suburban periphery and agricultural hinterland under one administration. Targeted for substantial economic and population growth, the form of development within its extensive yet finite boundary lead to several experiments in modern planning during the following decades, the modern apartment tower playing a prominent role.

of the subway, it was heralded as a modern "European" approach to city building.[3] This was followed by English-Canadian architect Peter Dickenson's award-winning Governor General Regent Park, a social housing and urban renewal project in the downtown East side. Yet it would be in the expanding postwar communities that the modern tower would gain its prominence.

THE MOST SIGNIFICANT feature that shaped postwar Toronto was the establishment of the Metropolitan Government. The process of Metropolitanization was set in place almost immediately after the war. The Toronto Planning Department was established in 1942, soon followed by the Toronto and Suburban Planning Board.[4] These agencies quickly developed a series of plans

THE INVERTED METROPOLIS: PROMOTING THE SUBURBAN TOWER

In the wake of the formation of Metro, Toronto became an attractor for international, particularly European trained, modern planners. In conjunction with professional imports, a significant number of local planners and designers received modern training internationally, while at the University of Toronto, faculty successfully pushed for a modern curriculum within the design schools. The resulting combination of an eclectic mix of eager professionals, as well as a regulatory framework enabling the implementation of large-scale planning, set the stage for urban growth that was highly influenced by modern ideas.

Fig. 2. Sheppard and Finch Landscape: Typical view from apartment within Toronto's vast postwar communities

AMONG the leaders of international planners at work in Toronto were Englishman Gordon Stevenson and German émigré and card-carrying Communist Hans Blumenfeld, both of whom left the US for Canada during the turbulent years of McCarthy politics.[7] Coming to Toronto perhaps out of necessity, they were pleased to find a strong planning body with a mandate of regional management.[8] Once in Toronto, they advocated for comprehensive planning which would enable fully functional communities in the periphery. Sceptical of unregulated free market development, as well as the commuter towns which developed in the interwar and immediate postwar periods, they promoted guidelines which equitably distributed employment, transportation and housing throughout expanding regions, as well as accommodated all classes of workers.[9]

STEVENSON was a leader in the welfare-state planning involved in establishing the UK's New Towns Act. In Toronto, along with work in the City, he saw a brief tenure at the University of Toronto's nascent planning department, working with fellow British expatriate and CIAM member Jacqueline Tyrwhitt. Tyrwhitt, who was in Toronto working with Marshall Mcluhan, had a direct link to the British Modern Architectural Research group (MARS),[10] and with Stevenson was partly responsible for bringing ideas of modern planning to Canada.[11] He encouraged "mixed development," promoting varied housing typologies and densities in Toronto's outward growth.

IT WAS believed that significant apartment housing was needed in peripheral regions in order to facilitate employment, transit and social objectives.[12] In England these ideals manifested themselves in projects such as Roehampton. They soon entered the Canadian consciousness through early publications of *Community Planning Review*[13] and *Canadian Housing Design Council*,[14] as well as a large number of British trained design professionals working in Canada. Master planned and mixed density peripheral development had become an interest of national housing agencies. The creation of official plans of Metropolitan Toronto and its municipalities by Blumenfeld, Stevenson and their contemporaries helped push these ideas into policy.

THE FORM OF THE REGION: SATELLITE, EXPANSION AND HIGH-RISE

One of the key missions of Metro was the use of government intervention to ensure the "continued climate of economic expansion."[15] Planners would determine the overall framework and private developers would be the instrument of execution. In planning housing, industry and natural zones, two competing, yet complementary ideas emerged; what could be described as the "satellite" and "expansion" models.

THE SATELLITE MODEL, derivative of the *garden city*, was originally proposed in the Toronto Metropolitan master plan of 1943. The plan called for the creation of a definitive greenbelt around the historic city and populating the periphery with self-contained, "complete communities" physically separated by green space.[16] In contrast, alternative plans argued for complete "expansion," dividing existing agricultural concessions into zones of industry or residence and conceptualizing the entire Metro area as "developable."

This approach was first proposed in the 1946 plan for the Metro Borough of Etobicoke, developed by Roman-trained Hungarian architect and planner E. G. Faludi.[17] Faludi was a key figure in bringing the principles of modernism to mainstream Toronto planning circles and development industry.[18] Faludi's plan articulates land use planning and neighborhood unit development using the principles close to those elaborated by the CIAMs. Most strikingly, it extended Toronto's macro grid into the countryside, outlining a framework for new low and high

Fig. 3. *Slab Farm:* Tower development in rural areas, early 1960s

Courtesy of the archives of *Canadian Architect Magazine*

density projects. After a handful of experimental satellites to be discussed below, "expansion" became the primary operating model of Metropolitan Toronto.

GAINING early traction as a counter to unregulated sprawl, the satellite model first emerged in practice with the development of Don Mills in the early 1950s; designed by Harvard graduate Macklin Hancock, the project was both ground breaking in its modern urbanism, and a financial success for developer E. P. Taylor. It was described by English planner Sir William Holford as "the most attractive (new) town that I have ever seen."[19] The satellite town, bounded by forks of the Don Valley Ravine system at the edge of Toronto, provided industry, shopping, mixed-housing types, and ample natural open space. Insisting that all structures be modern in character, Don Mills quickly became a showpiece of high design and an attractive alternative to living downtown. Yet, though containing substantial apartment housing, these were of the mid-rise type.

Flemingdon Park Master Plan, 1958

Fig. 4. Flemingdon Master Plan: The initial master plan in 1958 by Macklin Hancock

IT WAS NOT until the Metro borough of North York removed its height restrictions that suburban apartments reached their full potential in the housing mix. The two projects which fully catalyzed the use of the suburban apartment tower were Thorncliffe and Flemingdon Park, planned in 1955 and 1958, respectively, and offering high-rise towers and slabs "in the park" as the dominant housing type, within master planned and contained communities. With groundbreaking in the late 1950s, they were the first privately developed, suburban apartment neighborhoods in North America.

PLANNED as a "complete community," they were to offer all of the amenities necessary for community living. Macklin Hancock, planner of Flemingdon Park, describes the project's intent as: ". . . to create a new community of urban character—to correct the formless sprawled peripheral sectors of Metro Toronto."[20] English planners, influenced themselves by Scandinavian projects, saw the modern "tower in the park" as key to providing equitable and healthy housing at high densities. British advocates working for the London County Council, such as Frederick Gibberd, saw towers as the model that combined the best housing standard possible with the responsible use of land.[21] Many of these same arguments were used in the creation of these projects. In fact, tours of modern tower communities such as England's Roehampton and Stockholm's Vällingby by members of Toronto's City Council granted final planning approvals.[22]

Upon completion, Flemingdon featured innovative and internationally published housing and cultural institutions by Toronto architects Irving Grossman and Raymond Moriyama. It also became the home of Toronto's new Science and Technology Museum (Ontario Science Centre), as well as temporarily proposed as the site of the new headquarters of the Canadian Broadcasting Corporation. Highly ambitious, it was a project of national significance.

THESE INNOVATIVE master planned communities set the precedent for high-density development throughout the expanding Metro area, yet today remain anomalies within development which primarily took place along a grid of expanding arterial roads. The expansion model ultimately became favored, (paradoxically) as it was argued to lead to a more compact region. Planners were sceptical of the satellite model's ability to contain new populations within servicing limits, as well as the

challenges it posed for private development."[23] Gradual growth by accretion" was felt to bring desired social and economic benefit[24] in a manor satisfactory to the objectives of planners, municipalities and private developers, alike.[25] For the most part, subsequent communities followed flexible district guidelines rather than comprehensive master plans.

THE TOWERS, themselves, were often marketed for their sophistication; promoted for their "Jetsons" aesthetic and especially in the playful work of Estonian/Canadian architect Uno Prii becoming an attractive and modern alternative to the aging downtown. For many, high-rise apartments symbolized a new world and a nation confident after the war. They also represented a highly profitable real estate venture fuelled by a robust economy.

The encouragement of density offered profit margins for both speculative developers and municipalities looking for tax revenues. This generated fierce competition among municipalities for new projects.[26] A convergence of planning ideology and the development market created a diaspora of the typology, with towers quickly appearing throughout the entirety of the Metro region. Ironically, the towers became the symbol of both top-down planning and free market development.

BY THE EARLY 1960s, the "tower in the park" was not only the most popular form of development, it was also the only legal type of mass housing.[27] Guided by the official plan, and supported by Faludi's critical review of mid-rise apartment clusters emerging in Toronto's inner city neighborhoods, maximizing open space became a key concern.[28] The sixty to seventy percent open space formulas common in the suburbs became endorsed by the Canadian Mortgage and Housing Corporation as a requirement for all new projects in the City.

The planning policies not only reinforced the mode of development now common in the periphery, as a corollary, it stipulated the application of this form within the historic city.[29] Eager to make up for tax assessments and status lost to the suburbs, Toronto forged ahead with towers of this type in its historic districts. The contentious situation, which resulted in heightened criticality of modern planning, and the innovative response of the architectural community, citizen groups and the Reform council—most famous for height restrictions, development freezes and the cancellation of Toronto's urban highway program—need not be reiterated here.

REJECTION AND LEGACY: THE MODERN TOWER IN A CONTEMPORARY CONTEXT

By the end of this period of postwar growth, "multiples" outpaced single detached and "semis" by a ratio of 2:1. By 1966, at the peak of Toronto's first mass housing boom, nearly forty percent of the city's housing stock and seventy-seven percent of housing starts were apartments of this type.[30] Nearly thirty thousand high-rise units were built in 1968 alone. Seas of bungalows were privately developed in concert with hundreds of tower blocks throughout the sprawling Metro area. Clusters of residential high-rises as far as twenty kilometers from downtown contained densities as high as 350 people per hectare,[31] resulting in a region with nearly twice the density of Greater Chicago.[32] The regional urban form of Toronto planned under Metro gives it opportunities and challenges unique to North America.

Fig. 5. Thorncliffe Construction: Thorncliffe Park under construction with accompanying advertisement
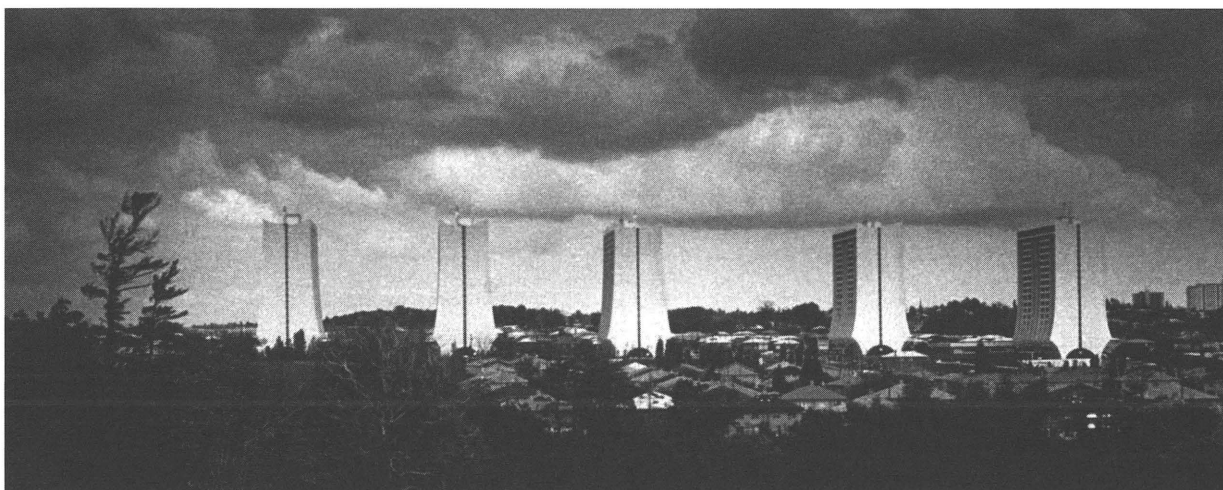

Courtesy of the archives of Canadian Architect Magazine

Courtesy of the archives of Lockwood Survey Corporation Limited

Fig. 6. Thorncliffe Downtown: View of the Thorncliffe Park master planned community, with downtown Toronto in the distance, early 1970s.

However, during the subsequent decades following the success of Toronto's "Reform" movement, these communities have fallen out of the general urban discourse. As an unintended corollary of the criticism of modern regional planning and the emphasis on historic fabric implicit in the "Reform" movement, projects from the modern period experienced widespread rejection; casting areas of the City housing millions of residents as undesirable. Products of neglect, several of these neighborhoods have fallen into significant disrepair.

NEW RESEARCH from the University of Toronto[33] outlines that Toronto is currently suffering from startling and increasing income polarization. While the historic center

Fig. 7. Uno Prii: Five Towers by Estonian/Canadian architect Uno Prii in a postwar community in Northwest Toronto

is becoming increasingly wealthy, areas of the city considered "Priority Neighborhoods" of acute poverty and lacking services are all examples of the postwar communities in question. The recent Paris riots reinforce the inequity and social tensions that may arise if this trend is to continue.

Another unexpected outcome is the high energy usage associated with these buildings. Predating building science, they require up to twenty-five percent more energy per square meter than a typical single family home,[34] responsible for a significant percentage of the region's greenhouse gas production. As issues of climate change and social inequity become central political concerns, reengaging this aging and significant housing stock is becoming a key priority.

Following the lead of experiments in tower neighborhood refurbishment in the EU, Toronto is beginning to consider the opportunities of a "Tower Renewal" program within the Canadian context.

REENGAGEMENT calls into question issues of "appropriateness" related to the needs of resident communities and modern heritage. However, that these buildings are once again beginning to be understood as an asset is an important shift. To reiterate Buckminster Fuller's musing of some forty years ago, these towers were created with the intentions of a progressive and well-planned city. With care, perhaps they may indeed meet these aspirations.

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Courtesy of the archives of Lockwood Survey Corporation Limited

Fig. 8. *Bathurst Green Belt*: Tower cluster at Metro's Northern border, with untouched farmland beyond

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Courtesy of the archives of Lockwood Survey Corporation Limited

Fig. 9. *Density in the Peanut*: The "peanut" neighborhood in Northeast Toronto, which boasts densities greater than many neighborhoods in the central city

Fig. 10. *Slab Landscape*:
Photo of typical apartment cluster as they exist today
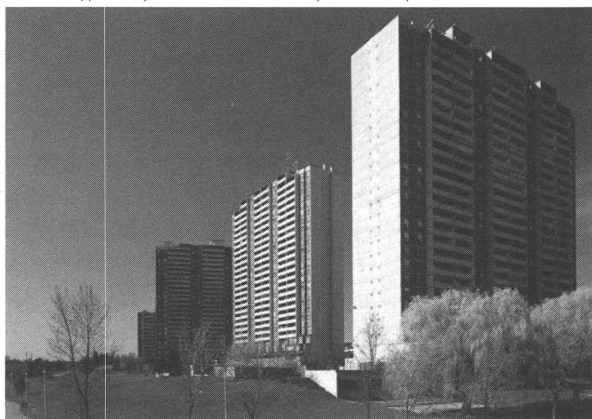
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Courtesy of Jesse Jackson

Brasília's
Superquadras

■ RICHARD **WILLIAMS**

There is a startling image of one of Brasília's residential *superquadras* (superblocks) taken by the French photographer Marcel Gautherot in 1960 *(fig. 1)*. It depicts a scene at 308 South, a mile or so from the developing commercial center of the city. It shows a children's playground baking in sunshine with a slide, a climbing frame and four seesaws; a small boy stands at the top of the slide facing backwards as if he is unsure what to do.

UNDER THE SHADE of a solitary palm, just visible on the left hand side of the image, a loose group of children sit or stand. There is an enervated quality to the scene, as if the heat is too much. But it is the background that is most arresting. It is dominated by one of the earliest of the residential slab blocks in the city, and shows, in this case, a rear view of the building. It is an extraordinarily blank façade. There are no windows, as such; just hundreds of small perforations, with horizontal bands of concrete running the length of the building. Its scale is hard to ascertain; it could be anything from five to fifteen storeys. On its pilotis it appears not to touch the ground; the repetitive pattern of the *azulejos* (Portuguese ceramic tiles) on the ground floor give it a machine-made quality, as if it has not been touched by human hands. It has a profoundly otherworldly quality; it might as well have arrived from outer space.

SIMILARLY to other early photographers of the city, that otherworldliness is the main impression Gautherot wanted to communicate. Gautherot well represents in photographic form Oscar Niemeyer's statement that he wanted to create a sense of "shock or surprise," in the city, a state of temporary alienation that, like the *merveilleux* sought by the Surrealists, would lift the visitor out of the everyday world of things.[1] It reiterates the uncanny quality of the city when first inaugurated, the sense that it was little more than a giant architectural model deposited without much thought in the middle of

Fig. 1. View of one of the first *superquadras.* Photograph by Marcel Gautherot

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■ DANS LES PAYS D'AMÉRIQUE DU SUD COMME LE BRÉSIL, LE SECTEUR PRIVÉ A DÉMONTRÉ ENCORE DAVANTAGE DE VIGUEUR QU'EN AMÉRIQUE DU NORD. LE CAS DES SUPERQUADRAS DE LA CAPITALE, BRASILIA, A FAIT LA PREUVE QUE CE TYPE D'INITIATIVE POUVAIT FAIRE RIMER AMÉNAGEMENT URBAIN ET VISION ARCHITECTURALE. NÉANMOINS, NOUS VERRONS DANS CET ARTICLE QUE LE PLAN PILOTE DE LUCIO COSTA – INSCRIT PAR L'UNESCO SUR LA LISTE DU PATRIMOINE MONDIAL DE L'HUMANITÉ EN 1987 – A CONNU UNE CERTAINE MUSÉIFICATION, QUI ROMPT AVEC LA LIGNE MAÎTRESSE PROGRESSISTE DE LA CAPITALE BRÉSILIENNE.

the Brazilian *planalto*. That was Simone de Beauvoir's impression on a rather grumpy visit in 1961.[2] And it alludes, albeit quietly, to the sense of the city as dystopia, a sentiment more publicly expressed a few years later in a brief, but faintly troubling, photo essay by the planner Colin Buchanan, "The Moon's Backside," published in the *RIBA Journal*. Here the city is depicted as having already fallen into a ruin, the marbled hall of the city museum awash with water from a leaking roof, and the residential blocks disgorging raw sewage into the surrounding landscape.[3]
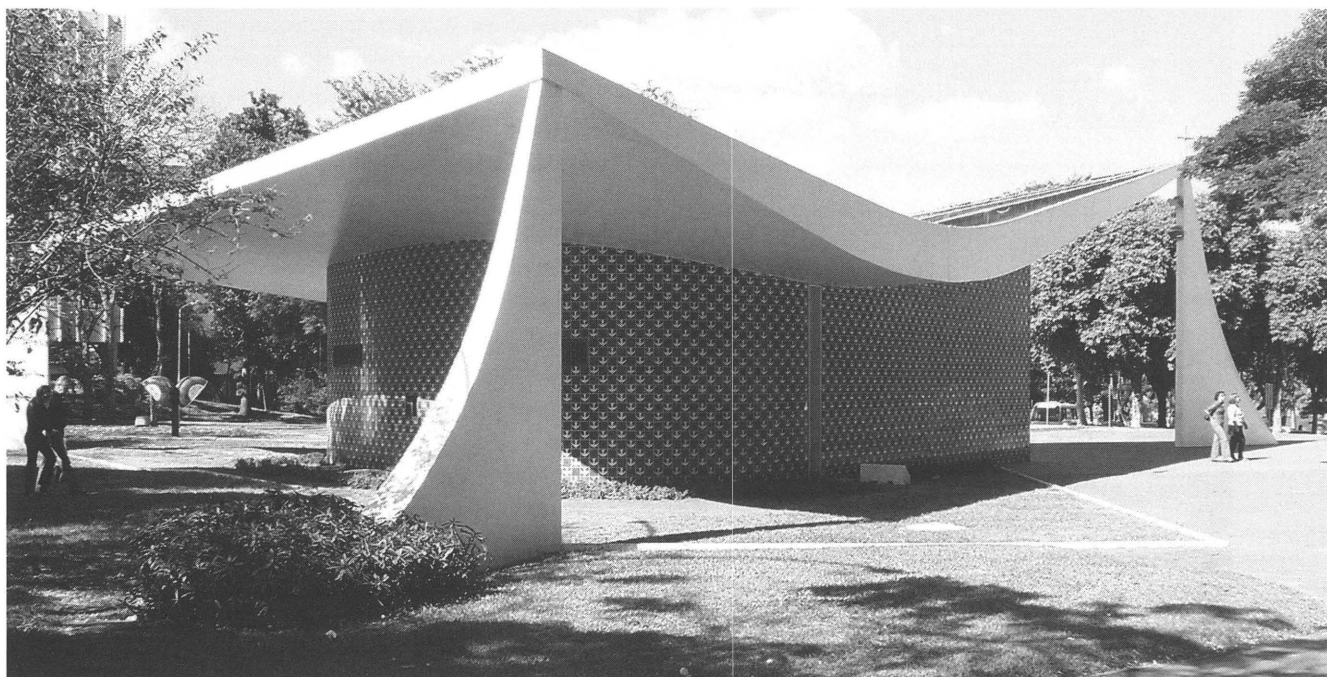
Fig. 2. **Oscar Niemeyer**, Igrejinha, Brasília, c. 1959

THE PLAN

Lucio Costa's winning competition entry for Brasília was notorious: submitted late and unofficially, it was also, in comparison to the other entries, astonishingly thin.[4] Nevertheless, what it had to say about the city was powerful, and remains so, clearly defining its form to the present day. The city is famously a cross, or an airplane, or a bird; at any rate it has two bisecting axes, with a short, formal *Eixo Monumental* (Monumental Axis) crossed at the central bus station by the 14km of the *Eixo Rodoviária* (Highway Axis), an eight-lane motorway built to (then) international standards, either side of which are aligned the residential sectors, organized in *superquadras*.

EACH SUPERQUADRA is comprised of six to eight slab blocks set in green space. There were a variety of ways of arranging the blocks, although they were always orthogonal (there is none of the picturesque informality found at, for example, Roehampton). Each block was imagined as a complete neighborhood, a mini village with a population of three thousand. Each would have a school, a community center, sports facilities, shops and sometimes a church within a few minutes walk, under trees, in areas well separated from traffic. The sketches in the Pilot Plan are rough, but show clearly what was envisioned. Greenery was of great importance; this was a plan for modest and undemonstrative buildings, whose simple forms retreated behind luxuriant parkland; this was, above all, a development that was imagined as a *de facto* park, drawing on the simple, understated imagery of the English New Towns. The architecture is simple and undemonstrative, and meant to dissolve before the spectacle of nature. In the submission, Costa wrote of his desire for trees to screen the blocks, and for

the architecture to "merge into the scenery."[5] He was notably unspecific about architectural style. As long as the blocks observed the general restriction on

Fig. 3. Superquadra, south wing, Brasília

height (no more than six storeys) and planning (traffic to be separated from pedestrians), then the façade could be variable.

GAUTHEROT'S PHOTOGRAPH of the children in front of the block at 308 South is therefore—however striking—somewhat disingenuous. It well represents the otherworldly character of the city as built, the sense of alienation de Beauvoir communicated so unambiguously in her 1960 travelogue. But it shows the blocks well before any serious planting. The blank façade would (as Costa's sketches clearly show) act a screen on which (in effect) images of the natural world would be projected. Gautherot's image is also disingenuous in terms of scale.

Fig. 4. *Superquadra*, south wing, Brasília

Fig. 5. *Reversed store fronts*, South wing, Brasília

Without trees to give scale, the block appears vast, unfathomably so. In fact, it is modestly scaled, far smaller than the modern blocks being thrown up at the same time all over Rio de Janeiro and São Paulo. Niemeyer's Edifício Copan (São Paulo), contemporaneous with this image, is a colossus by comparison: thirty-two storeys and seventeen hundred apartments in a single building. Brasília has often been compared with Le Corbusier's monumental *Ville Contemporaine*. A mistake—Brasília's residential sectors are modest, self-effacing and bucolic.[6]

A FURTHER POINT worth making about Costa's plan—and one usually overlooked—is how conventional, even conservative, it is in its imagination of the city's social life. Costa was, like his friend Niemeyer, a Communist, but he described himself as a social conservative, and the plan shows it. The superquadra is a deeply ordered and hierarchical place, with the church at the top. It is also a place that recognizes class distinction. Rather in opposition to Niemeyer's famous understanding of the city as "free from social and racial discrimination," Costa imagined a place in which minute gradations of class still existed, and would need to be framed architecturally.[7] "Social gradations can easily be regulated," he wrote, "by giving a higher value to certain blocks . . . the blocks closer to the highway will naturally be valued more highly than the inner blocks, which will permit gradations inherent to the economic system."[8]

IMPLEMENTATION

One of the curiosities of Brasília is the richness of post-occupancy studies, many in the field of anthropology. Many of these are motivated by a broader dissatisfaction with modernist planning, and see Brasília as an example of a global phenomenon rather than as something unique and specifically Brazilian. Their analyses of the implementation of the plan have tended to be negative, and have focused in particular on the relationship between the city's broad social aims of the project and the housing. This emphasis has produced generally negative conclusions, with numerous studies, for example David Epstein's in 1973, drawing a stark contrast between the 'plan' and the 'reality' of the city.[9] These analyses tend to be concerned more with architectural modernism and its perceived flaws than Brasília *per se*. As a result, they tend to miss things, not least the remarkably close relationship between Costa's plan and what was actually realized. Visit superquadra 308 South now and what you see is a more or less perfect iteration of what Costa intended. The planting is lush, with a different native tree identifying each block; there are well patronized restaurants and bars; there is a beautiful church by Niemeyer; everything is well cared for, not least the slabs themselves, whose communal areas underneath the pilotis gleam with polished marble. It is not just 308 South that exemplifies this, but the whole of the Western side of the South Wing; it is possible to walk from the Hotel Sector to at least 508 South under tree cover. It is a linear park exactly as Costa wanted. There are some good bars (the Beirute, at Block A, 109 South, founded in 1966, remains a vital meeting point for middle-class *Brasilienses*). There is an unusually good art-house cinema (Cine Brasília). For the most part, Costa's vision (whatever its flaws) is convincingly realized on the South wing.

ON THE SOUTH SIDE, the main deviation from the original Plan is the layout of the local shops. As Holston describes, the local stores were designed to face away

from the street and towards the superquadras, an arrangement that for residents immediately seemed counter-intuitive. In reality, the arrangement was reversed: store fronts became backs and a more or less traditional idea of the street was reinstated.[10] The practice was institutionalized in the newer building in the North sector with new storefronts facing outwards towards the street.

THE SOUTH WING is more or less complete; the North wing took longer and has seen some deviation from the plan, a fact that is obvious from the center itself, where the hotels and shopping malls on the northern side of the *Eixo Monumental* take on a sometimes decidedly American character. To walk from the center of the city to the middle of the South wing is to enter a linear park; to do the equivalent on the North side means entering what seems like an endless parking lot. The malls and hotels extend for a mile or so, and are (unlike their equivalents on the South side) mostly inward-looking, marooned in parking lots, though occasionally spectacular. The *superquadras* have little landscaping in contrast to the equivalents on the South side, and have been allowed to develop in a less regulated fashion. This has affected some basic planning issues: the individual blocks can be up to eight storeys, for example, and the newer blocks have introduced such things as underground parking and secure ground level entrances, elements which directly contravene the bucolic character of the original blocks.[11] The overall density remains the same—and is unusually low for Brazil—but in several other respects, such as the

hardness of the surroundings, and the inward-looking character of the urbanization, this is not much difference from an average middle-class housing development anywhere else in Brazil.

THE DIFFERENCE in urbanization between South and North wings is a repeated refrain in a highly amusing, but accurate, piece of reportage by the French novelist Jean Rolin in 1997: "the South is beautiful; the North, by contrast is," he writes, "the ugliest place I have laid eyes on."[12] The alterations to the nature of the urbanization detail changes, and occupy a grey area in relation to the Plan. But they add up to a significantly different form of urbanization, one much more urban than bucolic in character. This is underlined by the exterior treatment of the slab blocks, themselves. Where on the South wing the blocks are undemonstrative, using a limited set of repeated forms, forming, in effect, a blank screen against which the landscaping takes on a leading role, on the North side, the buildings are much more varied, colorful, garish, even baroque. They have extensive use of colored glass; there are balconies; there are penthouses and roof terraces; there are historical allusions.[13] In summary, it is a much more varied landscape, almost as if the harder quality of the landscaping (where it exists at all) demands some architectural relief.

THERE ARE some agreeably eccentric bits of the Plan on the North side. The revised guidelines for the North side saw the reinstatement of an idea of the traditional street

Fig. 6. 'Babylonia' shopping mall, Brasília
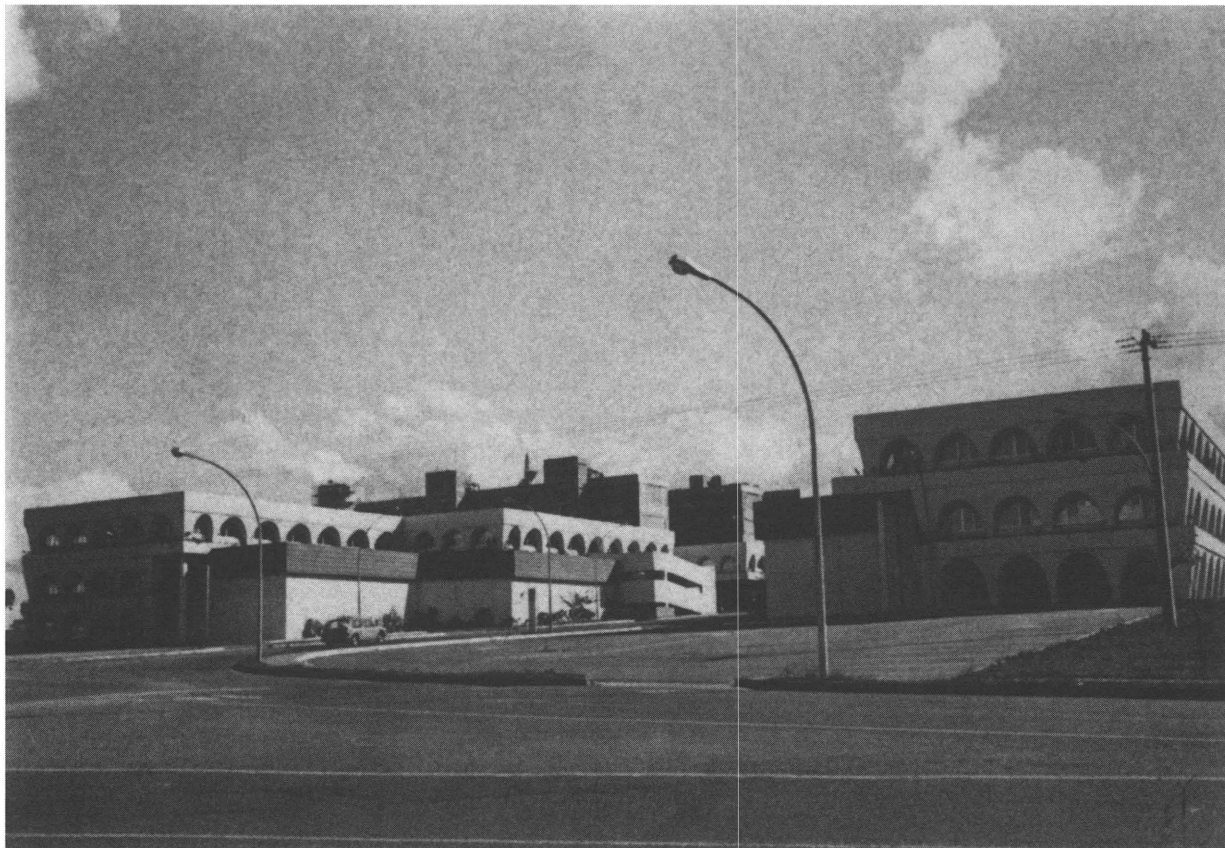
© image courtesy Chicago University Press

around the neighborhood stores—but as soon as this happened, the great quasi-Moorish shopping scheme popularly known as Bablyonia, came into view. A big, inward-looking shopping mall, orientated toward the car-borne visitor, it has bizarre North-African decoration, crudely applied. It is a negation of more or less everything the Plan stood for, but it is also an important landmark.

THE PILOT PLAN is nearly complete, and has been protected by a Unesco World Heritage order since 1987. Its completion, however, has come at a time when it is increasingly marginalized as a place of residence in the metropolitan city. It's been recognized since its inauguration in 1960 that the Pilot Plan would not and could not account for the entire population of the city. The population of the residential axes reached a peak in the 1970s at 250,000 or so, from which it is now declining. The reasons are partly economic—it is expensive. But they are also demographic. Most of the residents of the Pilot Plan are the original residents or members of their immediate families. The Plan's apartments are relatively small—rarely more than two bedrooms—and couples with families have begun to move out. The big beneficiaries have been Taguatinga, with a population of over 500,000, the economic and demographic giant of the federal region, and its new suburb, Águas Claras, which has begun to rival the Pilot Plan in scale if not yet in population. The residential areas of the Pilot Plan have something of a museum-like character, inhabited by an ageing, shrinking, wealthy population. The South side, in particular, is a modernist Bath, perhaps. The real city, a metropolis of three million or so, now lies somewhere else.[14]

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3 Colin Buchanan, "The Moon's Backside," RIBA Journal 74, 7 (April 1967): 159–60.
4 For a contemporary commentary on the Plan, and full English translation of it, see William Holford, "Brasília, A New Capital City For Brazil," Architectural Review 122, 731 (1957): 395–402.
5 Ibid.
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11 See Farès el-Dahdah (ed.), Case: Lucio Costa, Brasília's Superquadras (Munich: Prestel Verlag, 2005).
12 Yannis Tsiomis and Jean Rolin, "Brasília," L'Architecture d'Aujourd'hui 313 (October 1997): 76–87.
13 Francisco Leitão in el-Dahdah, Brasília's Superquadras, 66. Leitão regrets the loss of architectural "purity" in the later designs.
14 For more on the recent changes to the Pilot Plan, and new developments see Richard J. Williams, "Brasília After Brasília," Progress in Planning 67 (2007): 301–66, and "Niemeyer in Brasília," Blueprint 251 (February 2008): 34–9.

Fig. 7. View of Aguas Claras, 2005

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Finding **Housing**

SINGAPORE, INTERNATIONAL EXEMPLAR OF "POSITIVE PUBLIC HOUSING"

BELINDA **YUEN**

The continent of Asia contains over sixty percent of the world's total population, about fifty percent of its urban population, and over sixty percent of the world's urban population increase over the next three decades is expected to occur there.[1] Demographic estimates project a trend towards accelerated formation of very large urban agglomerations, including mega-cities with more than ten million people each, many in low-income countries. The majority (sixty percent) of the world's mega-cities are in Asia.

RAPID POPULATION and urban growth have serious implications for resources such as food, housing, employment and infrastructure. In particular, the phenomenon of slum formation, inadequate sanitation and poor housing conditions grows relentlessly in scale. Asia has the largest slum population in the world—sixty percent of the world's slum-dwellers (570 million) and the majority of the world's people who lack adequate water, sanitation and drainage.[2] Squatting is a spontaneous phenomenon, the result of inadequate or failed policies, planning, bad governance, inappropriate regulation, dysfunctional land markets, housing crises and a fundamental lack of political will.[3] But against this general "doom and gloom" picture of inadequate housing, Singapore emerges as a city that seems to have a handle on dealing with the shelter issue. Singapore is a modern city-state located in the sub-region of South-east Asia, just one degree north of the equator. Occupying a land area of 700 sq km, the city-state has a total population of 4.5 million. Its public housing program provides housing to eighty percent of the resident population (Singaporeans and permanent residents), many of whom (ninety percent) are home owners—no small accomplishment even in the Western experience of mass social housing.

YET, at the start of the current period of public housing development in the 1960s, the housing condition in Singapore was no different from that presently faced by many Asian cities: the mass of Singapore's poor lived in squalor, often without water supply, sanitary facilities or any basic health requirements. According to the 1947 Colony of Singapore Housing Committee Report, Singapore had some of the world's worst slums; about 550,000 people (more than half of its population) were

LES JUXTAPOSITIONS LES PLUS EXTRÊMES ENTRE CAPITALISME ET HABITAT SOCIAL ONT RYTHMÉ LA CONSTRUCTION À HONGKONG ET SINGAPOUR. DEPUIS LES ANNÉES 1950, CES ÉCONOMIES DE LIBRE ENTREPRISE SE SONT APPUYÉES SUR DE COLOSSAUX PROGRAMMES D'ÉTAT POUR LA PLANIFICATION DE L'HABITAT SOCIAL. CEUX-CI INCLUAIENT AUSSI BIEN DES BLOCS D'APPARTEMENTS LOCATIFS QUE DES PROGRAMMES D'ACCESSION À LA PROPRIÉTÉ – PLUS NOVATEURS POUR L'ÉPOQUE. À SINGAPOUR, LE GOUVERNEMENT DIRIGISTE MIT EN ŒUVRE LE PROGRAMME LE PLUS CONSÉQUENT, À TRAVERS DES POLITIQUES D'INCITATION FISCALE PRUDENTES ET DES PLANS D'URBANISME ÉNERGIQUES. EN TERME DE « PATRIMOINE » ARCHITECTURAL, LA VALEUR DE CE PROGRAMME URBAIN, QUI CONTINUE AUJOURD'HUI D'ÉVOLUER QUOTIDIENNEMENT, EST DÉLICATE À ESTIMER. MAIS, À L'ENCONTRE DE LA STIGMATISATION QUI MARQUE SOUVENT LES GRANDS ENSEMBLES EN OCCIDENT, IL OFFRE UN EXEMPLE DE CONSENSUS SOCIAL ET POLITIQUE JAMAIS ATTEINT PAR AUCUN AUTRE PROGRAMME DE LOGEMENT DE MASSE AU XXᵉ SIÈCLE.

living in slums and squatter areas on the urban fringe, in temporary dwellings made of *atap*, old wooden boxes, rusty corrugated iron sheets and other salvage materials. The remainder, living in the city area, had densities of over 2,500 persons per hectare. As recounted by Mr. Lim Kim San, first chairman of the Singapore Housing and Development Board, overcrowding was the norm:
"I went into a three-storey shophouse with one lavatory and two bathrooms. We counted two hundred tenants living there. It was so dark and damp. It was an inhuman and degrading existence. Underneath the staircase was a single plank. A man was lying on the plank. He had rented it. That was his home! And he was lying down

covered by a blanket; the thick red blanket made in China. I paused to ask him if he was sick: 'Why are you covering yourself with a thick blanket?' He replied: 'I am covering myself out of respect for you. I am wearing only undershorts. My brother is wearing my pants.' They were too poor to afford clothing. In those days, there were shops which pulled clothing and shoes off the dead to sell them. 'My God,' I thought to myself, 'I really must help those people.'" (*The Straits Times*, 9 August 1997)

AS WITH MANY OTHER CITIES in developing countries, the housing problem in Singapore had two fundamental challenges. First, there was insufficient decent housing to meet the needs of the growing urban population (average annual growth in 1947–57 was 4.4 percent). Second, housing provided by the private sector was beyond the financial means of low-income families. The poor, not being able to afford decent private housing, had to continue living in overcrowded and often life and health-threatening conditions.

Housing surveys revealed the magnitude of the housing provision: for the ten-year period 1961–70 at least 147,000 new housing units were required, of which eighty thousand were to relieve existing overcrowding, twenty thousand to resettle families affected by central area redevelopment and the remaining forty-seven thousand to accommodate natural population increase.[4] As the private sector could only build three to four thousand units of housing a year for the upper and middle income groups, public housing would be required at the rate of eleven thousand new dwelling units a year for those unable to afford private housing. The challenge was taken up by the newly elected government (Singapore was granted internal self-rule in 1959 and independence in 1965), which had won the election on a manifesto of providing employment and housing. Public housing provision during the colonial administration (1819–1959) was largely limited, as housing was viewed as a transient issue that would disappear with economic growth. The outcome of these laissez-faire attitudes was housing stress.

THE NEW STATE commitment is a key cornerstone of Singapore's post-independence public housing intervention strategy. Unlike many other developing countries that looked on housing as a social problem to be addressed after economic progress, Singapore considered the two activities—economic growth and social development—as of equal and symbiotic importance. Two statutory agencies, the Economic Development Board and the Housing and Development Board (HDB), were immediately set up in 1960 with financial, legal and institutional powers to effectively enhance the supply of jobs and housing, respectively. This complementary relationship between employment and housing has (so political-legitimacy analyses have

Fig. 1. *1980s HDB public housing in Singapore*: Ang Mo Kio New Town, 1985 view of south zone from Block 714 (20-storey tower block) showing predominantly 12-storey slab arrangement

Fig. 2. *1980s community planning by Singapore's HDB*: 1985 view of 20-storey tower blocks and mosque (Masjid al Mutaqin) in Ang Mo Kio New Town; Block 71 is the nearest of the 20-storey point blocks

argued) played a key role in the Singapore government's enduring political performance.[5]

THE CORE OBJECTIVE of Singapore's public housing program is to provide affordable housing to all in need of shelter. Rejecting the popular but incremental construction of assisted and self-help housing, Singapore set off a comprehensive sector review and development of public housing. Of significance is the crystallization of the two basic functions of the HDB that have set the context for adequate housing delivery and changes in housing conditions for the poor:

- provide housing of sound construction and good design for the lower income groups at rents which they can afford (HDB Annual Report, 1962); and
- encourage a property-owning democracy in Singapore and enable Singapore citizens in the lower middle income group to own their own homes (HDB Annual Report, 1964).

THE FIRST is in line with traditional social-housing philosophy: the state as a provider of housing. The second is altogether new: by strengthening the owner-occupation tenure through building mass public housing specifically *for sale*, it allows the state to assume the role of facilitator and social engineer. As the national housing authority, the HDB is empowered to plan, develop and manage (in the latter case, prior to the formation of town councils in 1989) the whole production-consumption

process of public housing townships, with all their dwelling units and infrastructure. The construction of the housing and infrastructure, however, is contracted to the private sector. By centralizing its public housing effort under a single authority, Singapore has circumvented the common problems of duplication and fragmentation of duties, often associated with multi-agency implementation.

THE HDB has comprehensively planned housing developments and, since 1965, entire new towns, with neighborhoods and precincts of improved services and facilities *(fig. 3)*. For each of these facilities, planning standards have been developed to ensure that a quality service environment is achieved within a general framework of growth and modernization. The trend is towards self-containment of public housing townships, within which household members, especially those of low income, can fulfill most of their basic needs within the new town, albeit at relatively high density: work, shopping, school, entertainment, sports and other recreational pursuits *(table 1)*.

THE AVERAGE HEIGHT of most public housing apartment blocks is twelve storeys, but more recent developments have risen to thirty and fifty storeys. The trend is towards taller buildings with increased population growth and technological advancement. Notwithstanding the rise in building height, though, the thrust is to provide a better living environment for the residents. This policy is crucial to enhancing the attraction of relocation to public housing. As indicated by early resident surveys (1968 and 1973) on public housing tenants' present-past living conditions and more recent statistics on Singapore public housing residential mobility, there is a consistently high level of residents' satisfaction with public housing living: a significant 82.5 per cent of all households living in public housing have indicated that they would be content to always live in those flats.[6]

Fig. 3. Greenery, landscaping and school facilities are integral parts of the public housing landscape

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Table 1. Land use distribution and gross density of new town

LAND USE	PROTOTYPE NEW TOWN (60,000 DWELLING UNITS)	
	LAND AREA (HA)	PERCENTAGE
commercial (town center and neighborhood center)*	30	4.6
residential**	347	53.4
schools	62	9.5
open space	26	4.0
sports complex	7	1.1
institutions	15	2.3
industry***	44	6.8
major roads	89	13.7
utilities and others	30	4.6
total	650	100.0
gross new town density	92 dwelling units per hectare	

notes:
* includes civic, cultural, recreational uses and incidental developments in the town and neighborhood centers
** includes private housing within the town boundary
*** non-pollutive industries only
Source: HDB (2000a)

A PUBLIC HOUSING PROGRAM on this gigantic scale also has its challenges. For example, to build cheap and fast, a strategy of standardization by building prototype flats and blocks has been adopted. In addition, the HDB uses long-term supply contracts and bulk purchase strategies to ensure the continuous supply of essential building materials at steady prices. While these pragmatic development interventions may have facilitated the rapid construction of dwelling units, standardization of building blocks has led to criticisms of cookie-cutter, monotonous townscape in many of the early public housing town developments.[7] Shoddy workmanship and building defects (for example, cracks in walls and ceilings, inferior fittings, frequent lift breakdown) are another problem in several of the early quick-built projects that attracted many complaints, and even provoked debate in parliament. Learning, modifying and innovating, are the keys to rectifying any problems in the next cycle of construction improvement. Quality considerations have gained greater emphasis with the fall in housing shortage.

AGAINST the quest for a distinctive city in the global age, attention on the place-identity of public housing townships and neighborhoods has intensified *(fig. 4)*. The HDB has devolved its estate management function to town councils, comprised of residents. Through the town councils, residents can get involved in the management of their towns. Experiences to date have shown that the reform of centralized comprehensive mass social housing is anything but regularized and static. It requires a dynamic solution-seeking capacity committed to a

continual process of learning and improving housing policies and creating diverse interventions to confer the desired benefits of the target families.

PRICE-ACCESS into the HDB's uniquely balanced program of new dwellings for rental and home ownership remains important in meeting the housing needs of the poor, and is very much guided by affordability. As Singapore's Minister for National Development explained in 1996, "When we price our flats, we don't just price them based on our costs. We price them with an eye on the affordability for those who are purchasing them, and we try to keep that level of affordability the same over the years."[8] At that time, the government gave a commitment that, should incomes not increase, neither would the prices of three- and four-room HDB flats.[9] The policy, still maintained today, is to set the price of four-room flats to the affordability level of seventy percent of Singaporean households, while the price of three-room flats will remain affordable to ninety percent of households. In other words, no one is discriminated or excluded from housing on grounds of affordability.

ALTHOUGH the public housing program began on an exclusively rental basis, the new and internationally

Fig. 4. Upgrading old blocks and towns to make them relevant to current needs: Ang Mo Kio Avenue 1, seen in 2003

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innovative policy of home ownership of public housing on a ninety-nine-year lease was launched in 1964, to "enable Singapore citizens in the lower middle income group to own their own homes."[10] Under the publicly set out eligibility and allocation framework, which continues today, an income ceiling serves as a cut-off point to help low income families gain access to the program: applicants whose total household income exceeded the eligibility ceiling thus did not qualify for public housing. Flats are allocated on the basis of need, families before singles, on a first registration basis in line

with the government's wider social development policy.[11] To happen on a society-wide scale, mass home ownership requires affordable housing credit—achieved through state assistance with down payment and mortgage interest payments. The aim is to ease front end loading and mortgage financing problems for the potential purchasers so as to encourage renters, including lower income families, into owner occupation. The most significant assistance for homeowners was perhaps a 1968 enhancement of the home ownership scheme, which allowed buyers of public housing to withdraw a portion of their savings in the Central Provident Fund (CPF) for a down payment (twenty percent of purchase price) and mortgage payment (the remaining eighty percent of purchase price, paid in installments through an HDB assisted mortgage loan with interest rates set below the prime rate). These CPF savings represent accumulated funds from the worker's pay-as-you-go social security scheme to which both employer and employee make mandatory monthly percentage contributions.[12] On average, a flat applicant who has worked for four to five years would be able to pay the twenty percent down payment using their CPF savings, thus eliminating the need for cash outlay. The use of CPF savings for housing is an attractive financing solution as monthly mortgage repayment for the flat is generally less than half of the individual's CPF deposit (leaving remaining CPF savings intact for retirement and take-home pay for other consumption). According to HDB records, the majority of first-time house buyers could pay their monthly housing loan entirely from CPF savings. Additionally, the CPF Board administers a low premium mortgage-reducing insurance scheme to protect the ownership interest of the owner's surviving family members in the event of death or incapacitation.

THUS, with the use of CPF, it became possible to own a flat for a lease of ninety-nine years without suffering a reduction in monthly disposable income. The impact of CPF on wealth generation has been much examined elsewhere.[13] This mechanism has made possible a paradoxical situation where, even though housing provision is dominated by the state, a high proportion of the public housing stock is under private ownership—successfully reconciling "under one roof" two policy approaches more usually, in other countries, projected into destructive opposition to each other. The proportion of home-ownership public flats increased from twenty-six percent in 1970 to ninety-two percent of Singapore's housing stock by 1999[14]—a situation unparalleled anywhere else in the world, even in that other Asian stronghold of public housing, Hong Kong. It is, arguably, this vital and innovative policy recipe, rather than the intrinsic architectural or urbanist characteristics of its developments (consistent in building quality, landscaping and maintenance though these are) that has been

the key ingredient in making Singapore the world's foremost stronghold of "positive public housing."

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13 See Low and Aw, *Housing a Healthy*; and Chua, *Political Legitimacy and Housing*.
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2- INVENTORIZATION AND RECORDING
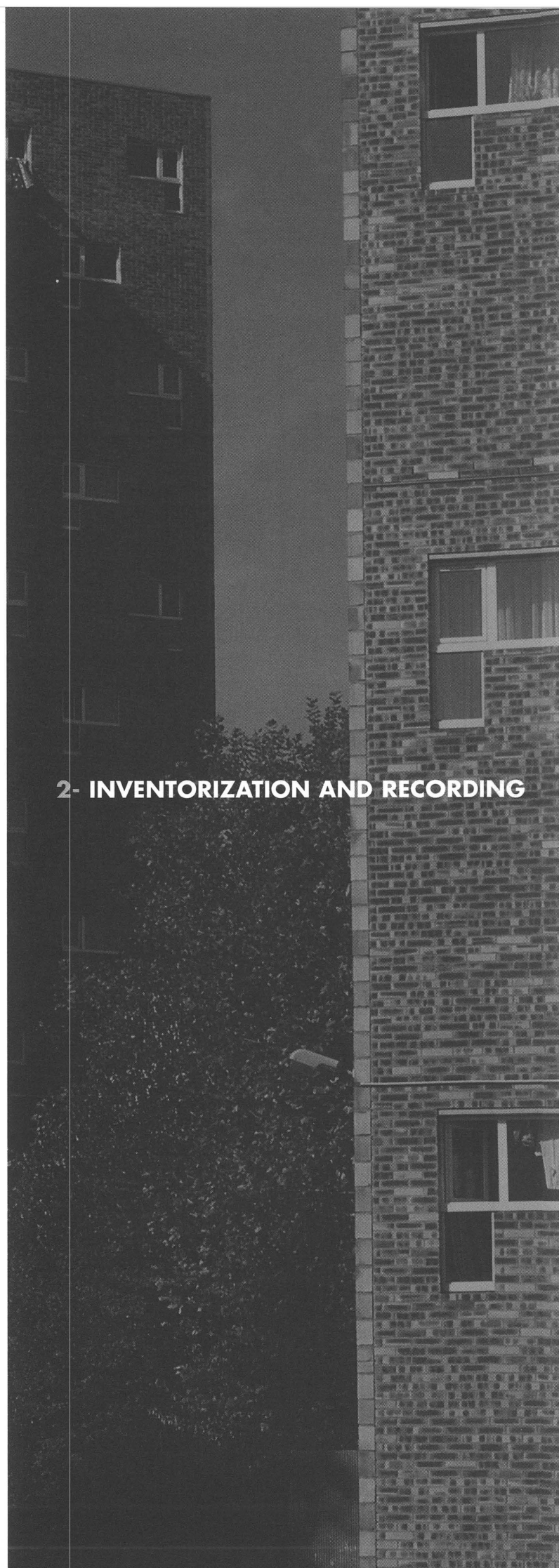
The Cumbernauld New Town Research and Inventory Project, 2006–9

■ DIANE M. **WATTERS** AND JESSICA **TAYLOR**

Cumbernauld New Town, designated in 1955 and built in 1957 with an initial target population of fifty thousand, was the most ambitious venture in Scotland (and Britain) of the second generation of post-1945 new towns.

LA VILLE NOUVELLE DE CUMBERNAULD, CONÇUE EN 1955 ET CONSTRUITE DEUX ANNÉES PLUS TARD, FUT L'INITIATIVE LA PLUS AMBITIEUSE MENÉE EN ÉCOSSE (ET EN GRANDE-BRETAGNE) EN MATIÈRE D'URBANISME APRÈS LA SECONDE GUERRE MONDIALE. L'AVENIR ET LA RÉHABILITATION DE LA VILLE – AUJOURD'HUI EN DÉSHÉRENCE ET HONNIE PAR SES HABITANTS – FONT L'OBJET DE RÉFLEXIONS DANS UN CLIMAT « ANTI-MODERNE » HOULEUX QUI FAIT OUBLIER COMBIEN SA CONCEPTION INITIALE ÉTAIT RÉVOLUTIONNAIRE EN TERMES D'URBANISME, DE DESIGN ET DE HIÉRARCHISATION SECTORIELLE. LE TRAVAIL D'INVENTAIRE RÉALISÉ PAR L'ÉQUIPE DE DOCOMOMO MET EN VALEUR LE POTENTIEL QUE CE PLAN D'URBANISME D'APRÈS-GUERRE RECÈLE ENCORE AUJOURD'HUI.

DESPITE being a multi-award winning urban design in the 1960s (receiving the acclaimed American Institute of Architects R.S. Reynolds Award for Community Architecture in 1967), the town has suffered from poor economic investment when compared to earlier indigenous "Mark I" New Towns, such as East Kilbride, begun in 1947, and Glenrothes, in 1948. The disbanding of its original politically powerful governing development authority (Cumbernauld Development Corporation) in 1993, amidst a general anti-modern movement cultural climate, has left Cumbernauld with a notorious reputation as one of Britain's most reviled products of postwar modern movement architecture and planning.

IN A PERIOD of unprecedented innovation in architecture and planning, the town, and in particular its high-profile megastructural Town Center (planned in 1959 and built 1963–67), attracted the interest of the international design press, but although it remained internationally prominent in elite architectural debates in the mid-1960s and 1970s (overlapping with the early period of construction), opinions within the architectural world began to slide from positive to negative in the mid-1960s. Despite criticism, the popular 'perception' of the town remained positive into the late 1980s, but by the early 1990s the general media-led narrative of Cumbernauld as a "deprived" community took hold—leading ultimately to a succession of bogeyman-awards bestowed upon the town, such as the UK's runner-up "Crap Town" in 2003. Cumbernauld's positive international reputation had apparently been forgotten. To date, Cumbernauld New Town is unique among British New Towns in that it has not been accorded a detailed and comprehensive historical study.[1]

In 2006, a three-year government-funded PhD project to examine the original vision and realization of Cumbernauld New Town was begun with two overall aims: first, to set the New Town within its wider historical and theoretical context, and second, to create a detailed inventory which would factually document the process of planning and building of Cumbernauld, identifying the main and detailed elements of the original strategic planning concept within the region, and its shifting strategy from the mid-1950s to the early 1960s.[2]

Fig. 1. Cumbernauld New Town, traffic sign, 1990

THIS BRIEF PAPER introduces the focal inventory element of the Cumbernauld project, and sets it within the wider context of heritage recording in Scotland and internationally. The inventory has been compiled using the Docomomo *urban fiche* methodology for inventorizing and analyzing urban ensembles and landscapes (including New Towns), via a hierarchical digital database, keyed into maps and images. The *urban fiche* format, established in 2004, was based on the highly successful Docomomo individual site register which details modern movement buildings of significance in over fifty countries. Although relatively modest in scale (it is anticipated that on completion in 2009, roughly 160 fiches will be sufficient to cover the entirety of the town), this pilot project aims to test the potential methodology for an international inventory of urban and landscape ensembles when applied and specifically tailored to a postwar New Town environment in Scotland.

It was anticipated that the inventory of the town would 'test' two hierarchies, or sets of relationships: the hierarchy of *scale* (such as town/big area/little area) and the relationship over *time* (such as the repeated layering of modern development on one site). The unique non-area clustered zoning of Cumbernauld's town plan, and the fact that its built fabric (excluding the Town Center) has changed little over fifty years, has resulted in the project ultimately focusing on the first relationship, that of *scale*.

THE TOWN sat on a low ridge-like hill to the south of the existing village of Cumbernauld, was oval-shaped in plan, and had the towering town center at the top of the ridge. The key principles of the overall town plan of 1959, drawn up by Hugh Wilson (chief architect and planning officer until 1962) were: increased density and urbanity in the clusters of residential zones (which contrasted with the spacious segregated neighborhood units of Mark I new towns); separation of pedestrian and vehicular traffic; and one single town center. The residential zones formed an elongated doughnut-shape

surrounding the Town Center, and were divided into two: the north-west side on the ridge looking towards the Campsie Fells (Muirhead, Seafar and Ravenswood area zones), and the flatter south-east side sloping away from Town Center (Carbrain, Kildrum, and Park area zones). There were six industrial zones sited on the periphery of the town plan which sat within the housing area zones. In 1965, the first planned expansion created the Abronhill area: set on a smaller ridge site further to the south, it was in essence a mini-replica of the main town, with a single town center. The seven original residential zones, slotted together around the center, were, in turn, sub-divided into numbered individual development sites (most of these were under twenty square acres each). The Carbrain area zone, for example, was comprised of thirteen individual site elements: an individual element such as Carbrain 9 (1963–67), consisted of 525 dwellings, accommodating 1,766 people, in a variety of housing ranging from three-storey terrace houses to six-storey deck-access flats. The public, commercial, and religious buildings within the overall area zone were also given individual development numbers. Throughout the entire original town there were one hundred such individual developments, aggregated together under the headings of the seven area zones, and the Town Center, slotted jigsaw-like together with no real overlap.

THE PLAN of the town therefore virtually dictated a specific approach to inventorization, in the form of a simple, almost-flat inventory structure, with only three hierarchies of *scale*: the overall town; the area zones; and the individual developments (clusters of housing or individual amenity buildings). Because the town has changed little over its fifty years (excluding the much-

Fig. 2. Cumbernauld New Town, aerial view of Seafar residential unit, 1991

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altered Town Center, of course), the layering of development on individual elements over *time* has been kept to a minimum: and where there has been development, it adhered to the existing footprint of the plan. Whereas the jigsaw-like structure of the area and individual zone/development plan has allowed a simple, neat inventory, it has resulted in problems in use by inhabitants.

THE INVENTORY has also highlighted the fact that, despite the town's overriding concept of a dense integrated town not split into neighborhood units, in reality it does have a distinct recognizable structure of community areas that differ from each other in terms of housing design, landscape character, and topography. There is also a sharp difference in nomenclature between the original development titles used in the inventory and the location names used by the residents. The residents of the town, who may, of course, ultimately become users of the inventory, identify their "home area" by a combination of the area zone name and the street name, although the latter have no official status in the development hierarchy of the town. Thus, for example, an

Fig. 3. R. S. Reynolds Memorial Award for Community Architecture (plaque and sculpture). Awarded to Cumbernauld New Town in 1967

address known by residents as "34c Clouden Road, Kildrum" will be identified in the inventory as an undifferentiated part of "Kildrum 17." To offset this disparity and allow such an inventory as this to be used by residents, an element of digital mapping will prove essential to the long-term impact of the inventory; this area of the project is currently being developed.

THIS MODEST PILOT PROJECT inventory is not only significant in testing the Docomomo *urban fiche* methodology at an international level, but it also potentially has a specific role within Scotland, as a systematic evaluation model for conservation protection of postwar buildings and sites, filling the deficiencies in the current government heritage 'listing' system, dominated by elite art-historical values. Here, it is perhaps appropriate to explain the almost unique

heritage situation within the Scottish government. Unlike almost all other Western European countries, the state system responsible for the recording, inventorization, and protection of historic buildings has been sharply divided between the Royal Commission on the Ancient and Historical Monuments of Scotland (undertaking recording and dissemination), and Historic Scotland (responsible for listing and, in partnership with local authorities, historic building control).

RCAHMS was formed in 1908, essentially as the first attempt within the UK to create a systematic nationwide official listing of archaeological and historic monuments on an area-by-area basis. A very wide definition was adopted: "ancient and historic monuments connected with, or illustrative of, the contemporary culture, civilization and conditions of life of the people of Scotland." The terminal date of 1707 was very late within the British context at that time, but by the 1960s recording and analysis had extended to nineteenth century buildings. State sponsored official 'listing' of historic buildings did not begin until 1947. Initially based upon a privately-funded interwar map-based inventory of groups of old historic burgh houses of 1935–39, by the 1960s and 1970s these lists became more overtly art-historical, concerned with the work of known architects and with other historically significant buildings. Eventually, and tentatively, listing of postwar buildings began, but still along similar lines: focusing on the private-practice work of elite architects. It was RCAHMS, free from conservation concerns, that set the pace for broader, expanded built-environment recording in the 1980s and 1990s to include all sorts of everyday building types and landscapes, advancing from the nineteenth century heritage to the mass post-1945 building programs now suddenly, in many cases, rendered obsolete. But, despite this extensive apparatus, no systematic program of inventorizing postwar architecture and planning schemes has been carried out to date.

IN SCOTLAND there has been a recurring tension throughout the twentieth century between aspirations to widen the scope of heritage to embrace more and more of the built environment and cultural landscape, and the practical reality of the difficulty of actually extending active preservation that far. The result has been a kind of 'leapfrogging' pattern, in which the scope of recording has repeatedly found itself much wider than the scope of preservation. The tension between broader landscape recording and the elite values of architectural preservation can be seen at its most problematic at Cumbernauld New Town. To date, only six postwar buildings have been listed in the new town area: four bespoke religious and educational buildings by the avant-garde Scottish postwar practice Gillespie Kidd & Coia, and two churches by Alan Reiach.[3] Ironically, the
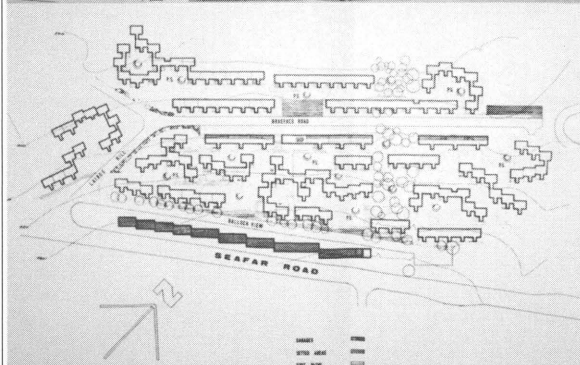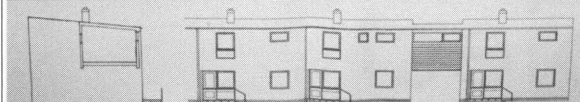
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IDENTIFICATION

WP Ref: URB/SCO/CNT/SEA/2/RES

Plan/Image:

Diagrams from CDC. "Cumbernauld Technical Brochure." 1960-1970. Photographs by rapporteur.

Rapporteur/date: Jessica Taylor, June 2007

Name: Seafar 2

Variant: None

Town: Cumbernauld

District/province: North Lanarkshire

Country: Scotland

Postal code: G67

NGR: NS 7552 7482

Typology: URB/RES

Protection/date: None

HISTORY/DESCRIPTION

Dates: First handover March 1962, completed December 1963

Designers/other key agents: CDC, contractor Atholl Houses

Original brief: Briefs were not set at Cumbernauld Development Corporation in designing housing until much later in the mid to late seventies. Until that time housing types were created by considering sunlight, slope, site and the footpath and road system while attempting to keep the high new town densities set out in the Preliminary Planning Proposal.

Overall plan/context (including x-ref to area fiche): The Seafar 2, 3.5 hectare site lies to the north of the Seafar Road, to the north of which is the Wood. Lairds Hill, Balloch View and Braeface Road access the site. The sites has slopes of 1 in 7.

Individual elements (including x-ref to sub-fiches): The vast majority of houses in Seafar 2 (127 out of 143) are 2-storey split level dwellings. The two storey split level houses have an area 70.5 square metres of space. A pend study/bedroom increases the area of seven houses to 77.5 square metres providing five bedspaces. Nine terrace houses over garages each provide four bedspaces in 66.64 square metres. The roof slopes run parallel to the ground and each has its living room on the ground floor with large windows to take advantage of the views. The roofs being visually linked down the slope, an excellent feature in such an exposed site, create small sheltered spaces. These slopes also provide the maximum of sunlight. Diagonal stepped ramps and contour paths link these spaces, the whole forming 143 homes at 41.1 houses/ha accommodating 166 bedspaces/ha (55.6ppa). The houses are informal groups, ground between paved and planted to provide pedestrian route and play spaces to ensure privacy to ground floor windows.

There are no private gardens. The site accommodates 166 bedspaces per hectare at 41.1 houses per hectare.

Development: Seafar 2 developed along the lines of needing to turn a problem site to advantage, providing imaginative housing designs and a pleasant environment for those living there.

NOTES
Seafar 2 won a Saltire Society Good Housing Award 1963. The Seafar 2 houses provide the first use of the split level house in Cumbernauld, and perhaps at all. The site was put for sale in 1971.

AUTHENTICITY
Excellent condition, well maintained areas in terms of structural fabric and landscaping.

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"Seafar 2." *Architectural Review* 129, no. 767 (January 1961): 31.

Fig. 4. Urban fiche

most significant architectural and planning elements of the new town design—its layout, housing patterns, landscape, and the Town Center (the latter being part demolished and refurbished 1999–2007)—have no statutory protection, and the town's most prominent award-winning architectural innovations in design terms are not to be found in the educational and religious set-pieces of the listed and protected elite buildings.

RCAHMS, unburdened by preservation concerns, carried out a full ground and aerial photographic survey of the town between 1990 and 1991, and continued its architectural archive gathering, in anticipation of the winding-up of the Cumbernauld Development Corporation. It also recorded the painfully slow partial demise of the Town Center in 1991, 1999 and 2000. Supported by RCAHMS, the current inventory aspect of the Cumbernauld project can be viewed as a rolling-out of the former's pioneering systematic topographical recording activities. The pilot project, on completion in 2009, will provide for the first time an entire inventory of the built environment of Cumbernauld New Town—providing a much-needed, objective, back-to-basics historical evaluation, which could potentially, in turn, help counteract the onslaught of over-simplified media attacks on the town and (by implication) its residents.

DIANE WATTERS is a buildings investigator at RCAHMS, teacher at the Scottish Center for Conservation Studies, and member of the Docomomo ISC/Urbanism + Landscape. A specialist in twentieth century architecture in Scotland, she has undertaken a succession of research-based publications under the RCAHMS aegis. She wrote the 1997 RCAHMS book Cardross Seminary, co-edited (with Miles Glendinning) Home Builders: Mactaggart & Mickel and the Scottish Housebuilding Industry (1999), and co-authored the RCAHMS book Little Houses: The National Trust for Scotland's Improvemement Scheme for Small Historic Homes (2006).

JESSICA TAYLOR is an AHRC-funded PhD student examining the genesis and design context of Cumbernauld New Town. A graduate of Art History at Birmingham University, and the Scottish Center for Conservation Studies, ECA, her diploma thesis focused on the conservation of postwar Soviet housing.

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For a full up-to-date bibliography of Cumbernauld New Town, see Miles Glendinning, "Cluster Homes: Planning & Housing in Cumbernauld New Town" in *Housing the Twentieth Century Nation, Twentieth Century Architecture 9*, 2008 (Elain Harwood and Alan Powers eds).

NOTES
1 The town is included in the general overview by David Cowling, *An Essay for Today: the Scottish New Towns, 1947–1997* (Edinburgh: Rutland Press, 1997).
2 This PhD on Cumbernauld is being undertaken by Jessica Taylor, and supervised by Miles Glendinning (Director of the Scottish Center for Conservation Studies at Edinburgh College of Art), and Diane Watters (Building Investigator at the Royal Commission on the Ancient & Historical Monuments of Scotland—the government body responsible for the survey and recording of the built environment in Scotland).
3 Listed Gillespie Kidd & Coia buildings in Cumbernauld include: Sacred Heart Church, Kildrum, 1960–62; the now part-demolished Kildrum Primary School, 1960–62; Cumbernauld Technical College, Carbrain, 1972–75; Our Lady's High School, Seafar, 1963–64. Alan Reiach's listed Cumbernauld churches are Kildrum Parish Church, 1962, and St Mungo's Church, Seafar, 1964–66.

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Exploring the Soviet 'Golden Home' Project

THE "REWORKING MODERN ARCHITECTURE" WORKSHOP IN PÄRNU

■ MART **KALM**

Post-1945 buildings in the Baltic States are quite unpopular, not only because they were built during the widely-despised Soviet occupation regime, but also since most of these buildings are seen as irrationally large and sloppily built, and burden their owners with unnecessarily high operating expenses. But this is only a half-truth.

YOU CAN'T JUST draw a line through a whole generation of work: there had to be some good architects among those who worked during the Soviet period. Many elderly people consider these buildings to be created during "their time," and to be a part of their history. It's not their fault that they happened to live their lives during the "wrong" regime.

THE KEK SUBURB, built on the edge of the holiday town of Pärnu during the 1970s and 1980s, is widely accepted as a project of architectural distinction. The farming collectives, which were forcibly created after the war, finally began to achieve financial success in 1960s because starving Russia could be sold anything and everything that they managed to produce. The regional inter-collective farm construction offices—the KEKs—grew into quite successful enterprises under these Soviet circumstances, as the collective enterprises had to build company apartments in order to retain their employees due to the severe lack of skilled workers. The Pärnu KEK suburb, designed by architect Toomas Rein in 1970, was an ambitious project in this field. This residential area, situated to the south of the Pärnu by-pass road, consists of a single, vast four-to-five storey apartment range of more than seven hundred meters in length of low-density residences built in its shadow during the 1980s. The

CET ARTICLE SE FONDE SUR PLUSIEURS INVENTAIRES RÉALISÉS PAR UN GROUPE D'ÉTUDIANTS, PENDANT UN ATELIER QUI S'EST TENU À PÄRNU EN ESTONIE EN AVRIL 2008. DES ÉTUDIANTS EN MAÎTRISE VENUS DE COPENHAGUE, LOUVAIN, FRANCFORT ET TALLINN ONT RELEVÉ DE MANIÈRE SYSTÉMATIQUE LES BÂTIMENTS D'UNE FERME COLLECTIVE DATANT DE L'ÉPOQUE SOVIÉTIQUE DANS LA BANLIEUE DE PÄRNU. L'ENSEMBLE, CONSTRUIT DANS UNE OPTIQUE COLLECTIVISTE, SOUFFRE AUJOURD'HUI D'UNE IMAGE DÉGRADÉE. IL S'EST DONC AGI DE RÉFLÉCHIR SUR LA FAÇON DE LUI OFFRIR UNE IDENTITÉ NOUVELLE, QUI LUI PERMETTE D'ÉCHAPPER À LA STIGMATISATION SOCIALE AUQUEL CE TYPE D'HABITAT SOVIÉTIQUE SEMBLE IRRÉMÉDIABLEMENT CONDAMNÉ.

ground floor apartments with atria in the long apartment building were so large (106 and 116 square meters) that the employer was not allowed to build these—the employees had to pay for them themselves. Therefore, part of the building became a co-operative. When the architect, inspired by Russian constructivism, suggested the name "Commune," the residents considered it horribly 'Soviet' and came up instead with the bourgeois-sounding title, "Golden Home." Owing to the stepped form of the long block, the balconied apartments on the upper floor are smaller, creating a striking austerity on the
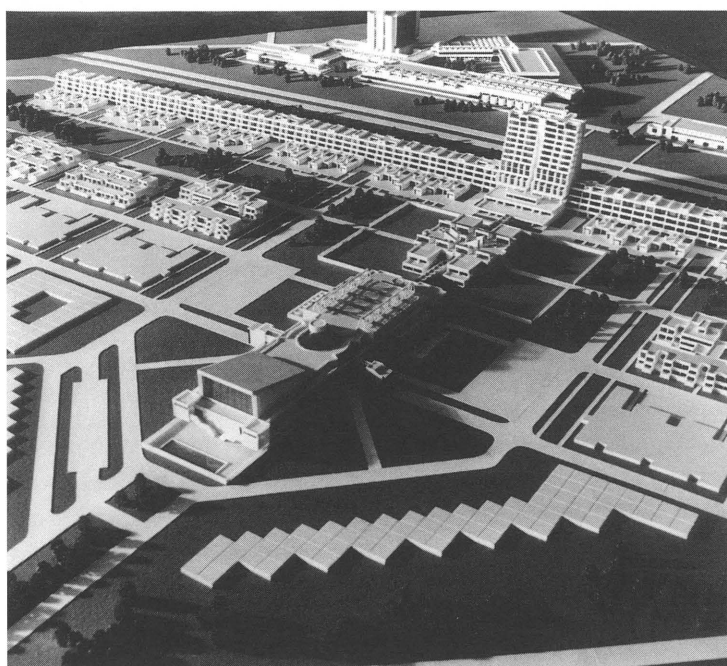
Fig. 1. Architect **Toomas Rein**, model of Pärnu KEK suburb, 1970

Fig. 2. **Toomas Rein**, *Golden Home*: long apartment block designed and built in late 1970s

northern side of the building, facing the by-pass, and a more picturesque effect on the southern side. In this general 'barrier block' configuration, the scheme is similar to Ralph Erskine's Byker Wall in Newcastle upon Tyne, but with its rigid straight-cornered structure, it is visually more reminiscent of the Siedlung Halen in Bern, by Atelier 5.

IN THE MIDDLE of the long apartment block, there was to be a sixteen-storey tower with shops and services on the ground floor; however, this was never built. From the center, there extended a T-shaped wing, along which a kindergarten also designed by Rein was built; a proposed sports center also never materialized. On the ground floor of the long apartment block there is a corridor, which was supposed to provide access to the center—to the shops, laundry, post office and restaurant, and further on, to the kindergarten and sports center. In the Estonian climate, with its severe winters, it was important that the children could be taken to the kindergarten along the corridor without having to put on all of their outdoor clothing; however, as the crossing point in the center is empty to this day, the idea clearly did not work.

IN THE ALLEGORY of Soviet society in George Orwell's *Animal Farm*, the apples in the attic were only for the pigs. One might therefore expect that only the privilege of the

Fig. 3. Corridor in long apartment block. Supergraphic by Villu Järmut recently disappeared

nomenclatura would permit better living conditions, but the Pärnu KEK suburb, where the builders built themselves an oasis of the good life, shows that life in the Soviet Union was more flexible and multifaceted.

WITH the renewed independence of Estonia in 1991, Soviet enterprises collapsed. KEK simply became the manager of the industrial buildings, while the residents privatized their apartments. The disappearance of the fatherly enterprise that used to care for everything meant the beginning of its downfall and the fading of an identity. Throughout the 1990s, the residents began changing their windows, enclosing their balconies and insulating the walls on their own volition. Today things are improving—the co-operative management boards in the buildings are more active, having taken loans and begun putting the buildings back in order. The older KEK residents are poor pensioners, who miss the KEK times when everything that needed to be fixed was done at no cost to the residents, whereas the newer residents who have purchased apartments are ready to spend their own money to fix up the building. So the former elite suburb is slowly integrating with other suburbs, and is recreating a new identity for itself.

DESPITE the recognition that the KEK suburb's architecture has received, the state has not managed to provide it with any official protection. The National Heritage Board, daunted

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by the sheer size of the complex and the number of owners, continues to argue whether or not each building should be protected individually or if the suburb should be protected as a complex.

OBSERVING these processes is undoubtedly a "challenge of change" for today's university students, and stimulated a notable recent international collaborative study and survey initiative at Pärnu. Masters students in the fields of architecture, restoration and art history from the Danish Royal Art Academy's School of Architecture (led by Prof. Ola Wedebrunn), Frankfurt College (led by Prof. Wolfgang Jung), Raymond Lemaire International Centre for Conservation, Leuven Catholic University (led by Prof. Luc Verpoest and Prof. Barbara Van der Wee) and the Estonian Academy of Arts (led by Prof. Mart Kalm) took part in a Socrates Intensive Program workshop, which took place at Pärnu KEK from 19 April to 2 May 2008. A preparatory meeting was held in Wrocław, Poland, prior to the Pärnu workshop, which considered both pure 1920s German avant-garde *Siedlungen*, as well as Polish Socialist mass housing. This was the second modern architecture development experience for most of the schools participating, as last year's preparatory meeting was held in Dessau and a workshop was conducted about Copenhagen's meat market.

THE PÄRNU WORKSHOP was supplemented by a seminar entitled "Industrially Produced Housing Surviving Times." The Slovakian doctor of architecture, Henrieta Moravcikova, was quite optimistic regarding the fate of the Petrzalka area, which was built for 130,000 residents in Bratislava; the capital is booming and new buildings are being built amongst the old pre-fabricated concrete buildings, old buildings are being repaired and there aren't even any empty apartments. A very different picture emerged concerning the position in post-reunification Germany: the art historian Dr. Elke Mittmann presented the case study of Halle-Neustadt, a vast, pre-fabricated concrete suburb of a former chemical factory next to the existing 'old' town, which is still not viable, despite West-German millions invested in upgrading the apartments during the 1990s, and the multiple high-level art projects that have taken place there. The president of Docomomo France, Agnès Cailliau, gave a beautiful presentation of the story of the development of the *grands ensembles*, which were the inspiration for the Soviet micro-regions. Art historian and Gothenburg City Museum's living environment specialist, Sanja Peter, spoke about everyday work with residents and developers, and about how decent living environments were retained in new developments as part of Sweden's postwar "One Million Apartments" project. Tampere University engineers Jussi Mattila and Saija Varjonen are famous because they know how to talk about the pathology of cracks in concrete so that not only architects, art historians and restorers, but also lay people can understand them.

Fig. 4. Pärnu KEK: long apartment block with proposed 16-storey tower containing shops and services. Perspective drawing by Toomas Rein, 1972
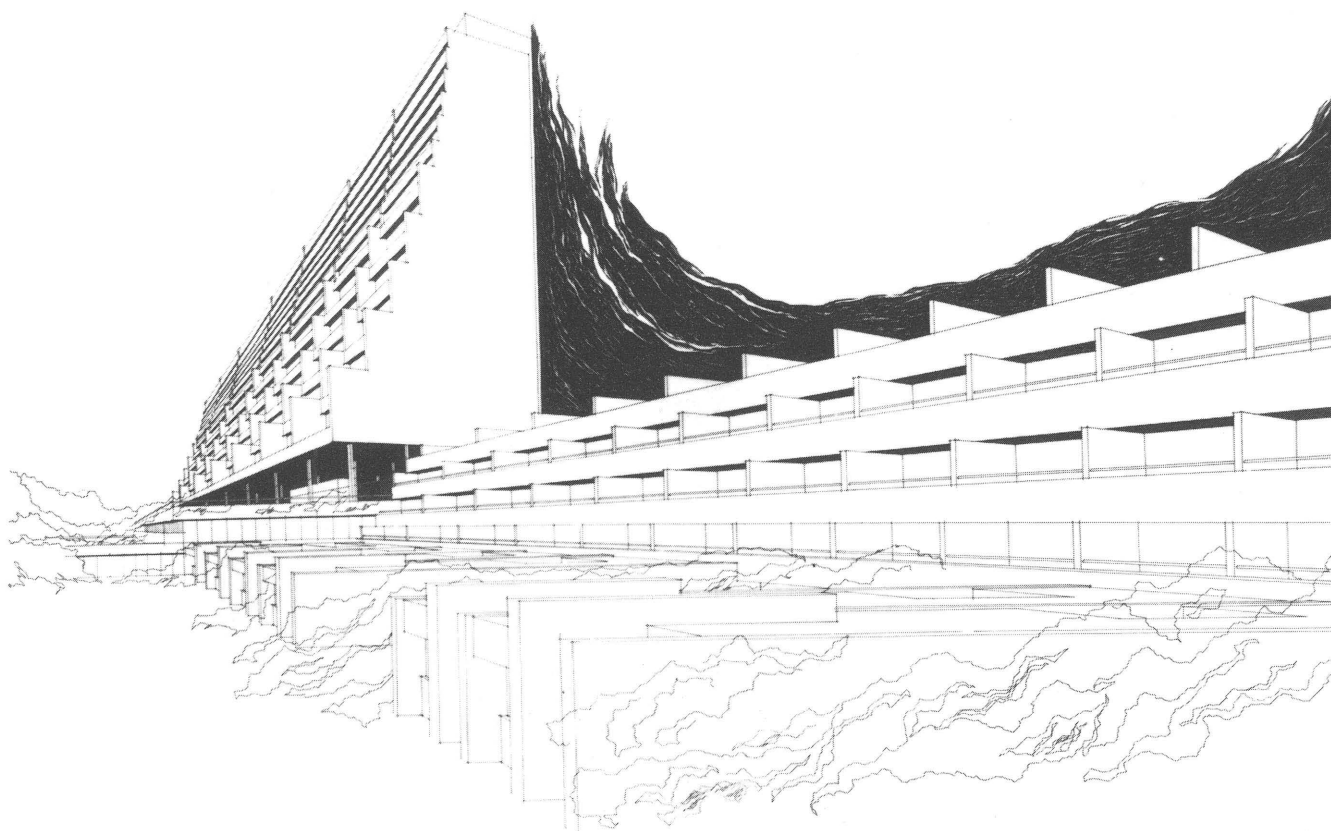
© photo Toomas Rein archive

Fig. 5. As built, a gap was left instead of the planned tower between the wings of the long apartment block and kindergarten; this is now used by a car dealer

THE WORKSHOP PROJECT at Pärnu KEK was grounded in this prior analysis and debate. The assignment encompassed a vast range of potential activities, from analysis of the existing monument value of the buildings and drawing up proposals for restoring them, right through to considering whether the original idea for the building complex should or could be completed. The engineer Andres Ringo (who belonged to the KEK management team and had supported the building of the complex), the original architect Toomas Rein, the current

Pärnu city architect Karri Tiigissoon, and regional heritage inspector Nele Rent helped the students become familiar with the complexity of the situation. Naturally, the educational objectives of such a workshop go beyond group work and field co-operation as well as adjusting to a new environment, because one is working with an uneasy heritage. This ambitious, multi-strand event was not intended merely to yield simplistically measurable results, but, rather, to draw attention to and analyze a problematic area *in situ*, to raise awareness of all the potential dimensions of its heritage conservation or regeneration, and, most important of all, to prepare the multi-national group of students involved to tackle equivalent problems of modernist housing in their own countries across Europe.

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Fig. 6. One of the student proposals presented at the Pärnu KEK workshop, May 2008
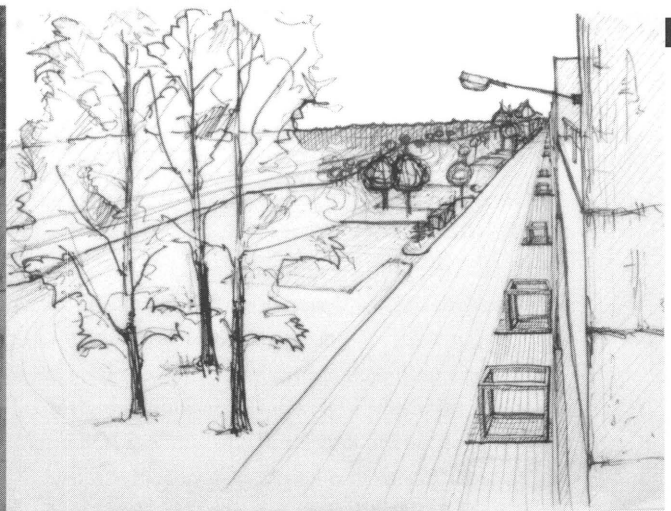
Doing **Building Work**: The Un-making of Red Road

■ JANE M. **JACOBS**, STEPHEN **CAIRNS** AND IGNAZ **STREBEL**

The first, and tallest of the six point blocks and two slab blocks which comprise the 1,350-dwelling Red Road housing estate, Glasgow, was formally opened on 28 October 1966 by William Ross, the then Secretary of State for Scotland (accompanied by his wife). Its innovative construction consisted of steel frame, supporting five-inch laid-in-situ concrete floors, and asbestos-cement insulation board and fully compressed asbestos cement sheeting for the outer cladding of the building.

THE STEEL FRAME construction was novel for the time, allowing Red Road to achieve an unprecedented building height—some thirty-one storeys in the tallest of the point blocks. This project was built by Glasgow Corporation, the largest of Scotland's powerful municipalities—which had dominated social housing provision ever since the First World War. As noted by the architectural historian Miles Glendinning, the Corporation's Housing Committee was keen to use any vacant land available in Glasgow for the purposes of housing construction.[1] According to Red Road's architect, Sam Bunton, the only way he could meet the relatively high density requirements set by the Corporation on the Red Road site (some 212 people per acre), was "to rise to a height of over thirty storeys."[2] The only way to build that tall was to turn from more conventional steel reinforced concrete building systems to structural steel construction. In the story of Red Road, the use of steel and the heights it allowed, were justified directly on the grounds that a certain residential density was deemed necessary. And that density was understood as a central calculation in the exceptional building effort needed to address the exceptional housing crisis faced by modernizing cities like Glasgow.

RED ROAD is an emblematic example of the dramatic slide from utopian vision to dystopian reality that marked so many postwar high-rise modernist social housing programs in Britain. Once hailed as the tallest in Europe and lauded as a model mass housing solution—rational,

■ LE GRAND ENSEMBLE DE RED ROAD À GLASGOW A ÉTÉ OFFICIELLEMENT INAUGURÉ EN 1966 PAR WILLIAM ROSS, ALORS SECRÉTAIRE D'ÉTAT POUR L'ÉCOSSE. CETTE CONSTRUCTION NOVATRICE, COMPOSÉE D'UNE STRUCTURE D'ACIER SUPPORTANT CINQ NIVEAUX DE BÉTON, CONSTITUAIT ALORS UN EXEMPLE PHARE D'INNOVATION TECHNIQUE. CET ARTICLE MET EN VALEUR L'IMPORTANCE DE LA DOCUMENTATION DE CE TYPE DE RÉALISATIONS, À L'HEURE OÙ LEUR AVENIR EST REMIS EN CAUSE ET OÙ LEUR QUALITÉ STRUCTURELLE MÊME SEMBLE OUBLIÉE DES HISTORIENS DE L'ARCHITECTURE DU XXᴱ SIÈCLE.

high-density, economic—Red Road is now notorious for its blighted state, recently even serving as setting for the dark surveillance thriller movie, also called *Red Road*.[3] Its asbestos-ridden structure defies safe repair and maintenance, resulting in a recent history of dis-investment, one component of which has been the inability of the relevant housing authority to replace the out-dated single-glazed windows. Its residents in recent years have included emergency housed homeless, asylum seekers, the aged, and the drug and alcohol dependent. Under the new market logics of social housing privatisation and stock transfer, the successor to Glasgow Corporation's Housing Committee, the Glasgow Housing Association (hereafter GHA), has determined that Red Road is no longer a "sustainable" or "viable" social housing development. In March 2005 the GHA announced a ten-year, sixty-million pound redevelopment

strategy for the Red Road site. The first stage of this redevelopment will be the demolition of 153/183/213 Petershill Drive, a twenty-six-to-twenty-eight storey slab block containing 312 flats, and the largest of the Red Road high-rises. The demolition, which (because of the asbestos) will be a careful deconstruction, as opposed to a spectacular "blow down," is scheduled for sometime before 2015.

RED ROAD is one case study in a larger inter-disciplinary project entitled "Difference and Repetition: An Investigation of the Residential High-rise as a Global Form," currently being undertaken in Architecture and Geography at the University of Edinburgh and supported by the UK-based Arts and Humanities Research Council. The interest of this project is to examine the varied fortunes of the state-sponsored residential high-rise projects of the 1960s and 1970s, what we refer to in shorthand as their "afterlife." Such developments were conceived within avant-garde continental modernism, then mainstreamed into the middling modernism of state mass housing provision programs across the globe. Underpinned by standardized production, guided by the concept of an aerated city, and packaged within a

functionalist "machine aesthetic," multi-storey blocks offered high-density dwelling within parkland settings— "healthy," "rational," and "efficient." The residential model that marriage spawned spread internationally, manifesting not only in European postwar (re)construction, but also post-colonial projects of national building, and neo-colonial modernizations. Within these various mass housing programs the high-rise building type has had quite distinct fortunes. For example, in the East (Singapore, Hong Kong, Taiwan, China) the form thrives, yet in the West (Europe, North America) it is shrouded by controversy and has received sustained criticism.

RED ROAD came to be of interest to us precisely because it is earmarked for demolition. It speaks of the ways in which high-rise housing in the UK has suffered under-investment, stigmatization and, in the face of the privatization of the national housing stock through right-to-buy and stock-transfer processes, extreme residualization. It is now commonplace for such housing schemes to be evaluated by managing housing authorities as "unsustainable." The block we are looking at in Singapore is, in contrast, a testament to the

Fig. 1. Red Road housing estate, Glasgow, 2007

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commitment of the government Housing and Development Board (HDB) to a "national" housing stock which is sustained through investment, maintenance, and repair. It has been through various stages of regeneration, including having new rooms plugged onto the exterior of the building. In short, we are looking closely at how one high-rise building falls apart, and how another holds together.

THE SENSIBILITY of our research has been to self-consciously look awry at the analytical conventions that have helped to secure the perception of the high-rise block as a housing "failure." We do this not because we want to make a case for high density, high-rise living per se, or are uninterested in the poor housing conditions they often came to deliver. We do this because we wish to dislodge the dominance of a reductive historical narrative and to challenge the narrowness of existing evaluative frameworks. These have, we feel, worked in unison to ensure that aspects of high-rise living (both in so-called failed contexts, as well as so-called successful contexts) have been misunderstood, overlooked, even forgotten. We openly admit that we are not especially

programmatic in this quest, although we would hope aspects of what we come to find and the methods we have experimented with may contribute to rethinking dense housing solutions, which we consider an important and pertinent urban question. But we do claim an interest in a more general objective and this is to restructure the ways in which we represent, interrogate and explain the orchestrated working of people and technologies in urban settings.

AS SUCH, this research has tried to look anew at the history and present fortunes of high-rise housing: to look past the over-determining formal features of high-rise blocks. It has also sought to loosen the hold that policy-linked accounts have over the high-rise housing stories to start to inquire into the messier entanglements of people, systems, rules, technologies and materials that do the everyday work of keeping high-rises together (making high-rise "successes") or pulling them apart (making high-rise "failures"). In pursuing this analytical lens we are indebted to the radical rethinking of society and technology bequeathed by Actor Network Theory (ANT). We are indebted in two specific ways.

Fig. 2. Elevation drawing of one of the Red Road blocks

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FIRST, the analytical approach of Actor Network Theory attends more vigilantly to the "seamlessness" of the socio-technical field and the way in which technologies and socialities co-produce the world. Actor Network Theory does not simply place the categories "society" and "technology" as equal "actors" or equivalent "determiners," but re-conceives the world as an assemblage of heterogeneous "objects" that cannot, *a priori*, be categorized as technological or social, nor for that matter assumed to be within a stable hierarchy of power. This conceptualization privileges terms such as "network" (or assemblage), "collective," "symmetry," "heterogeneity" and "flattening."
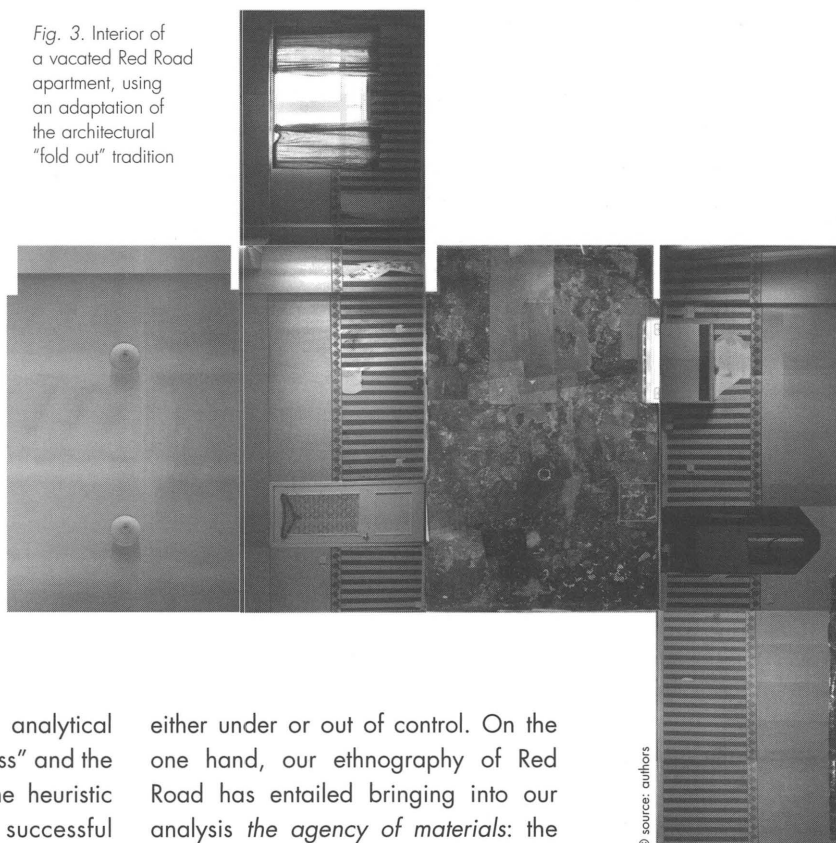
SECOND, within studies of science and technology two specific types of socio-technical assemblages have attracted much analytical attention: these being the technological "success" and the technological "failure."[4] Latour[5] articulates the heuristic value of this interest by arguing that successful technologies are significant because the socio-technical associations that hold them together are so seamlessly enmeshed they become 'invisible,' while the significance of failed technologies rests with the fact that previously invisible associations are, at the moment of failure, revealed. A specific study that has, at its heart, thinking about success and failure is Law and Callon's (1992) study of the "life and death of an aircraft." In it they show that the machine that fails is as interesting to technology studies as the machine that succeeds. For it is through the technology that fails that one can detect how "objects, artifacts, and technical practices come to be stabilized."[6] And in that story, one comes to understand that context (those who make the machine) and content (what is inside the machine) cannot be distinguished, that they are part of the socio-technical "co-evolution" of the world.

THIS THEORETICAL SENSIBILITY has led us towards a novel set of methodological investigations that have sought to avoid (following and paraphrasing Latour) the "vertiginous swing"[7] between a number of polarities: macro and micro; actor and system; technology and society. These methodologies have combined various kinds of traditional and visual ethnographies and hybridized these with approaches within material studies and archaeology. Our ethnographic work has assumed that *without the building*, the statements of those people who work and live in the building, or even comment upon it from a distance through policy or housing analysis, do not make proper sense. And, similarly, *without the descriptions of others* the building would probably be perceived as passive, obscure, and something that is

Fig. 3. Interior of a vacated Red Road apartment, using an adaptation of the architectural "fold out" tradition

© source: authors

either under or out of control. On the one hand, our ethnography of Red Road has entailed bringing into our analysis *the agency of materials*: the potentialities that lie in steel's strength, concrete's insulating capacities, glass' magical quality of transparency; but also the fate that is heralded by how steel rusts, concrete spawls, asbestos poisons, or windows need cleaning. On the other hand, it has entailed understanding that what is said by people about the building—be it in media reports, government documents, political meetings, or interviews—is *only part of what they do with* the building.

WHEN, for example, those people associated with Red Road (residents, concierges, activists, housing managers) tell us that us that "Red Road is coming down," this is a fate or course of action that is in the process of happening and, indeed, for it to happen much action has to be taken by a range of human and non-human participants. It is a process that began as soon as Red Road's architect, Sam Bunton, conceived of his novel steel frame structures and decided to insulate and clad them with asbestos. It is a process that was consolidated by the inability of the Housing Authorities to maintain and repair an asbestos-ridden building. It is a course of action resisted in minor ways every time a resident cleans or decorates, and in major ways when housing activists protest. And as Red Road is cleared of residents, water tanks closed down, and keys put out of use, so the work of bringing this building down continues. In this sense, Red Road as a housing failure is a 'performative' building event.

IN HIS RECENT ARTICLE, "What Does it Mean to Say that Economics is Performative?" (2006), Michel Callon uses the term *agencement* to develop a concept of

performativity. *Agencement* is, Callon argues, difficult to translate into English. It implies 'action,' but action always in an arrangement or an order. In its origins the term is linked specifically to definitions of the lay out, ordering, fitting together and disposition of material technologies such as a house or a machine. But this is also an arrangement in action and interaction with those using the machine. A term that approximates this, and which has been made more familiar to us by Bruno Latour, is "assemblage," but for Callon this term is also insufficient. As he notes, he does not want to replace agencement with "arrangement" or "assemblage" because this would "imply a . . . divide between human agents (those who arrange or assemble) and things that have been arranged."[8] As he puts it: "*Agencements* are arrangements endowed with the capacity of acting in different ways depending on their configuration... A socio-technical agencement includes the statement[s] pointing to it, and it is because the former includes the latter that the agencement acts in line with the statement, just as the operating instructions are part of the device and participate in making it work."[9]

OUR ETHNOGRAPHY of Red Road allows us to attend to the multiple alliances (of people, building, systems, processes, institutions) that make, shape and 'perform' a building in public space. Understanding and tracking this socio-technical effort is an important part of what we have done in the data collection stage of our project. It has taken us not only inside a Red Road flat to the resident and their views and actions, but also required that we trek through the corridors and stairs with the concierge, move around the estate with a housing manager, examine inscriptions in the archives and policy documents, audit the rules and systems by which the ng operates, and attend to translations circulating in housing activist discourses.

FURTHER detail on our project, including the history of the Red Road estate and the methodological experiments we have conducted on one of the slab block there can be found on our project website www.ace.ed.ac.uk/high-rise

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8 Michel Callon, "What does it mean to say that economics is performative?" *Papiers de Recherches du CSI – CSI Working Papers Series* 005 (Centre de Sociologie de l'Innovation, École des Mines de Paris, 2006), 13.
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CONSERVATION

1- PRESERVATION STRATEGY

The Van Eesteren Museum

A PROTECTED FRAGMENT OF AMSTERDAM'S GEUZENVELD-SLOTERMEER POSTWAR DISTRICT

VINCENT **VAN ROSSEM**

The so-called "Van Eesteren Museum" is a projected protected townscape in the western garden-city zone of Amsterdam. It forms part of the Geuzenveld-Slotermeer district, whose municipal authority has recently designated a small part of Slotermeer Garden City as a protected cityscape. Such postwar residential districts are now considered by many people as a failed experiment with too many rented social dwellings that, according to current standards, are just a little too small. But the Van Eesteren Museum ensemble, dating from the early 1950s, is exceptional, and has an obvious rarity value.

A NEW 'FRONT-LINE' OF URBAN CONSERVATION

In time, everyone will understand that, in their own way, these city extensions were just as important as the city's third expansion (*Derde Uitleg*). But for the moment, it is national policy to radically redevelop the most important heritage of the Reconstruction (*Wederopbouw*). Reconstruction implies demolition and new development. Thus, in a very short time, a characteristic townscape including much greenery, housing from the 1950s and school buildings stemming from a fresh view of Dutch education, is simply disappearing. An intact townscape—and that is what is involved in a protected urban prospect—assumes a balance between different scales. The large scale of the reallocation of sites that initially determined only building lines and building heights gradually came to include the detailing of the buildings. This is true not only for the historic inner city but also for the postwar residential areas.

THE HOUSING CORPORATIONS concerned with the current redevelopment proposals for West Amsterdam lodged a joint objection to this proposed designation. Although the district council wished to preserve no more than a representative part of the early postwar district, even this modest attempt to conserve was opposed by

CET ARTICLE MET L'ACCENT SUR LES STRATÉGIES EXISTANTES QUI PERMETTRAIENT DE CONSERVER DES GRANDS ENSEMBLES DANS LEUR INTÉGRALITÉ PLUTÔT QUE D'OPTER POUR UNE RECONSTRUCTION RADICALE. VINCENT VAN ROSSEM SOULIGNE ICI LE FAIT QUE, DANS LE CAS DU « VAN EESTEREN MUSEUM » – UNE PETITE VILLE DE LA BANLIEUE D'AMSTERDAM DONT LA PROTECTION EST AUJOURD'HUI À L'ÉTUDE –, L'AUDACE DU PROJET ET LES DIFFICULTÉS QUI ONT PRÉVALU LORS DE SA CONSTRUCTION REPRÉSENTENT DES CARACTÉRISTIQUES HISTORIQUES UNIQUES. L'ENSEMBLE DU VAN EESTEREN MUSEUM MÉRITERAIT SON CLASSEMENT EN TANT QU'EXEMPLE REMARQUABLE DE CONCEPTION URBAINE MODERNISTE À GRANDE ÉCHELLE PAR OPPOSITION AUX FORMULES DE PRIVATISATION ET DE FRAGMENTATION DE L'HABITAT QUI POURRAIENT LE REMPLACER.

every possible legal means—a stark testimony to the banality of the housing agencies' future vision for the city. If all remnants of the years of Reconstruction are expunged, the city will no longer be complete. The frontline of the defense battles waged by the Municipal Department for the Preservation and Restoration of Historic Buildings and Sites is shifting necessarily, as the extensions of the city age. This process began long ago

in the inner city, and it is now the Geuzenveld-Slotermeer District that is in the vanguard of experimentation in the conservation of 'historic' buildings; an experiment that bears witness to great administrative courage.

HISTORICAL ORIGINS

The Van Eesteren Museum forms part of the Slotermeer Garden City extension plan, confirmed by the municipal council in 1939. Although previous district plans had been approved, Slotermeer Garden City marked the beginning of a new era. It was the first residential district outside the Ringbaan (circular rail track) designed by the Urban Planning Department. Because the Municipal Property Company had been able to purchase the land outside the Ringbaan for agricultural prices, it was possible to introduce new ideals for public housing in the Slotermeer Garden City. The aim was to have lower densities, more single-family dwellings, more green open spaces and 'open' buildings.

FOR SOME TIME, the programmatic requirements for modern residential districts had already been under discussion by architects and town planners. On an international level, various organizations were active. These included the International Federation for Housing and Town Planning and the International Congresses of Modern Architecture (CIAM), who were occupied with the problems of mass housing construction. In Amsterdam the 'de 8' Architects Association played an important role in the debate about the modernization of residential districts. With their colleagues at the 'Opbouw' Association in Rotterdam, also part of the avant-garde, in 1932 the members of 'de 8' drew up a manifesto in which the foundations of the new urban planning approach for residential districts were laid down. Ben Merkelbach and Wim van Tijen were the leading authors and the manifesto was entitled "De Organische Woonwijk in Open Bebouwing" (The organic residential district in open construction).
The use of the term *organic* was intended to indicate that all the functions in the district should be attuned to the creation of a harmonious social whole. Different types of schools for various ages, sports facilities and public green areas for open air recreation, shops, and social and religious infrastructure, should all be taken into consideration, so that residential districts could meet all social needs.

THE CONCEPT of 'open building' was a striking innovation in the site layout of residential districts. The architects of the avant-garde branded the closed building block as an outmoded element of urban planning. They argued that the orientation of the dwellings was not good; when the weather was warm and the wind was still, the closed block was a stuffy space, surrounded by dusty streets, while from an architectural point of view the

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Fig. 1. Amsterdam, General Extension Plan, 1935

appearance of the inner side of the entity was hardly inspiring. The alternative to the closed block was to build rows of dwellings: north-south running blocks of *portiekflats* (flats with open entrance halls) with east-west facing dwellings surrounded by green space.

THE BUILDINGS in the Van Eesteren Museum are representative of this postwar experimental development stage, from the viewpoint both of urban development and of architecture. The design had already been drawn up before the war, and at the beginning of the 1950s was constructed in a modified form as part of the first development of the Western Garden Cities. In many ways, this zone forms a transition between pre-war renovations and later parts of the Western Garden Cities such as Slotervaart and Osdorp, where the characteristic standardization of the 1960s can be observed. This is a key attribute of the proposed preservation of the area. The Van Eesteren Museum fits in very well with the protected vistas around the older garden villages in Amsterdam Noord from the period 1920–30, and thus helps build up a careful, incremental record of the process of improvements in metropolitan social housing construction.

DESIGN AND CONSTRUCTION

The design, which was published on 7 July 1939 with a comprehensive, detailed explanation in the Municipal Publication (*Gemeenteblad*), forms a chapter in a long history. The first draft dates from June 1936. The reallocation of the land was then little more than a rough scheme, but the outlines of the Van Eesteren Museum can already be recognized. The Burgemeester Vening Meineszlaan and the Burgemeester Eliasstraat formed a green strip that also functioned as a pedestrian route from Bos and Lommer to the Sloterplas (lake). The Gerbrandypark was also shown on the plan from the very beginning. The Burgemeester de Vlugtlaan, connecting to the Bos and Lommerweg and the Hoofdweg, was
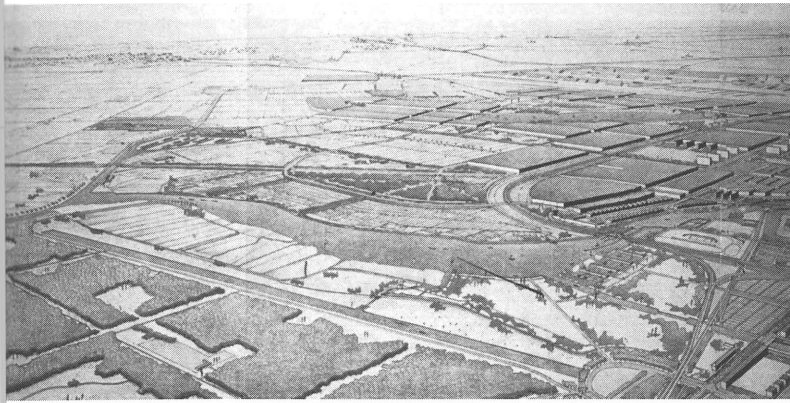
Fig. 2. Birds eye view of the extension on the Western side

considered to be an important secondary traffic route and probably also as a shopping street, but the shopping function is not shown on the legend. The buildings on the south side of Burgemeester de Vlugtlaan consist of a series of four-storey rows at right angles to the road, in accordance with the principles of the "Organic Residential District in Open Construction." The north side was given a different appearance; in fact, here a street elevation was formed, with four-storey short blocks parallel to Burgemeester de Vlugtlaan. These were dwellings intended for members of the *middenstand* (lower middle-class small-business owners), possibly with shops on the ground floor.

IN a 'provisional draft plan' of 1937 the redistribution of the plots is more detailed. The abstract series of strips with four-storey blocks on the south side of Burgemeester de Vlugtlaan has assumed a more conventional character, with inner courtyards and end walls on the street side. The plan is un-captioned, but we can assume that these end buildings were intended to serve a shop function. The four-storey blocks on the north side gave place to strips of low-rise buildings parallel to the axis of the road. These changes indicate that the search for the future appearance of the Burgemeester de Vlugtlaan was not yet over. Other considerations probably also played a role in this: for example, in the Department of Urban Development, there was a discussion about shopping streets and shopping squares. Cor van Eesteren, the head designer of the department, felt that shopping streets were more suitable for Amsterdam. Sunlight orientation probably also played a role. The four-storey blocks on the north side of Burgemeester de Vlugtlaan were poorly aligned in relation to the low-rise buildings behind them. In 1936 the appearance of Burgemeester de Vlugtlaan was still very abstract, but the plan of 1937 already shows that the crossing of the Burgemeester Fockstraat and the Burgemeester de Vlugtlaan would be given a different spatial character.

THE LINES followed by the accepted zoning plan of 1939 are broadly similar to those of the 'provisional draft plan' of 1937. The site layout of the district, with low

buildings between the Burgemeester Vening Meineszlaan and the Burgemeester de Vlugtlaan, was further elaborated in accordance with a building method previously employed by the Housing Department in Amsterdam Noord. These consist of a composition with three or four rows of dwellings, situated along a footpath and lying at right angles to a north-south residential street with a longer row of dwellings. These long rows were constructed after the war as maisonettes. It was intended that low-rise shops should be built along the north side of Burgemeester de Vlugtlaan. The complex configuration of the four-storey rows with shops on the ground floor at the ends on the south side of this street was carefully delineated. On the street side, the series of rows were closed off by low-rise shops. At the corner with the Burgemeester Fockstraat are two freestanding blocks with shops and three storeys of dwellings above.

AFTER THE WAR, the 1939 design was built in a modified form, but without any formal revision to the accepted zoning plan. The layout of the low-rise district was not changed, but the low-rise buildings with shops along the north side of Burgemeester de Vlugtlaan entirely disappeared from the plan. These had to give place to a series of 'portiekflats' in modular buildings designed by J. F. Berghoef. For the third time, the street took on an entirely different image. The reasons for this were probably both practical and aesthetic.
The government stimulated the use of the modular building system through extra subsidies. The traffic layout, too, was improved by greatly reducing the number of crossings of the residential streets by Burgemeester de Vlugtlaan. The modular building system also formed a novel aesthetic element in the street scene. The concrete façade elements, the steel window frames, and the

Fig. 3. *Slotermeer*, provisional draft with schematic layout of dwellings, 1936
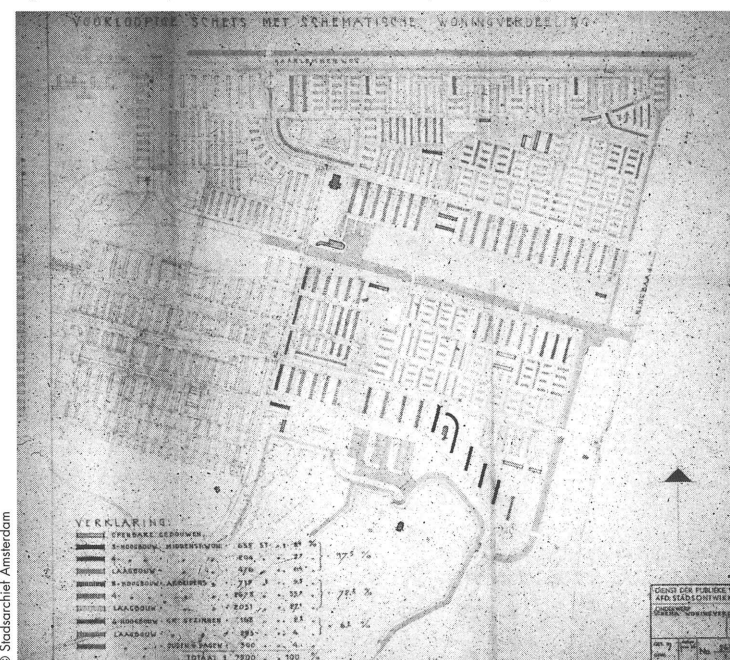
inflexible dimensions gave these residential blocks a markedly businesslike character, contrasting with the more traditional formal idiom of the low-rise buildings behind them. Undoubtedly, Van Eesteren considered this to be an enhancement.

THE BUILDINGS on the south side of Burgemeester de Vlugtlaan also finally assumed their definitive form. The composition of the series of rows with shops on the street side was refined, with more variation in the length of the rows. Thus a more symmetrical composition was created that, although designed by different architects, can be considered as a large aggregate: a super building block, with inner streets and gardens, open towards the side of the park and closed on the north side. The 'closed' buildings with shops along Burgemeester de Vlugtlaan consisted of three parts: two high blocks with four residential storeys above the shops on both sides of the

Fig. 4. Slotermeer, further elaborations, 1937

Burgemeester Fockstraat, flanked by two lower rows of buildings. The two higher blocks formed part of a greater architectonic whole, designed by Arthur Staal, which gave form to the crossing of the Burgemeester de Vlugtlaan and Burgemeester Fockstraat. In a modest way, this crossing is widened almost into a public square by the oblique positioning of the building block in the northeast corner. This also explains the, at first sight, unusual siting of the rows of Berghoef, specifically those around and parallel to the obliquely positioned block of Staal.

THE VARIOUS DESIGN STAGES of the ensemble that make up the Van Eesteren Museum show that Van Eesteren had long sought a balanced composition. The draft of 1936 was the first confrontation between the program of requirements and the principles of rational land reallocation. Its abstract image caused some unrest in official circles, but over time this became more

balanced. Thus, a residential district was created that gives a representative picture of the evolution of town planning between 1920 and 1950. The striving for single-family dwellings in a green neighborhood, which was of primary importance to the Housing Department, became almost seamlessly transformed into a more urban vision, with multi-storey buildings and shops along a main street.

The Van Eesteren Museum of today coincides almost exactly with District A, the first part of Slotermeer Garden City that was constructed; only the five rows of dwellings between the Vening Meineszlaan and the Arthur Meerwaldtpad fall within the Museum but outside District A. Site preparation work on District A began in March 1949 and, on 1 December 1951, the first pile was driven in the corner of the Prof. Oranjestraat and the Wolter Brandligtstraat. On 1 September 1952 the first single-family houses were ready for occupation on the Harry Koningsbergerstraat.

CHARACTER OF THE BUILDINGS

As we saw in the description of the site's original urban-design concept, the Museum consists partly of single-family dwellings and partly of multi-storey buildings. The multi-storey buildings are concentrated along the Burgemeester de Vlugtlaan. The Department of Urban Planning avoided, as a matter of policy, the mixing of single-family houses and multi-storey blocks. Along the Vening Meineszlaan and the Harry Koningsbergerstraat, a number of *middenstand* dwellings were built, which were architecturally clearly distinct from the mass housing. In the northwest corner of the Museum is an unusual complex of dwellings for old people, designed by Aldo van Eyck and Jan Rietveld. District A has two middle schools and one primary school (on the Harry Koningsbergerstraat), which remains in almost its original state. The Slotermeer School, on the Burgemeester Fockstraat, has been partly renovated with modern materials but otherwise is reasonably intact. The middle school in the southwest corner of District A, on the Burgemeester Eliasstraat, has been radically remodelled/reconstructed.

THE ARCHITECTURE of the low-rise buildings is traditional in character, with brick walls and pitched, tiled roofs. This architecture has not been enhanced by the subsequent insertion of window frames with double-glazing. The architectonic quality of the modular buildings of Berghoef on the north side of the Burgemeester de Vlugtlaan has already been mentioned above. A number of blocks are still in the original or almost original state; a few others have been drastically renovated. As a result of this the architectonic renovation the unity of the ensemble has been partially lost, but the extraordinary urban planning structure is still clearly recognizable. The large urban ensemble on the south

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side of Burgemeester de Vlugtlaan was built by various architects with divergent architectural views, and has never formed a formal architectonic unit, yet, despite this, a remarkable architectonic ensemble emerged. Here too, some blocks have been radically renovated, but the urban planning idea that formed the basis of the project is still clearly recognizable. The shopping square designed by Arthur Staal on the corner of the Burgemeester de Vlugtlaan and the Burgemeester Fockstraat forms an architectonic unit that decisively interrupts this long through-traffic street, for the spatial benefit of pedestrians and cyclists.

AS THE DEVELOPMENT of the plan shows, Van Eesteren always considered both sides of the Burgemeester de Vlugtlaan a single unit. The super block on the south side of the Burgemeester de Vlugtlaan has a pronounced urban character, with the Gerbrandypark as suitable for a large city green area, while the open series of rows of Berghoef on the north side form the transition to the small scale urban space around the low-rise buildings, which still calls to mind a garden village. The unusual complex of dwellings for old people and the blocks of middenstand dwellings, beside the green zone north of the Burgemeester de Vlugtlaan, almost have the character of an exclusive residential neighborhood. From a town-planning point of view, the profile of the Burgemeester Vening Meineszlaan is of special interest. The part between the Ringbaan and the Burgemeester Fockstraat runs parallel to a green strip that is bounded on the south side by small but rather high blocks of flats. West of the Burgemeester Fockstraat the profile was given a different character: the built area is closer to the street and is more horizontal. The green strip in which Arthur Meerwaldtpad lies is behind these buildings, but is clearly visible between the rows of houses. In the meantime, the entity has been completed by the planting of full-grown trees.

THE FUTURE OF AMSTERDAM WEST

In the Western Garden Cities, within the framework of the current renovation, a large number of dwellings were demolished. As a result, in a very short time, the characteristic urban image of these postwar residential districts disappeared. The Department of Monuments and Archaeology deeply regrets this development, but up to now all appeals for a more cautious approach to urban redevelopment have been in vain. It is for this very reason that the Van Eesteren Museum is of such great importance to Amsterdam. It will guarantee that, come what may, a small part of Slotermeer Garden City will continue to exist for the sake of posterity.

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Fig. 5. 'Slotermeer Garden City,' definitive design, 1939

Fig. 6. Slotermeer, Part A under construction, October 1952
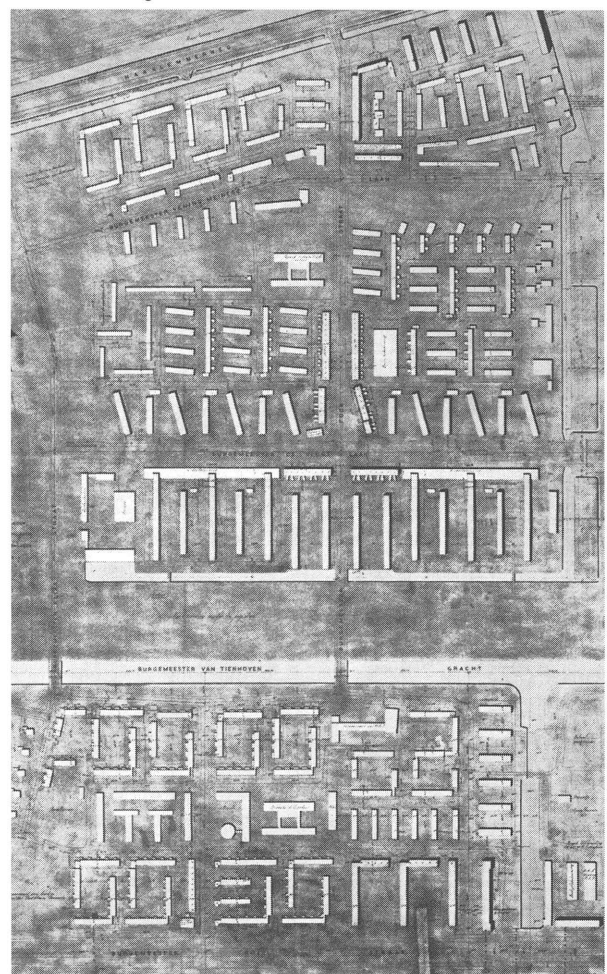
Making Better Places Through Heritage Designation?

THE BYKER ESTATE, NEWCASTLE UPON TYNE

■ ROSE **GILROY**, JOHN **PENDLEBURY** AND TIM **TOWNSHEND**

In 1968 Newcastle City Council took the bold step of appointing Ralph Erskine, a remarkable appointment by the Conservative-controlled local authority, to be architect and planner for the rebirth of Byker. Erskine and the City Council shared a vision that all that was positive about Byker—specifically its strong social capital built from kith and kin networks—could be retained, while all that was poor—its worn out Victorian terraces and hard environment—could be transformed into a delightful place that supported its community.

THE VISION AND THE PROCESS

The commitment not to break family ties determined a ten-year phased program of new building and demolition with private tenants moving into their new Council-owned homes and then seeing their old homes demolished. The City Council, for its part, consulted intensively with tenants to ensure that those who valued their neighbors could continue those relationships in the new streets. The success of this re-housing policy can be over emphasized; the redevelopment ultimately facilitated less than half of the old Byker residents to return. Similarly, the extent of resident participation in the design has been perhaps over stated. By setting up office in the heart of the area and working with an open door policy, Erskine's practice did demystify the architectural process and residents did comment on the pilot scheme at Janet Square, and some of the features, specifically outward opening front doors and open plan living/dining/kitchen areas were changed. But the major design, the layout, and the integration of the landscape design is that envisioned by Erskine.[1]

The most famous feature of the estate, the 'Byker Wall' is housing that incorporates a sound barrier to block the noise of an intended motorway (later downgraded to a dual carriage way, set down in a cutting). Behind this

LE QUARTIER DE BYKER, SITUÉ À NEWCASTLE-UPON-TYNE, CAPITALE RÉGIONALE DU NORD-EST DE L'ANGLETERRE, A ÉTÉ TOTALEMENT TRANSFORMÉ EN PLUSIEURS ÉTAPES ENTRE 1969 ET 1982. LE PROJET DE RÉNOVATION CONÇU PAR LE CÉLÈBRE ARCHITECTE RALPH ERSKINE, ÉTABLI EN SUÈDE, A FAIT L'OBJET D'UNE INSCRIPTION NATIONALE QUI PREND EN COMPTE PLUSIEURS MILLIERS D'HABITATIONS, ET MET À CONTRIBUTION TOUS LES HABITANTS DE LA VILLE DANS UN ESPRIT DE « SYNERGIE PATRIMONIALE » ET D'INVESTISSEMENT COMMUNAUTAIRE INÉGALÉS EN GRANDE-BRETAGNE. LA SOLUTION PATRIMONIALE CHOISIE POUR PRÉSERVER CETTE ŒUVRE À GRANDE ÉCHELLE EST LA PLUS RADICALE ET NOVATRICE DU PAYS.

was constructed a new street layout with south facing communal courtyards replacing the old gridiron street pattern. These spaces were filled with planting boxes, seats and tables where neighbors could congregate. The dwellings themselves were low-rise of varied size to fit the full range of households and characterized by light materials—timber cladding, often brightly colored and metal roofs—all in marked contrast to the old brick terraces they replaced and to the Brutalist architecture that had been replacing them elsewhere. The integration

Fig. 1. The "outside" of the Byker Wall from Dalton Street

of landscaping into the estate was a key feature, including architectural fragments from demolished civic buildings. Cars, then not widespread among Byker residents, were mostly kept at the periphery of the estate. A number of older buildings—the community nodes of churches and pubs—were retained to bridge the old and new, while new social facilities included a large number of 'hobby rooms' for clubs and individuals to use.

THE SCALE of the redevelopment meant that perhaps inevitably it faced problems, political and policy shifts. Industrial action in the 1970s caused delays while a protracted and bitter litigation on a late phase effectively put an end to the building of Byker in the mid-1980s. The introduction of the Right To Buy (Housing Act 1980)[2] coupled with a large-scale moratorium on local authority house-building meant that by this period two large sites were vacant. These were developed for owner occupation by local builders for sale to those who were on the Council housing waiting list. Today Erskine's development comprises 2,010 dwellings and houses around 9,500 residents.

DECLINE INTO CRISIS

While most of the development remained stable and astonishingly free of vandalism given its soft materials, a degree of shabbiness due to poor attention to landscape and overly slow cycles of repainting built up through the 1990s. In the southern 'neighborhoods' of Ayton and Bolam, which were noticeably built to a higher density, vandalism to both buildings and landscape had problems from the start that led to early, but largely failing, security measures in the neighborhood center of Raby Cross. The general tarnishing of the reputation of social housing in Britain, together with the gradual outflow of those in secure jobs to owner occupation led to pockets of empty properties that, in turn, drew attention from vandals. This escalated to a point where Bolam Coyne—a medium-rise small block described by Erskine as a piece of the wall that drifted south—was totally empty and though fenced off (as it remains), still an area for gangs of youths who terrorized local people. The prominence of the block and the anxiety of residents, whose peace of mind and home security was blighted, demanded action. The determination in the late 1990s that demolition might be one of the solutions caused an upsurge in alarm far beyond the estate or Newcastle. Was this a surgical strike that would cut out the rot and allow the development to regain its reputation? Was it in itself an act of vandalism against the greatest achievements of an internationally recognized architect? The debate led to a call for listing[3] which many architects and Byker 'champions' saw as a means of 'protecting' the estate, from the bulldozers at least. In 2000, English Heritage recommended that the government list the entire Erskine development at grade II*. An intention to list, albeit at a lower grading, was announced in 2003 and instigated a consultation exercise, but it was four more frustrating

Fig. 2. The southern "inside" of the Byker Wall from Raby Way

Fig. 3. A typical courtyard space

years before a final decision to list the entire Erskine development at grade II* was made in January 2007.[4]

RE-VISIONING BYKER

The story so far might suggest a fall from grace by a local authority, once courageous enough to implement Erskine's vision, but ultimately failing to invest in its long-term future. From a local authority point of view, however, there was a constant struggle by a group of committed officers to ensure adequate resources for painting and fabric overhaul in the face of cutbacks in housing expenditure and the need to fulfill commitments to other Newcastle tenants. That a more radical approach was needed grew from the realization that Bolam Coyne, whether ultimately demolished or not, raised deep questions about the development as a whole, and how it might be helped to cope with change. Over the thirty years and more since the first brick was laid in Byker, the estate—we might say the country—went through considerable social and economic change. The scale and complexity of Byker has meant inevitably that parts of the redevelopment have been responding in different ways to these wider forces. There are neighborhoods where unusually strong place-bounded communities continue to thrive and use their courtyards as space to share. In other neighborhoods, rapid turnover of residents coupled with a retreat from community life fuelled demands for high closed-board fencing to give privacy. The layout of alleyways and meandering paths presents challenges for a society that is more fearful. Higher vehicle ownership coupled with increased concern for security resulted in greater pressure on narrow roads and the concreting over of private gardens. While these may have happened in many areas, the impact has been more marked in Byker because the ethos of the design was to create a sociable place, where people walked about, met each other by chance but greeted each other as neighbors. Could the design respond to a different society? These deliberations, and a willingness by the

City Council to act as though Byker was listed before a decision had been reached, led to the drawing up of a conservation plan,[5] with the intention of creating a framework that would allow for the natural evolution of the estate and a sorting of what was architecturally and historically significant from what was, at the time of building, a matter of expediency and cost. Project architects and landscape architects formerly with Erskine and now advisers on Byker have confessed that many of the elements—the roofing laths used as fencing, the sliding sash metal windows—were used because they were cheap and plentiful not because they were in themselves essential to the vision of Byker. This willingness to see the estate as a process rather than a fixed inheritance enabled the arms-length landlord, Your Homes Newcastle,[6] to, for example, replace windows with double glazed units with narrow colored frames that perform in terms of security and thermal comfort.

Fig. 4. View to St Michael's church: the significance of landscape and retained landmark buildings
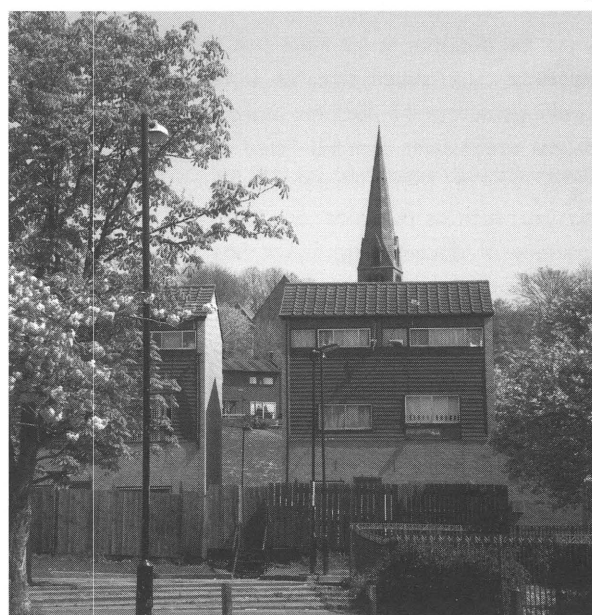
Fig. 5. The northern outside edge of Bolam Coyne

designation might be to pressure central and regional bodies with responsibility for social housing or heritage into releasing more funds. However, the example of Park Hill in Sheffield, where following a failure to secure public sector resources, blocks have been sold to a regeneration company for the renovation and sale of most of the accommodation to owner occupiers, illustrates that this is not a given.

LESS TANGIBLY, listing might be part of a process of re-thinking Byker; of celebrating what makes it different and special and that helps people within and beyond the Estate to perceive it more positively. As such, it might be part of a continuation of the historical pattern of changes in Byker; of more considered processes of place management and community engagement. Alternatively, however, it might be seen as something to frustrate residents and housing managers in their desire to make a better place, stopping improvements to the fabric and causing delay and inertia, as has been all too evident in the case of Bolam Coyne, derelict for a decade. As such, it might be seen as an elitist, external imposition with, at best, little relevance to residents and, at worst, as a device to frustrate resident aspirations and, over time, to further wrest control from Byker residents over their future.

Vandalized and neglected wooden tables and seats were replaced by metal versions in the same primary colors. These steps combined with renewed vigor in the painting program have led to parts of the estate looking as dynamic and cared for as they ever did. The better appearance and better management of the estate has increased demand for Byker properties. New communities of economic migrants and asylum seekers in the southern part of the estate have reinvigorated churches and community life. Whilst very significant social and economic problems remain in Byker, together with some physical problems, especially with the landscape, on many fronts there are reasons to be optimistic about Byker.

THE IMPACT OF LISTING: CLARITY AND CONFUSION

Since the decision to list there has been frustration and inactivity. The sheer size of Byker, with its 2,010 dwellings across 81 hectares makes it one of, if not the largest areas ever granted listed status, and it has a highly complex fabric whereby buildings and landscape features, such as pergolas, are difficult to separate. The enormity of documenting Byker has led, inevitably, to some errors and omissions that Newcastle planners have had to work through to determine exactly what is covered in the designation. This retreat into bureaucracy has frustrated Byker residents who have been left without information, leading to rumors and apprehension about what listing might mean. Meanwhile, rising costs of implementing Decent Homes Standards[7] generally, and particularly, in the Wall itself which is in quite poor condition, has led to officer anxiety that planned improvements will come to a stop. The virtue of Byker's

WHOSE FUTURE?

Whose future can be secured? Does a commitment to Byker as a community of social housing tenants mean that

Fig. 6. Renewed furniture in the public domain

funding will be sluggish and the preservation of the Byker vision uncertain? Conversely, might a desire to promote the value of Byker's architectural qualities lead inevitably to significant gentrification, with areas of the estate becoming desirable housing for those who have not only a "proper appreciation" of it, but can also invest their own money in the fabric? To an extent, the population of Byker is already changing. The upper levels of the Wall, once difficult to let, have been colonized by artists, academics, craft workers and students who enjoy the architecture and from their balconies stand above the problems experienced in the low-rise housing below. Do they add weight to Byker's resurgent reputation or are they the first settlers of a wave that will, given the opportunity, move in to buy-up parts of the estate? Does tenure or social grouping matter if the design continues to be meaningful and cherished? Will valorization through listing lead to a gentrification that is inimical to the reason why Byker is a special place? Or does Byker have the capacity to evolve in ways that allow many different kinds of people to move in and find some sense of community?

This article is based upon research undertaken by the authors encompassing a number of interviews with residents, heritage professionals and housing managers. See John Pendlebury, Tim Townshend and Rose Gilroy, "Social Housing as Heritage: The Case of Byker, Newcastle upon Tyne," in Lisanne Gibson and John Pendlebury (eds.), Valuing Historic Environments (Abingdon: Ashgate, 2009).

ROSE GILROY, **JOHN PENDLEBURY** and **TIM TOWNSHEND**, Global Urban Research Unit, School of Architecture, Planning and Landscape, Newcastle University.

NOTES

1 Indeed it has been noted by Robin Abrams (in his article "Byker Revisited," *Built Environment* 29, 2 (2003): 117–31) how strongly the design relates to other work by Erskine.
2 This gave eligible tenants of local authorities (and some housing associations) the right to buy their property at a discount. This, for many policy analysts, was a watershed that led to residualization of public sector housing.
3 In England the legal definition of a 'listed building' is a building of "special architectural or historic interest."
**4** Buildings can be listed as grades I (the highest grade), II* or II. The higher grades are used sparingly, with over 90% of buildings being Grade II.
5 North East Civic Trust. *A Byker Future: The Conservation Plan for the Byker Redevelopment, Newcastle upon Tyne* (Newcastle upon Tyne: English Heritage & Newcastle City Council, 2003).
6 Your Homes Newcastle is an independent body set up by Newcastle City Council to be the managing agent for its housing stock.
7 This is the new minimum standard of housing conditions for all those who are housed in the public sector. The government set out a target in 2000 that it would ensure that all social housing meets set standards of decency by 2010, and public housing bodies have been required to set out a timetable under which they will assess, modify and, where necessary, replace their housing stock according to the conditions laid out in the standard. Criteria focus on repair, modern facilities, e.g. in kitchens and bathrooms, and thermal comfort.

2- INTERVENTION STRATEGY
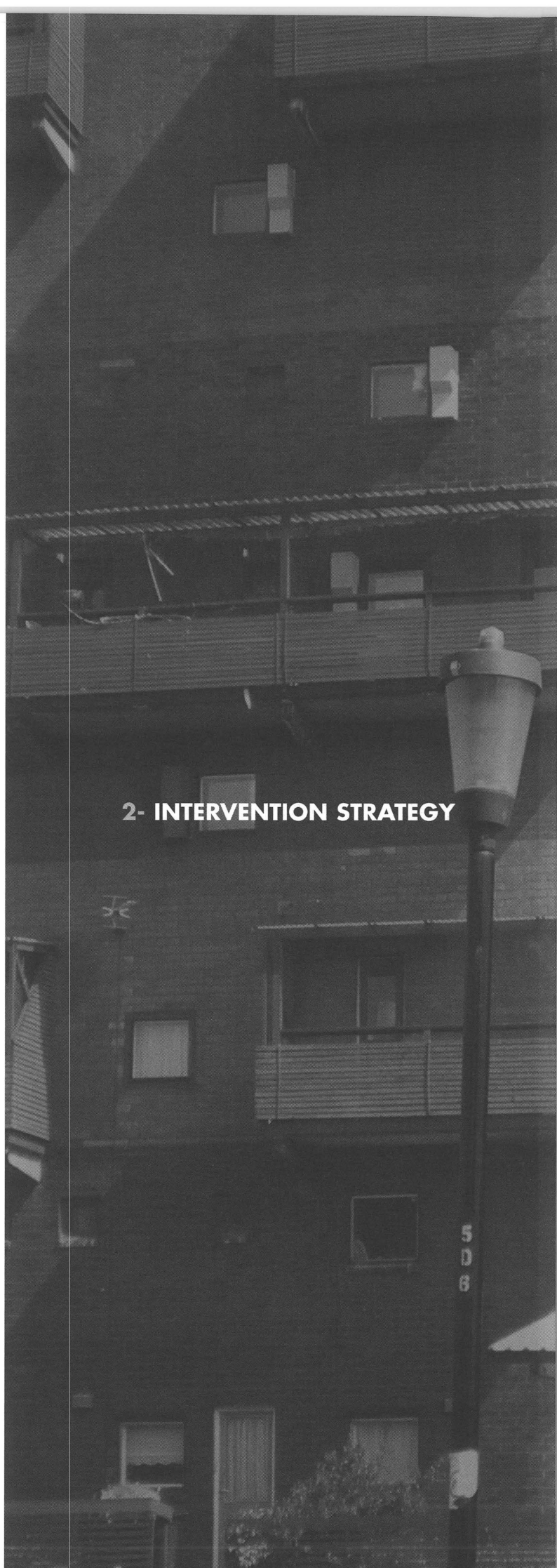
Grass and Concrete
Regenerating Amsterdam's Westelijke Tuinsteden

■ WOUTER **VELDHUIS**

The Westelijke Tuinsteden, literally the "western garden cities," are suburbs of Amsterdam built in the 1950s and 1960s. They are counted among the leading successful examples of postwar urban design.[1] The international appreciation for them in academic circles, however, is far removed from the day-to-day reality of urban restructuring.

LOCAL AUTHORITIES, housing associations and developers are focused primarily on the current problems in these urban areas.[2] The widely spaced layout and relatively uniform housing stock are seen as the most problematic issues. Substantial effort is now being invested in diversifying the housing stock by demolishing old buildings and constructing new ones, but no consensus has yet been reached on an approach to public space. This is mainly because issues of public space, buildings, housing patterns and the overall urban structure are linked in quite complex ways to the discussion of the meaning of built and written heritage. This article is an attempt to place the daily practice of urban regeneration in the Westelijke Tuinsteden in the context of the larger debate on the meaning of public space in this postwar city.

FIVE PERSPECTIVES, ONE REALITY

Public space in the Westelijke Tuinsteden can be interpreted in five different ways. Although these five positions are often opposed to one another in debate, they are, in fact, five levels of description that are simultaneously present in the Westelijke Tuinsteden.

1 Amsterdam's General Extension Plan (*Algemene Uitbreidingsplan*; AUP) of 1934 was intended primarily to reorganize the scattered urban development in and around the city of Amsterdam into an orderly expansion

■ DANS LE PREMIER DES TROIS ARTICLES D'AUTEURS HOLLANDAIS QUI PROPOSENT DES SOLUTIONS INTERVENTIONNISTES ET CHIRURGICALES AU PROBLÈME DU LOGEMENT SOCIAL, WOUTER VELDHUIS PRÉSENTE UN PROJET DE REVITALISATION URBAINE, MIS EN ŒUVRE PAR L'AGENCE MUST, POUR UN QUARTIER DE 7 000 HABITATIONS EN BANLIEUE D'AMSTERDAM, LE WESTELIJKE TUINSTEDEN. ALORS QUE LE PROJET DU VAN EESTEREN MUSEUM FAISAIT ÉTAT DES STRATÉGIES NÉCESSAIRES POUR LA CONSERVATION D'UN QUARTIER ENTIER, CET ARTICLE MET EN VALEUR L'IMPORTANCE DE LA CONSERVATION DE LA STRUCTURE ET DU TISSU URBAINS EN TANT QUE THÈME MODERNE ORIGINAL FACE AUX TRANSFORMATIONS QUOTIDIENNES DE L'HABITAT INDIVIDUEL.

policy for the long term.[3] The AUP allowed for an eventual city population of 960,000. The plan was based on three fundamental spatial networks: roads, parks and canals. The bird's-eye views drawn for the AUP emphasize the importance of these networks, showing their layout and potential uses in detail, unlike those of the undefined residential and commercial blocks. The form of the living and working spaces is left open for the future, while the position and appearance of the networks is precisely indicated. The result is a durable, flexible system of public space, an organizing framework within which adjustments can be made.[4]

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2 The AUP is usually described as a functionalist plan, but one can just as easily link it to Amsterdam's strong aesthetic tradition of urban design. In his lectures, the urban planner Cornelis van Eesteren described the city's canal belt as "a quality standard that modern urban planning should match, though by other means."[5] After he joined the City of Amsterdam's town planning department in 1929, the built heritage created by Berlage in the south and west of the city was the most important aspect of the urban fabric on which he embroidered. The AUP, which was completed four years later, reconciles Berlage's historic Amsterdam with the modern city in a miraculously natural way. The city's west side, in particular, can be read as a fascinating dialogue

between two designers who left a lasting mark on Amsterdam.[6] Just as Berlage placed towers in squares and along axes to signal special moments in the urban structure, Van Eesteren placed tall, striking buildings along the main structural lines of the Westelijke Tuinsteden, buildings which stand out from the horizontally organized fields of housing blocks. This approach to urban aesthetics sharply distinguishes the Westelijke Tuinsteden from other postwar residential districts in the Netherlands.[7]

3 Van Eesteren developed much of his design vocabulary during his de stijl period, between 1922 and 1925,[8] and was especially deeply influenced by the perceived social implications of the new tendencies in painting and architecture described in Mondrian's manifesto on neo-plasticism.[9] In the AUP, the neo-plasticist vision of the ideal society is transformed into a more concrete approach: elementarism.[10] In elementarism it is not the individual buildings that matter, but the relationships between them, and those relationships are not aesthetic but functional.[11] The symbol of this socially transparent space is the Sloterplas, the pond in the middle of the Westelijke Tuinsteden. The center is no longer the prestigious focal point from which the civil authorities wield their power. Instead, the center is empty, untraversable and unmonumental. It is a magnificent public space that does not represent any social or political value. It is merely space for the sake of space, emptiness for the sake of emptiness, a center for the sake of a center. This space violates both the principles of public space in classic urban planning and those of functionalism.[12]

4 The drawings in the AUP do not convey a clear picture of the most important building block of which these suburbs were ultimately composed: the residential units, arranged in an open, spacious pattern. The experiments with clustering residential buildings around a courtyard (hovenverkaveling) that took place just prior to, and again after, World War II, greatly influenced the ultimate form of the Westelijke Tuinsteden. This form of cluster housing replaced the monotonous landscape of row housing with a differentiated spatial pattern. This made it possible for residents to forge bonds with the places where they lived, on a sliding scale from collectivity to public space. This tendency was also connected to Rietveld's experiments with 'turbine' patterns of housing,[13] and it foreshadows the designs of Van Eyck and associations of architects such as De 8 and De Opbouw. Collectively, the Westelijke Tuinsteden, with 54,000 residential units in total, forms an open-air laboratory for cluster housing. Each cluster, composed of a courtyard or green space and the surrounding buildings, forms a

The basis: two rows
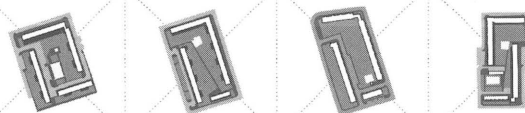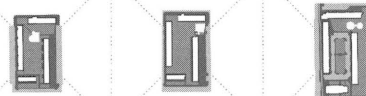of housing make
one hook

Type 1: two hooks

Type 2: mirrored hooks

Type 3: open hook
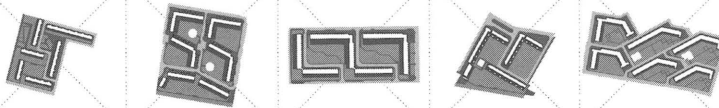with closed hook

Type 4: two open hooks

Type 5: hook
with a row

Type 6: hook
with several rows

Unique hook configurations

© Must urbanism, 2006

Fig. 2. The rich palette of clustering around courtyards in the Westelijke Tuinsteden

composition in which housing types, housing patterns, private space, collective space and public space are combined in a subtle yet inextricable way.

5 In the Westelijke Tuinsteden, both the proximity of the landscape and the proximity of the city are of great importance. The road network connects the Westelijke Tuinsteden to the city, while the canals and parks connect it to the landscape. The Sloterplas is the ultimate mix of landscape and city, in the heart of the Westelijke Tuinsteden. The water and greenery allude to the countryside. The boulevards, bastions, parkways and tall buildings allude to the city. Almost anywhere you go in the Westelijke Tuinsteden, you can feel this dual orientation. Streets often have an asymmetrical contour, with continuous, urban-style frontage on one side and a great deal of open space and greenery on the other. All the main squares are linked to the road network and adjacent to both tall buildings and a canal or park. Almost every home has a street in front of it and a shared green space at the back. The same narrative is reiterated

at every level. All the elements of the Garden City are linked, in a chain that runs from large to small, but also from small to large. Public space flows everywhere, allowing complete freedom for each individual. From your home, green landscapes are within arm's reach, and just around the corner you can feel the effervescence of the big city.[14]

FOUR GARDEN CITIES
OR A PARK CITY?

For the past ten years, the Westelijke Tuinsteden have been in the throes of urban regeneration. In this process, two trends have been at play. The first is the changing role of these suburbs in the Amsterdam region. Their dual orientation, towards both the city center and the surrounding countryside, is out of date. The city is all around them now, and the surrounding landscape towards which they once were oriented has largely vanished. While the surrounding districts are benefiting from this new urban orientation, and from the economic growth associated with Schiphol Airport in particular, the

Westelijke Tuinsteden are missing out on this stimulus. Furthermore, major social shifts are taking place within the Westelijke Tuinsteden. The original residents, who moved there in the 1950s, remained for many decades, and these suburbs hence enjoyed an exceptionally stable and homogeneous demographic makeup. The ageing population and large-scale relocation to other districts and cities have changed this situation almost beyond recognition.[15] In socioeconomic terms, large parts of the Westelijke Tuinsteden are now among Amsterdam's most disadvantaged areas, as a result of their cheap and fairly uniform housing stock.

THESE TRENDS have had an impact on public space. Because public space is an inalienable part of the overall design of the Westelijke Tuinsteden at every level, the above-mentioned shifts in the urban surroundings and socioeconomic changes have had direct consequences. The main problem is the friction between the changing demographic makeup of these suburbs and the sociocultural codes that informed the design of their public spaces in the 1950s. As their inhabitants have become more heterogeneous, the meaning of the public sphere has changed. The Westelijke Tuinsteden can now be regarded as a complex configuration of the urban practices of a variety of demographic groups, each with its own dynamics in time and space.[16]

A NEW URBAN PLAN, Richting ParkStad 2015[17] envisages the comprehensive urban regeneration of the Westelijke Tuinsteden through close cooperation between the city authorities and housing associations. The plan focuses on the overall spatial structure of the Westelijke Tuinsteden and the differentiation of the residential neighborhoods within these suburbs. Crucially, although the plan describes the overall spatial structure as one of the main challenges facing urban designers, none of the parties involved have identified this structure as one of their projects; indeed, they claim that "its general nature makes it profoundly unsuitable as a means of guiding the transformation."[18] The title of the plan, "ParkStad" (Park City), leaves little doubt as to the main thrust of the document: more park and more city. As this implies, the plan is sharply critical of the Westelijke Tuinsteden as they are today. Firstly, it advocates abandoning the idea of independent garden suburbs and instead proposes to transform this urban area into a unified, clearly recognizable whole: a single, genuine city with more than 120,000 residents, a true center (Osdorpplein), an independent commercial district (the zone around the A10 motorway) and a diverse population. Secondly, the plan replaces the word tuin (garden) with park. This is a criticism not so much of private gardens as of collective, public green spaces. Given that another aim of the ParkStad plan is a much denser population in this area, it can be seen as an attempt to reduce the amount of

public space substantially and to formalize the remaining public areas quite drastically. It calls for paved areas to become fully-fledged streets and green spaces to become fully-fledged parks.

Fig. 3. The chain of landscapes on six different levels

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Private garden

Garden strip

Neighborhood green

Park

City park
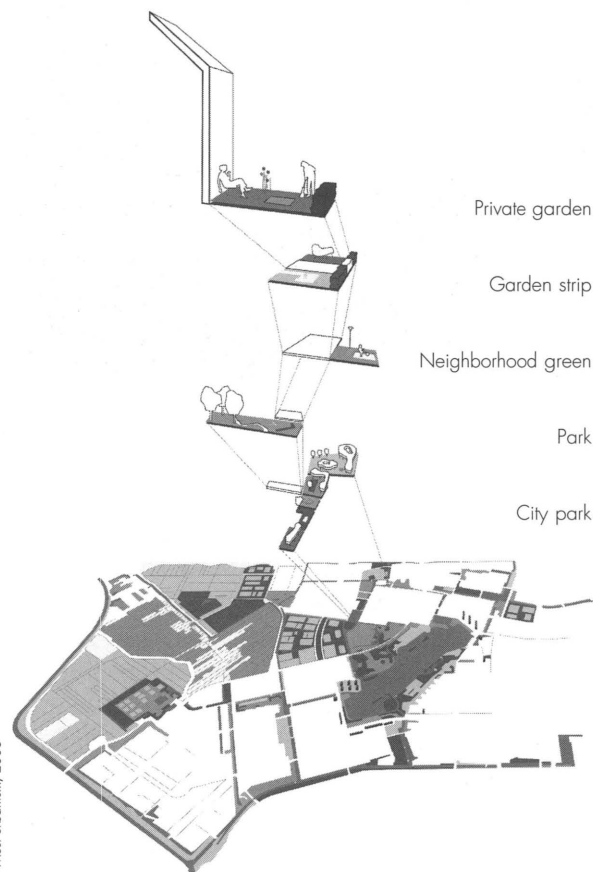
Fig. 4. The chain of urban spaces on six different levels

© Must urbanism, 2006

Front garden

Street

Square

Main street

City street

67
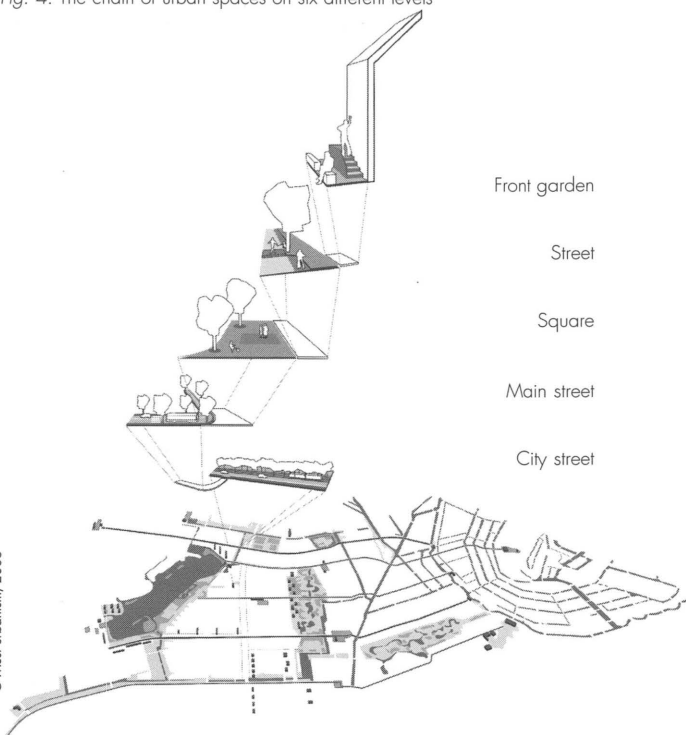
Fig. 5. Model of the new Confuciusplein in Slotermeer

© Must urbanism, 2004

REDEFINITION OF SPACE

Most of the regeneration plans being carried out at the moment involve a strategy of radically reducing public space and formalizing communal space by creating clear boundaries. Cluster housing with large open spaces is making way for perimeter blocks, and semi-public space is being privatized and fenced off. As these plans proceed, one might ask whether they are going further than necessary to achieve their goal. Undeniably, the parks are becoming more park-like, but in m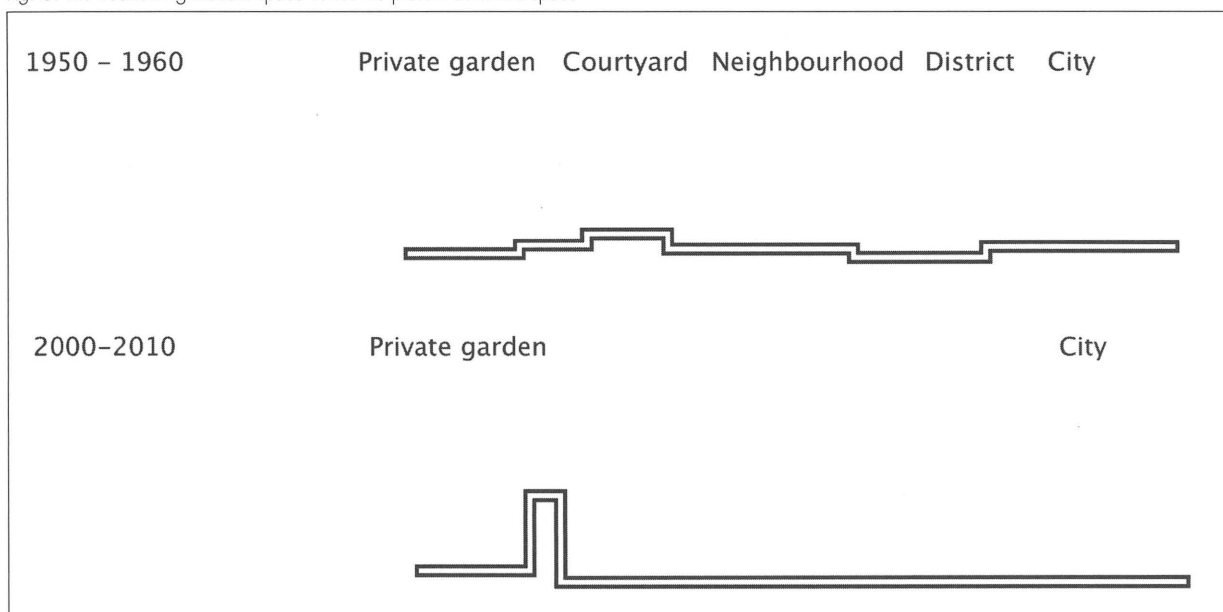any places the fluid relationship between parks and buildings that characterized the Westelijke Tuinsteden has disappeared, and in the residential neighborhoods, the distinction between public city streets and private gardens is becoming more and more rigid. Are there

no other, more intelligent methods of redefining the concept of public space in the Westelijke Tuinsteden, methods that are better adapted to the unique characteristics of the area?

IN VARIOUS PARTS of Amsterdam's Geuzenveld-Slotermeer district, Must Urbanism is working in partnership with a number of architects to achieve a new balance between buildings and public space, one that does justice to the distinctive spatial organization of the Westelijke Tuinsteden. The area falling under the new plan includes 7,000 residential units, about one-third of which will be replaced.[19] This transformation is on a large enough scale that it allows a systematic approach to a number of spatial-planning problems. The connections to the surrounding neighborhoods and parks are being improved, and the system of urban facilities is being reorganized. The new Confuciusplein illustrates these changes. At an intersection of roads and routes, this square is linked to the public space that defines the structure of Slotermeer. The painstaking arrangement of the buildings adds an additional layer to the aesthetic composition of the district. A new building to be constructed on the square will bring together restaurants, businesses, care facilities, education and residential space. At the heart of the building, there will be an atrium, open to the public, with communal facilities shared by all the residents of the district. This will bring a new type of collective space to the Westelijke Tuinsteden. The square itself will be furnished in a neutral manner, so that all of the district's diverse demographic groups will feel at home there. In this respect, it will resemble the characteristic socially transparent spaces in other parts of the district. Finally, there will be a short cut from the square to nearby Sloterpark, so that urban and landscape areas literally flow into one another.

Fig. 6. The free-flowing modern space versus the present defensive space

1950 – 1960	Private garden	Courtyard	Neighbourhood	District	City

2000–2010	Private garden				City

© Must urbanism, 2006

BEHIND CONFUCIUSPLEIN, new homes are being built in a contemporary garden city setting. Because most of the parking places are at the rear of the building, the houses at the front enjoy a large public space with little car traffic. The grassy fields that form part of this present-day variant of cluster housing connect seamlessly to the collective gardens of the adjacent 1950s staircase-access flats. Placing the front gardens and patios of these houses along these green strips encourages the future use of the fields and creates an atmosphere reminiscent of the popular courtyard complexes (*woonhoven*) in the vicinity. The nearby Slotermeerhof complex reflects a decision to radically minimize the private domain. Designed in partnership with the residents, it literally mediates between the district and the park. The meandering arrangement of the buildings creates three courtyards, each with its own distinctive character. Private gardens are prohibited, a measure that reinforces the distinctive look of each courtyard. Each unit has a small patio or balcony that forms a buffer between the private and public domains. A similar strategy was followed in the Van Tijenbuurt, another local neighborhood. Within each of the existing courtyard complexes, eight residential units were added in two clusters of four. The housing blocks are cleverly designed so that they have no front and back, but are oriented in all directions equally. All these plans attempt to connect the regeneration of public space to the reconstruction of the adjoining properties, forging new links between essential measures to improve the housing stock and the enhancement of public space at multiple levels.

GRASS AND CONCRETE: LANDSCAPE AND CITY

The Westelijke Tuinsteden were designed from a large-scale, visionary perspective and built in the form of small-scale, pragmatic projects. The principle of dual orientation (towards both the city and the landscape) was put into practice with the smallest building blocks imaginable: grass and concrete. The grassy field represents the landscape, while the square with its 30x30 concrete tiles represents the city. The grass and the concrete tile have no inherent orientation and are neutral in texture. They do not dictate any particular use, but allow each individual to do as he or she chooses. The most important feature of public space in the Westelijke Tuinsteden is that this undefined urban and rural space is palpable everywhere and flows around all the buildings. It is this free-flowing space that is making urban regeneration problematic, not least because space of this kind is no longer suited to today's society. The desire to feel connected to the outside world has grown much stronger, while the sense that the world can penetrate unhindered into our living rooms is becoming increasingly unwelcome. It is, therefore, high time for new design experiments that seek a place-specific balance between present-day demands and the distinctive characteristics of public space in the Westelijke Tuinsteden.

IN THIS SENSE, the current situation is quite comparable to that of sixty years ago. There is a general consensus about the overall spatial structure that has been put into place. At the level of the individual projects involved in the transformation, however, designers are still searching frantically for suitable design principles. The ultimate success of urban regeneration will depend on what approach is taken on this smaller scale. This is what will ultimately determine what relationships emerge between the overall structure, the arrangement of the buildings, public space, collective space and housing. We need to embark on a new search for contemporary configurations of the most characteristic building blocks of public space in the Westelijke Tuinsteden: grass and concrete.

WOUTER VELDHUIS is an architect and founding partner of Must urbanism, an office for urban design with a focus on urban renewal, regional design and independent research. With Must he published, amongst others, the Atlas Westelijke Tuinsteden Amsterdam (with Ivan Nio and Arnold Reijndorp, 2008), the Limes Atlas (with Bernard Colenbrander, 2005) and Euroscapes (2003). Wouter lectures at several Dutch academies for architecture and urbanism and the Technical University Delft.

NOTES

1 Sigfried Giedion, *Space, Time and Architecture. The Growth of a New Tradition* (Cambridge, Mass: Harvard University Press, 1947).
2 In recent years, the Westelijke Tuinsteden has appeared in the Dutch news primarily as one of the country's most serious problem districts.
3 *Algemeen Uitbreidingsplan van Amsterdam. Nota van toelichting* (Amsterdam: 1934), 11.
4 *Algemeen Uitbreidingsplan van Amsterdam*, 167.
5 Cornelis van Eesteren and Vincent van Rossem, *Het Idee van de Functionele Stad. Een Lezing met Lichtbeelden 1928* (Rotterdam: NAi Uitgevers, 1997), 70.
6 Vincent van Rossem, *Het Algemeen Uitbreidingsplan van Amsterdam. Geschiedenis en Ontwerp* (Rotterdam: NAi Uitgevers, 1993), 234.
7 For an enlightening discussion of the difference between the mass of the city in the Amsterdam urban aesthetic with large areas of open space between buildings *(open verkaveling)* and the characteristic arrangement of buildings in Rotterdam *(stempelverkaveling)*, which had sociological determinants: Henk Engel and Endry van Velzen, "De Vorm van de Stad, Nederland na 1945," *Oase* 37/38 (1994).
8 Manfred Bock, Vincent van Rossem and Kees Somer, *Bouwkunst, Stijl, Stedebouw. Van Eesteren en de Avant-Garde* (Rotterdam: NAi Uitgevers, 2001).
9 Piet Mondriaan, "De Woning – De Straat – De Stad," *i 10* (1927).
10 *Algemeen Uitbreidingsplan van Amsterdam*: 165.
11 Jan de Heer, "AUP + AUB(ette)" in *Raderwerk. 10 Jaar Projektraad Bouwkunde* (Delft: DUP, 1981), 190.
12 Van der Hoeven & Louwe (1985), 145.
13 Jan de Heer, "Het centrumloze labyrint, Gerrit Rietveld en de stedebouw," *Oase* 23 (1989): 20.
14 Hans Verhagen, *Sterren Cirkels Bellen* (Amsterdam: 1968).
15 In 1980, 8.6 percent of the population belonged to ethnic minorities; this figure is now 54.6 percent and, in many neighborhoods, has risen above 80 percent.
16 Ivan Nio, Arnold Reijndorp and Wouter Veldhuis, *Atlas van de Westelijke Tuinsteden* (Amsterdam/Rotterdam: Trancity, 2008).
17 *Richting ParkStad 2015. Ontwikkelingsplan voor Vernieuwing, 2001; Ruimtelijk Kwaliteitskader ParkStad*, 2003.
18 Sjoerd Cusveller, "Vadermoord, Broedertwist en Nevenschikking" in *De Tweede Impuls* ('s Gravenhage: Nirov, 2004), 22.
19 *Vernieuwingsplannen Buurt 5 en Geuzenveld-Zuid* (Amsterdam: 2003), a design by Must Urbanism for the Geuzenveld-Slotermeer district authorities and the housing associations Far West and Westwaarts.

The Rhythm of Renewal

■ ARJAN **HEBLY**

"At the start of the twentieth century we saw two great inventions: the airplane and the Garden City. Both of them announced a new era; the first gave wings to man, the second promised him a better house after his return to earth."[1]

IN THE NETHERLANDS, thirty percent of the housing stock was built during the first twenty-five years after World War II. Now, however—in sharp contrast to that founding period—these neighborhoods appear in a very bad light. Proud municipalities, commissioners, designers and inhabitants have yielded to decay, both physical and mental.

The homogeneous housing stock of these neighborhoods, with its big scale and anonymity, is seen as a great evil. Some key figures in today's Dutch planning practice, commissioners and designers, even declare them to be totally obsolete. This leads to a radical reorientation of these postwar areas towards the latest ideas on idyllic living.

One cause of the bad image of these postwar urban districts is today's political and professional adulation of the city. We can speak of a double phenomenon of suburban fear and of city hype—especially within the cultural urban elite, who adore the cozy quality and the rich urban facilities of the nineteenth-century metropolis. The city is thought to be more 'sustainable,' too, because of the short distances between working and daily activities. In the Netherlands, this kind of appreciation applies to some old inner cities, especially Amsterdam, although Amsterdam is more the exception than the rule. One of the consequences of this vision for the postwar districts is, nevertheless, an urge to remodel them into the likeness of dense nineteenth-century inner-cities.

BUT is the solution really that simple? Against this vision, for example, one could argue that dense urban areas generate extra travel during weekends and holidays, and encourage people to buy second homes in sensitive country areas elsewhere. Since the twentieth century, too, it seems impossible to argue beyond the urban fact of the suburb, and the demand for free choice of where to settle. Maybe we have indeed eaten from a forbidden fruit, the fruit of suburban life, and we know it is impossible to pretend we haven't eaten from it.

LA MÉTAPHORE DU « RYTHME », SELON ARJAN HEBLY, PEUT NOUS AIDER À APPRÉHENDER L'« OUVERTURE » NON-HIÉRARCHIQUE DE L'URBANISME MODERNISTE – UNE APPROCHE PLUS SUBTILE ET RAFFINÉE QUE CELLE DE L'URBANISME GRANDIOSE DES RUES ET MONUMENTS RESSUSCITÉ PAR LES DÉFENSEURS DES ANNÉES POSTMODERNES QUI, AUJOURD'HUI ENCORE, FORMENT LE COURANT « ORTHODOXE ». À PARTIR D'UN CAS D'ÉTUDE À ROTTERDAM SUR LEQUEL IL A TRAVAILLÉ EN TANT QU'ARCHITECTE, L'AUTEUR AFFIRME QUE LE RYTHME SUBTIL, « DÉCENTRÉ » DE L'URBANISME MODERNISTE PEUT APPUYER LES EFFORTS DE RÉGÉNÉRATION, ET PERMETTRE DE S'INTERROGER : ALORS QU'ELLE EST TRADITIONNELLEMENT PERÇUE COMME « ANTI-URBAINE », L'OUVERTURE RYTHMIQUE MODERNISTE N'EST-ELLE PAS, AU CONTRAIRE, « SPÉCIFIQUEMENT URBAINE » ?

THUS, it is all the more daring to investigate a different, positively-framed question: what is the potential of these postwar areas for today? Because a powerful argument can be constructed, that these postwar areas are not only still revolutionary, but also, in principle, highly sustainable and human. From this perspective, today's practice of metropolis-worshipping design appears potentially retrogressive, and doubts begin to bubble up: is the new urban landscape, with its closed city blocks and romantically picturesque dwellings along curved streets, the real modern answer for our time?

And it is in the postwar districts themselves that lies the most important evidence for these postulations. Many are largely free from 'urban' problems, highly appreciated by their inhabitants, and have developed a self-renewing ability over time, a condition that is the ultimate test for the sustainability of urban districts. One can think of neighborhoods like Kerschoten in Apeldoorn, De Pettelaar in Den Bosch, Mariahoeve and Morgenstond in The Hague, the Kuyperwijk and the Voorhof in Delft and Buitenveldert in Amsterdam. What they all have in
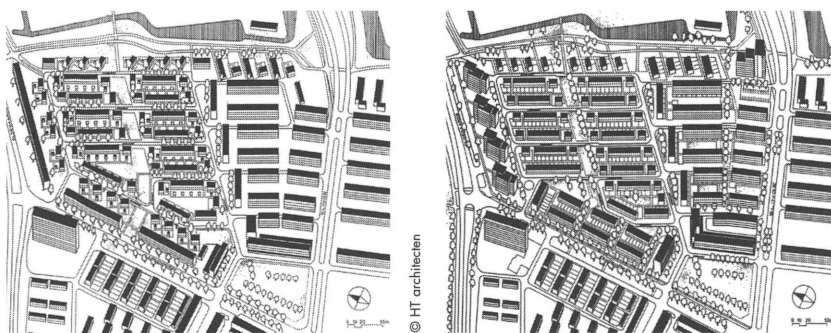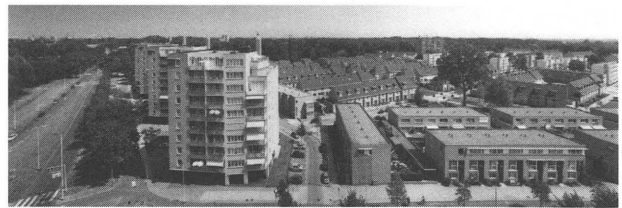
Fig. 1. *far left.* Old layout of the Horsten
Fig. 2. *left.* New layout of the Horsten
Fig. 3. *below.* North and western edge

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common is a fine mix of different housing types, separated from, yet connected to, one another, within an open and abundant green environment. These are the places from where we can learn how to renew others that suffer from more intractable problems.

What are the main problems demanding attention? As many of these neighborhoods were built in impecunious times, when good materials were scarce and expensive, their sound and climate insulation is often of poor quality. Their large scale and one-sided mix of housing types, their outmoded proportions of dwellings, and their soaring car-ownership levels all call for intervention. The wide green spaces—one of the trump cards of the postwar city—need to be managed and maintained in a sustainable way. And because of the intrinsic openness of the postwar city, there is also the issue of the perimeter: what do these new borders and transitions look like? All in all, then, the challenge is to achieve a modern partitioning and mingling of people and groups of different status, ages, ethnicities, beliefs, states of health, and so on, in a city.

To help structure my analysis in this text, I want to make use of the metaphor of "Rhythm," both as a guide to the process of renewal and as a key to understanding the spatial syntax of the postwar city. Rhythm, in a way, epitomizes that great, overarching shift from the nineteenth century to the modern culture of the twentieth century.

TUNING IN

The rhythm of modern renewal means 'functionalism' in its true sense—not so much an architectural style as a way of intervening, a design attitude rather than a pre-imposed form. The functionalist approach demands a survey of the renewal task. This research demands a scientific environmental empathy, which has its consequence in the profile of the designer. Besides 'normal' urban data, a renewal task has three specific issues of its own: the handling of information about the inhabitants, the need to research cultural history, and the judgment of the intensity of intervention required.

The first stems from a recognition of the value of the inhabitants, acknowledging their input as a true source of knowledge rather than a cumbersome burden. They know, for instance, the important connections, the insecure places in their areas—which functions are

missing, and where the memorable spots are. Inhabitants are often also more open-minded than one might expect. Confronted with plans for the future of 'their neighborhood,' they are sometimes spurred to take even bigger mental steps than the professionals involved in the process of renewal.

The second specific element of the survey is the need to research the cultural history of the location. Each neighborhood in the Netherlands is the result of conscious human acts, and this kind of research can highlight a great diversity of values embedded in its environment. This leads, in turn, to the design itself. By studying the original intentions of the designers and the commissioning organizations, these areas often come to life in another unexpected way, yielding up a host of hidden qualities and subtle details. Our plans can then, in turn, be directed at these qualities, echoing but also critically interrogating them.

THE LAST ELEMENT of the survey is our own judgment of the intensity of the intervention really needed. Sometimes the change in environment must be very radical, but sometimes the change can be grafted upon the existing spatial qualities of the location. Much depends on the reputation of the area in the city as a whole, a factor shaped by the constant competition of the different areas in a city. When the reputation of a neighborhood is bad, a profound change is the remedy. When, on the contrary, the new design can be built upon the existing qualities, these qualities are, mostly, already evident to all participants in the process of renewal. But even in the case of a necessary contrast, our own designs can still draw on the reservoir of postwar spatial syntax, which is not only a very rich urban language but also, still, the most modern we have. In the next section of my paper, I want to explore in more detail the formal importance of rhythm as a means of fully understanding postwar architecture and urbanism and their utopian potential.

THE REVOLUTION OF RHYTHM

To help grasp the importance of rhythmic ordering as one of the great formal inventions of modern architecture and urbanism, we first have to investigate two things. Firstly, we need to establish the most appropriate cultural context for bringing this 'popular' theme of rhythm into focus.

Fig. 4. The intimate eastern edge

Secondly, it is important to explore what spatial rhythm actually means. Rhythmic ordering is something quite different from repetition. Repetitive structures are as old as the grid in urban and architectonic ordering, a pattern that stretched from old Egyptian or Greek architecture and city planning through to the Colonial approaches to shaping the land and the city. A different, hierarchical sort of repetitious order emerged in the post-Renaissance European concern with the harmonious city, with its ordered balance between the ordinary city and the monuments. Long streets lead to monumental squares and architectonic highlights. This was a way of expressing the hierarchy of society and its institutions.

During the profound changes of the early twentieth century, both of these ways of ordering the city became obsolete. Mass-society, equal-rights movements and representative democracy required another way of looking at the world, a redefinition of art, the city and its architecture. In the early modern movement the emphasis lay in the invention of a new world by technical means. Soon, though, another tendency became apparent, first in the visual arts, literature and music, and later in architecture and urban planning. In analyzing, looking at the world of the common, the ordinary and the popular culture came into special focus. Artists like Duchamp, Picasso, Schwitters, Dali and others incorporated ordinary things within their works of art. Mondriaan combined, in his Broadway Boogy Woogy, his own artistic conception of the rhythm of the street-life of New York. And in music, composers like Ravel, Shostakovich and Ives took over common tunes. Within this broadening of cultural scope, rhythm was a central aspect.

TO EXPLAIN spatial rhythm we have to look towards its musical base. A rhythm is the equal repetition of beats or tones, each with its own position, length or emphasis within an even, repeating time-measure. Essential to rhythm are the intervening moments of absence of beat, the repetition of silence. These silent 'beat-dots' are as important as the 'filled' beat-dots. Within certain classical music, from Bach to Mahler, a moment of silence can also occur, but it is usually used to underline a dramatic moment in the composition. In rhythmic music the alternation between dot and void are of equal importance. The source of this rhythmic music lays within the non-classical musical tradition, in Afro-American music like blues and jazz, and in other popular musical styles. The incorporation of rhythm in architecture and urban design, especially during the postwar period, meant the application of a rhythmic repetition of mass and void into space and, by that, a rejection of the long sweeping street, as, for instance, had been applied in Amsterdam South by architects like Berlage and others of the Amsterdam School. This rhythmic starting-point forms the basis of a very rich repertoire of solutions.

TOWER-ZONE

An example of one such solution is the incorporation of high flats into the urban fabric. Due to the dwelling shortages after World War II, multi-storey blocks became topical in planning practice. How should they be situated in the city? Traditionally, a high building, like a church or an office, indicated some symbolically important urban function or place. With high buildings that only contain dwellings, this kind of urban signage seems inappropriate and even absurd. The freestanding, monumental Unités of Le Corbusier are, in this respect, always a bit of a problem: they cannot be a part of an urban structure and thus appear intrinsically anti-urban. Within Dutch planning practice a new typology was applied: a zone of multi-storey blocks rhythmically ordered along or at an angle to main roads. The designer of the Algemeen Uitbreidingsplan Amsterdam (AUP, 1934), Cor van Eesteren, was well aware of the potential of rhythmic ordering. His ideas and designs were also shaped by the artist Theo van Doesburg and his many international contacts in the CIAM. He wrote, for instance, in 1958 that the neighborhood Buitenveldert "is designed within a rhythm of more or less equally-spaced motifs, also called living units."[2] The postwar areas of Amsterdam took up this theme with a vengeance, adopting the most striking spatial rhythms—a 'modern heritage' that can inspire our regeneration efforts today.

THE RAVENHORST RHYTHM

In our office's design for Ravenhorst in Rotterdam, the function and topicality of rhythm in modern housing design are strikingly echoed. Different from the mainstream "high-rise zoning" mentioned above, this is a street with low-rise housing. The street is part of the Horsten neighborhood, originally designed by the famous Dutch architect Willem van Tijen, and built in 1951. During the 1990s, the need for renewal of this area became apparent, due to different social demands. With the approval of the inhabitants, it was decided to demolish and rebuild the neighborhood—yet the new plan was, in many respects, shaped upon the rhythm of the old Horsten.[3] In particular, the north and west edges of the neighborhood, facing the city, were redesigned to communicate the new future of the neighborhood to the whole of the city district of Zuidwijk. In the north, a long housing block was replaced by a transparent zone with high flats, so the city-inhabitants were given a glimpse into the new inner low-rise world of the Horsten, and, from the Horsten itself, views were created towards the

main Zuiderpark on the north. On the western edge, two long housing blocks were replaced by a rhythm of four urban low-rise housing blocks *(figs. 1, 2 & 3)*. The eastern edge of the neighborhood, the Ravenhorst, was a special street. The neighborhood became more and more intimate towards its eastern border. Behind this border lies a park, and the edge itself comprises a rhythm of little housing blocks, each of two dwellings. The orientation of these blocks was not parallel to the street itself, but parallel to the direction of the western edge. The whole grid of the Horsten consists of an ingenious play of three directions. At the Ravenhorst, we see a lively rhythm of eight little blocks, with the front-façade to the south, little public-parks in front and high trees of the park in the back. The well-known critic Blijstra wrote in 1965 about this street: "Especially nice are the single family-houses, situated at the extreme eastern border" *(fig. 4)*.

How does one renew such a delicate spot, to fit in new requirements of living, such as the quest for privacy and parking space? At first we had to convince the commissioning organizations, and especially the municipality, that the correct solution was, again, low-rise single-family housing. Under their own initial plan to build a series of so-called 'urban villas,' we argued, the unique and intimate sphere of this spot would be totally destroyed. Eventually we made at the Ravenhorst twelve houses within six double-villas. The blocks are not situated parallel to the street, but follow the direction of the internal green zone of the grid, the Ellenhorst. The result is that the houses have a private garden oriented to the south, a little parking place at the north-side and broad in-between views towards the park. The gardens are separated from the street by transparent fences. The double-villa houses each have a wing, projecting symmetrically: these have, for each house, a different function. For the house along the street the wing provides more privacy in the garden whereas for the 'rear'-situated house, it provides a view from the kitchen to the street.
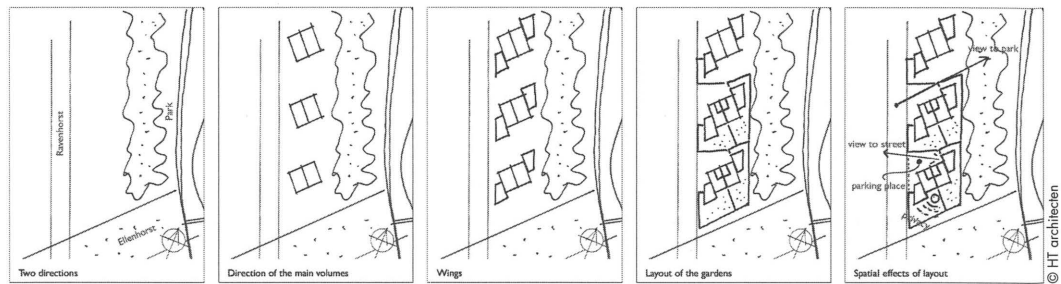

Fig. 5. Birth of the Ravenhorst rhythm

By cutting the additions and the roof, parallel to the street-direction, the perspective of the street and the park is enlivened, especially in its rhythmic ordering—an indirect evocation of the modern requirements of living *(figs. 5, 6 & 7)*.

THE MOST profound meanings of rhythm in architecture and urban planning are unspoken ones. Once you get an eye for this rhythm, you see the richness of its repertoire, especially in postwar areas. Just where, though, does its enchantment come from? Is it the quietness, in the midst of hectic urban life, that is so tempting? That could be the case—yet you could equally argue that rhythmic ordering is not anti-urban at all, but especially urban. On the one hand, rhythmic ordering of space shows us, through its openness, that the urban reality is bigger than the single perspective of the directional street. And on the other hand, rhythmic ordering links us to each other. To put it slightly differently, it enables people to dance with one another, all within the rules of urban life.

ARJAN HEBLY *is president of Hebly Theunissen Architects in Delft. He has taught at various academic institutions, including Delft University of Technology and the Academies of Architecture in Amsterdam, Rotterdam and Tilburg. He has a variety of publications and research projects to his name, on subjects including architecture, urban design, commercial estates and contextual design. The work of his architecture firm consists mainly of renewing aging neighborhoods and residential districts, such as the Horsten in Rotterdam, Tuindorp in Sneek and the Bomenwijk in Delft.*

NOTES

1 Lewis Mumford, introductory essay in Ebenezer Howard, *Garden Cities of Tomorrow* (London: Faber and Faber, 1945).
2 Cornelis van Eesteren, "Tuinstad Buitenveldert," *Ons Amsterdam* (1958): 110–4.
3 Renewal of the Horsten neighborhood under direction of Hebly Theunissen architecten, 1991–1999.

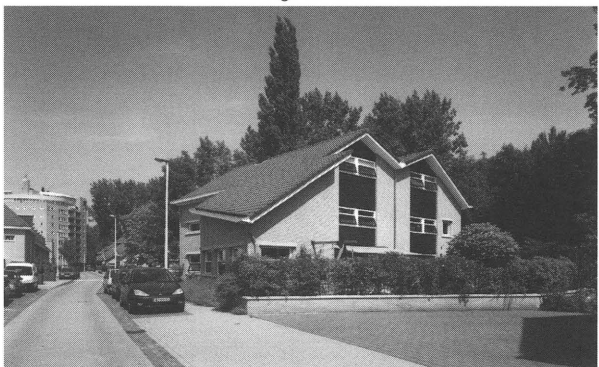*Fig. 6.* The Ravenhorst seen from the street

Fig. 7. The Ravenhorst seen from the park

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Three Projects
for the Renewal
of the Modern City

■ ENDRY **VAN VELZEN**

Dutch urban development has, until recently, focused on expansion. The expansion process has been so vigorous since World War II that it has caused individual towns and villages to fuse into what we are now starting to recognize as urban networks. In the decades ahead, however, it is anticipated that much of the space for urban development will have to be found within those networks themselves.

THE POSTWAR CITY

That means a shift of emphasis from expansion to the renovation and transformation of the existing city, including the districts built shortly after the war. This 'postwar city' was largely planned using the ideals and models of modern urbanism: openness, space and greenery. It constitutes roughly one third of the Netherlands' total urbanized land area.

For several reasons, the urban extensions of the 1945–70 period may be seen as a reserve capacity for further urbanization. Firstly, they are located strategically within the urban network, between historic town/village centers and later suburbs. Often with good access roads and public transport, they no longer constitute the periphery of the city but form a link to other parts of the urban area. Renewal in these strategic locations has an impact on the whole urban network. Secondly, the real estate of the postwar city is generally outdated and is too basic and too small for modern needs. In fact, these areas are currently the weakest links in the housing stock, so they are first in line for renewal. Thirdly, the real estate and the land of the postwar city are largely owned by a fairly limited category of proprietor: the housing corporations and the municipalities.

Hallmarks of the postwar city are their explicitly composed main structure, and the combined design of buildings and public spaces within large building zones. These design principles have produced city areas with a specific urban character. They differ from the prewar city in their open building pattern and their ample greenery; and they differ from later suburbs in the spatial

■ UNE RÉGÉNÉRATION SENSIBLE DES ENSEMBLES URBAINS MODERNISTES, DANS LE RESPECT DE LEURS CARACTÉRISTIQUES SPATIALES PROPRES, NÉCESSITE DES APPROCHES DIFFÉRENCIÉES SELON QUE L'ON ABORDE
F LA MACROÉCHELLE DE LA CONCEPTION URBAINE, OU LA MICROÉCHELLE DU PROJET ET DU BÂTIMENT. L'ARTICLE D'ENDRY VAN VELZEN EXPLORE CETTE DICHOTOMIE, DANS SON PRINCIPE GÉNÉRAL ET AU TRAVERS D'UNE SÉRIE DE CAS D'ÉTUDE D'ÉCHELLES DIVERSES À AMSTERDAM, GRONINGEN ET ZWOLLE.

dominance of the main structure. The postwar city also represents a major shift as regards to the role of the design disciplines. The land parceling and the closed perimeter blocks of the traditional city resulted in an almost automatic differentiation between architecture and town planning. But the boundaries between these disciplines became blurred in the postwar city.

Dutch postwar city areas have two distinct design levels: the main structure (or framework) and the building zones. When the postwar expansion districts were built, these corresponded to two different planning levels. One level, the structure plan, was an urban design task that involved defining the layout and the dimensions of various urban elements such as the relations between old and new parts, the pattern of roads and building zones and the creation of spatial effects. The second level concerned the building zones themselves: the scale of the building task and centralization of the client function provided opportunities to compose large architectural ensembles in

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Fig. 1. *Parkrand Osdorp*, Amsterdam designed by De Nijl Architecten. Photo Jannes Linders

which the spatial effect of the whole building zone was the primary design aim. The building zones were composed using the repetition of buildings and lines or groups of trees, so creating a system of open urban spaces that were the chief source of identity for the whole composition. The architectural detailing of the buildings was subordinate to this totality, as was the design and use of the open spaces.

CONTINUITY AND CHANGE

The portfolio of De Nijl Architecten consists mainly of projects in existing urban areas involving a combination of architecture and urban design. We started becoming involved in the renewal of postwar city districts in the 1990s. Our designs for widely varying locations in urban areas have helped us develop a sensitivity to the differentiated character of what is usually generalized as the "urban context." We have, furthermore, always combined our work in architectural and urbanism practice with duties in professional education and research. Our studies on behalf of teaching institutions and other commissioned research projects have been indispensable to our understanding of the nature of the different formal structures from which cities are composed. The primary object of research is the way different parts of the city have been developed using the techniques of architecture and urbanism. Interventions in existing city fabric always raise questions about how today's architecture and urbanism relate to the different ways these disciplines were practiced in the past.

Fig. 2. *Zuidwestkwadrant Osdorp*, Amsterdam

FOR PROJECTS in the existing city, the relation between continuity and change is primarily a question of transformation: recognizing the significance of the site and taking advantage of the spatial structures and their potential uses. The repetition of old forms is scarcely ever possible because satisfying new requirements on public space and buildings entails typological changes. The form of an urban renewal project cannot, therefore, simply be derived from the location itself. The location owes its significance to the direction in which the design

Fig. 3. *Haven Paddepoel*, Groningen designed by De Nijl Architecten. Photo Jannes Linders

Fig. 4. *Paddepoel Zuidwest*, Groningen

steers subsequent urbanization of the area. We bring this about by responding to the significance of the site within a wider urban context and by introducing building typologies from the wider context of the professional field. This is the only way that the specific context of each location can be resolved in architectural terms, creating scope for further development. The term "context" thus takes three forms in our approach to urban transformation:

– the *site* in a narrow sense (the available sites, their present state and that of the immediate surroundings, and the new requirements);

– the *topography* in a broad sense (the relation of the site to the wider urban area provides the basis for an intervention to redefine its role);

– the *disciplinary tradition* that makes it possible to interpret the task in this way and also provides means not available in the restricted context of the site (the disciplinary tradition includes the architectural ensembles of the postwar city, in which built fabric and open spaces are mutually defining).

We would like to illustrate this modus operandi with three different projects for postwar city renewal. We prepared the master plans for all three areas and designed a sub-plan within each of them.

ZUIDWESTKWADRANT OSDORP, AMSTERDAM
DESIGN 1995
EXECUTION 1997–2010

Urban development strategy and supervision commissioned by the Borough of Osdorp and six housing corporations; architectural design of towers commissioned by Het Oosten Housing Corporation.

The brief was to prepare an urban development strategy for approximately 2,000 homes on a number of restructuring locations in the southwest quadrant of the residential district of Osdorp. Osdorp was built in the 1960s and forms part of Amsterdam's Westelijke Tuinsteden (Western Garden Cities). Two elements emerged from our analysis of the area: the framework and the building zones. Due to the urban development around Zuidwestkwadrant, parts of the framework have

acquired a new role in the city and they have therefore lost their previous identity. The urban development strategy we adopted aims to transform these parts into new identity sources for the area. The two strips of greenery on the edge are transformed into parks, and a street is converted into an urban link road. The renewal of public space is associated with the reconstruction of the adjacent buildings and renovation of the building zones behind them. This urban design strategy has provided sufficient flexibility during the lengthy execution period to allow for changes in the requirements for the subsidiary projects.

One of these projects is the widening of a strip of greenery into a city park edged by towers, *Parkrand Osdorp*. The residential area behind the towers faces towards the park. The towers were designed by De Nijl Architecten. The line of six towers forms the spatial boundary of the park. This is an urban design motif that has been applied in many places in Westelijke Tuinsteden. A new feature is the way the towers are placed on the grade. The towers are grouped in pairs on a substructure containing facilities that form a court on the edge of the park. The court gives access to two towers, along low garden walls and under a wide portico. The verdant garden and the city park were both designed by the landscape architect Michael van Gessel. The garden blooms all year round and determines the character of the court.

The towers were constructed using industrial methods and fully prefabricated load-bearing façade elements. The use of load-bearing façades facilitates flexible configuration of the floor space. Various infills with dwellings are possible, and these can be changed in the future. The appearance is dominated by a grid consisting horizontally of bands of white, anodized aluminum, and vertically of piers of brown brickwork alternating with French windows. The horizontal bands are taller on the plinth and along the roof, giving the effect of a cornice. The portico, entrance halls and staircases are clad with colored panels. The 'urban architecture' supports the spatial effect of the project on different scales: the silhouette of the row of towers along the park, and the intimacy of the gardens between the towers.

PADDEPOEL ZUIDWEST, GRONINGEN
DESIGN 1999–2000
EXECUTION 2001–8

Master plan commissioned by the Municipality of Groningen; architectural design of harbor commissioned by IN Housing Corporation.

The brief was to prepare a development plan for approximately 290 dwellings on several restructuring locations in the southwest quadrant of the Paddepoel residential district. Paddepoel was built during the 1960s and forms part of the expansion area north of the city of Groningen. The district is organized around a cross-axis of main roads, amenities and public gardens, producing four quadrants. These neighborhoods have building zones that are sufficiently large enough to accommodate several different building typologies: rows of flats and double rows of single-family houses. The orthogonal parceling pattern is 'cut off' by the Reitdiep River, leaving a green strip of residual land with room for special building types such as tall housing blocks.

THE MASTER PLAN by De Nijl Architecten defines a new structure to improve the relationship of the area to the Reitdiep and to the inner city of Groningen. The street between two low-rise building zones is extended to reach the passage under the railway in the direction of the city center, where a new station is planned. At right angles to the extended street, at the boundary between old and new areas, a line of distinct public spaces is created to connect the east side of the neighborhood with the Reitdiep: a short, wide avenue that ends in a residential court built around a harbor basin. This court forms a new focal point for the neighborhood adjoining the Reitdiep. The new structure also provides a solution to the exceptional geometry of the large location on the southern edge, and allows more differentiation of the new housing. The extended street divides the location into a triangular site along the Reitdiep and a rectangular site that aligns with the orthogonal parceling pattern. The two sites have different building typologies which accord with the design principles of Paddepoel. The typological contrasts are bridged by the consistent use of building materials and colors that match those of the surrounding buildings.

Topographical analysis of the situation on the Reitdiep, between the historic inner city and the rural outskirts, justified the introduction of a new structure. It also motivated the design of a striking element to accentuate the siting along the Reitdiep: *Haven Paddepoel* (Paddepoel Harbor). It is a building type which is not present in the local context but which is comprehensible to everyone from the wider cultural viewpoint of architecture. This residential court was designed by De Nijl Architecten.

The Haven Paddepoel complex is slightly elevated above the surrounding grade. Garden walls with carports and storage spaces behind them border the whole structure. The dwellings have a dual orientation: towards the harbor quay and towards the garden. The dwellings can have various layouts while the façade organization remains the same. A staircase rises gently towards the court between end elevations of the blocks ornamented with relief brickwork. On the harbor side, the façade is perforated by first-floor loggias. The appearance is dominated by columns, a pergola and a color gradient on the wall behind the loggias. This arrangement gives each dwelling distinction, but also unifies the whole structure. Together with small piers in the harbor, the

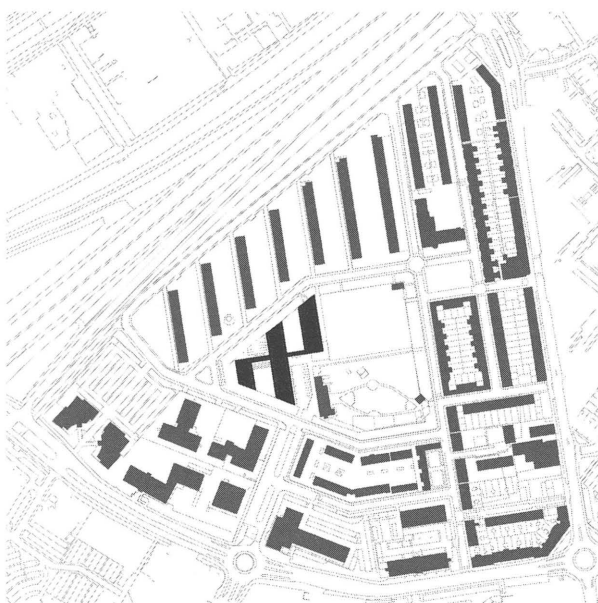Fig. 5. Housing project in Dieze, Zwolle designed by De Nijl Architecten

Fig. 6. Dieze, Zwolle

masts of the boats and the lifting bridge, the imposing scale of the building provides special character to the new public space of the neighborhood.

DIEZE, ZWOLLE
DESIGN 2002–5
EXECUTION 2006–8

Master plan and architectural design commissioned by SWZ Housing Corporation.

The brief was to prepare a plan for developing roughly seventy dwellings on a restructuring location in the middle of the Dieze residential area in Zwolle. Dieze was built in the 1930s and 1950s and lies immediately adjacent to the city centre of Zwolle. The neighborhood is organized around a large open space containing a playground and playing field. A triangular site that formerly contained schools adjoins the central space. This is the only restructuring location in the district. In the master plan, the buildings are oriented towards the central space and fulfill requirements complementary to the neighborhood. The development direction is derived from the central

space and is at right angles to the perpendicular of the triangular development site.

The structure of the development relates to the adjacent buildings from the early 1950s: brick-built housing strips separated by quiet, green space. The built development consists of three strips of apartment building, which are linked by transparent interconnections containing staircases and lifts. This configuration yields two public entrance courts and two private courtyards. One courtyard overlies a basement car park and the other contains a child daycare centre. All of the dwellings are accessed by galleries facing into the courtyards.

The apartment block consists of two programmatic sections, each of which can function independently. The first two building strips contain apartments for seniors, and the third contains small apartments for young people. Each section has its own entrance and internal access in one of the two interconnecting volumes. The load-bearing structures, façades and service ducts of the three sections are identical, however. The small apartments will be easy to combine into larger ones if required. Access to the two building sections is similarly adaptable, allowing the whole block to function as a single unit if necessary in the future.

The building shows many different faces to the outside world. The courtyards have continuous galleries, while the outside elevation is perforated. The longitudinal elevations are regular, but the end elevations are beveled off at the site borders. The different aspects of the building are unified by the façade materials, which relate to that of the nearby early 1950s buildings: a combination of orange-red brickwork and light grey, prefabricated concrete window surrounds and exposed floor edges.

ENDRY VAN VELZEN *is an architect and a partner in the firm of De Nijl Architecten, Rotterdam. He works on urban renewal projects for widely varying locations in urban areas such as historic centers, prewar and postwar urban extensions. He is currently involved in urban plans and building plans for Amsterdam, Antwerp, Apeldoorn, The Hague, Emmen, Groningen, Rotterdam and Utrecht. His writings on the problems of urban renewal are regularly published.*

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Le Corbusier's La Roche-Jeanneret Houses

ISSUES OF **RESTORATION**

TIZIANO **AGLIERI RINELLA**

Recent studies, accomplished in 2005, resulted in
the implementation of a "restoration dossier"[1] on Le Corbusier's
La Roche-Jeanneret houses in Paris (1923–25). The dossier
includes a detailed survey of the existing situation, the building's
technical data and a documented chronology of all restoration,
maintenance and transformation work carried out on it.
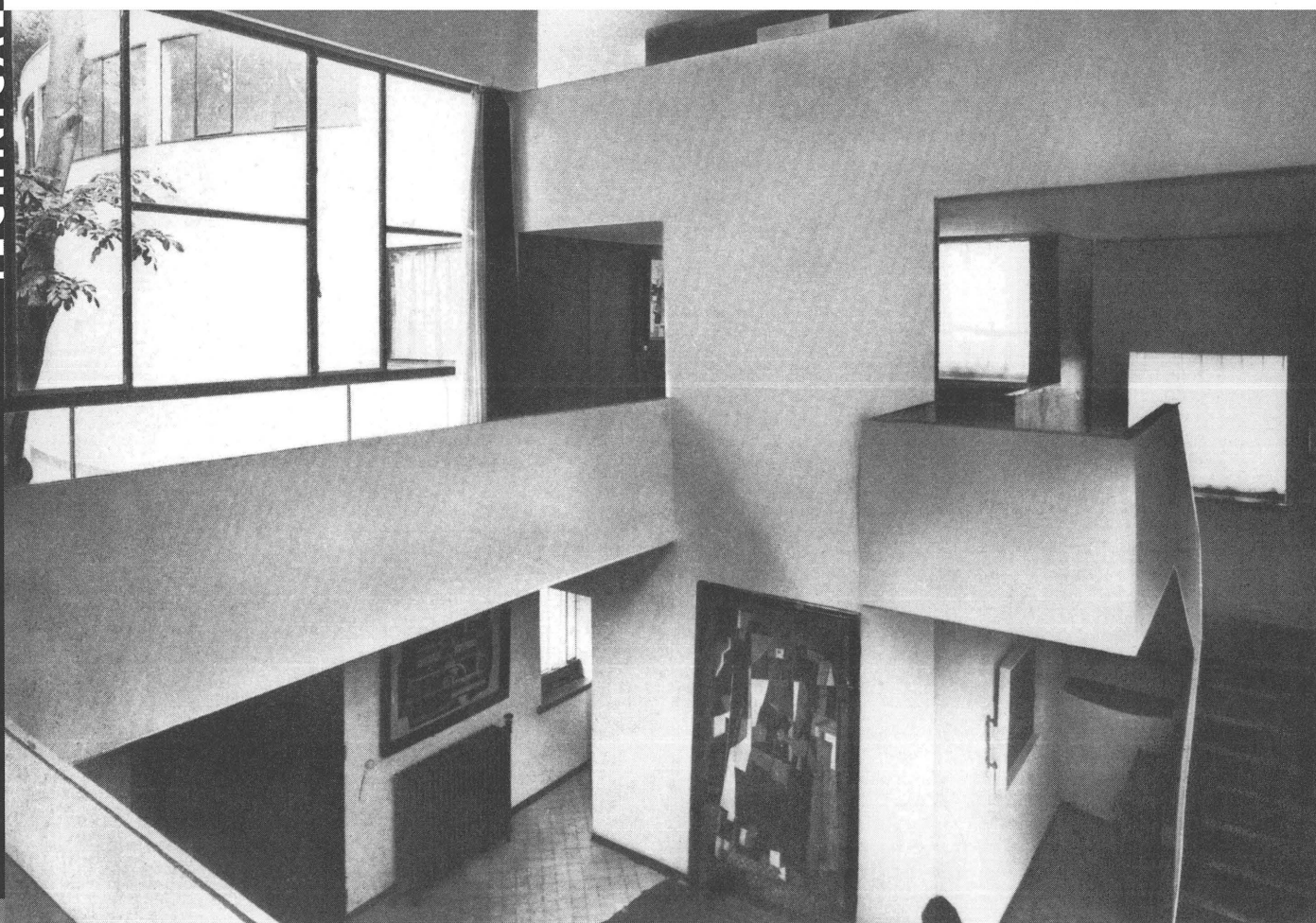
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Fig. 1. **Le Corbusier**, *La Roche house*, the hall, 1926

The aim of that work, implemented upon request of the Le Corbusier Foundation and developed under the scientific direction of Bruno Reichlin, was to draw up a 'model' of dossier, to be repeated, with particular characteristics defined according to the case, for any existing building of Le Corbusier. It should be considered as a preliminary study, constantly updatable, to be used for any future project of restoration. Pierre-Antoine Gatier, architect and director of Historic Monuments, exploited these cognitive premises for a project of restoration of the La Roche house, currently in progress. Gatier completed the reference framework requesting to the Le Corbusier Foundation the execution of the required stratigraphic assays, that were impossible to carry out during the dossier's implementation time. His project, born from a simple request of updating the La Roche house's electric plant to current

standards, was afterwards extended to the whole architectural body of the house, taking into consideration various aspects of the building materiality and attempting to provide fair responses to the revealed contradictions.

SITUATION

The restoration dossier supplies an organic chart of the existing building's situation. To achieve this aim, every archive source of the Le Corbusier Foundation was used, including the recent 'current' archives.[2] These records gather all the documents related to any kind of work executed on the building, from when it was occupied by the Foundation (in 1970) to today. The available data was integrated and verified through interviews of witnesses and people in charge of the works.
Besides the survey and the chronology of the restoration works, amongst the contents of the

"restoration dossier" there is a technical part on the 'matter' of the building and its constructive system, as well as a further part dedicated to the window frames.

RESTORATION WORKS AND MAIN MODIFICATIONS

The most relevant restoration work carried out on the La Roche-Jeanneret houses was directed by Christian Gimonet, first director of the Le Corbusier Foundation, in 1970. The goal was to restore[3] the La Roche house to open it to the public, and to refurbish the Jeanneret house, to host the offices and the archives of the Foundation. Many modifications done as part of this work are so well aged and camouflaged that they have caused misunderstandings, even for some experts. For example, a picture of the internal courtyard, published in some books, was sometimes indicated as an instance of the

influence of the de stijl movement on this building, because of its composition of orthogonal plans. In point of fact, this place was considerably modified by Gimonet in 1970, and that opened the passage between the courtyards of the two houses.[4] On that occasion he also added the canopy, that, indeed, is absent in the historical photos.[5]

A wide number of small modifications of differing importance were carried out at that time. Among them, one could remember the demolition of the toilets and some partition walls on the second floor of the Jeanneret house, in order to create the meeting room of the Foundation, enlarging one of Lotti Raaf's daughters' rooms.
Further issues Gimonet had to confront in 1970 were the safety regulations. Indeed, according to the rules of the time, the height of the hall handrails was insufficient to open the La Roche house to the public. The matter was difficult, because any transformation could compromise the authenticity of Le Corbusier's architecture. Fortunately, on that occasion, the Foundation was able to obtain derogation from the relevant authority. This was not possible for the roof garden, because of the absence of handrails on a part of it. So, since that time, the roof is inaccessible to the public, and people who go up the staircase of the La Roche house to the last ramp are stopped behind a closed glazed door.

An important transformation took place in 1975, when the Foundation required some more space for the microfilm room. A door was opened in the partition wall between the Jeanneret living room (already used as library) and the La Roche bedroom, which was occupied by the Foundation.[6] This had a disrupting effect on the principle of the architectural promenade, applied by Le Corbusier in this project,[7] which was now broken in its continuity. Indeed, people who today follow

the 'promenade,' go along the narrow corridor at the third floor, forced between the wall and the very low balustrade, find a closed door, and are unable to enter. This minimalist space was important in the overall design concept because it represented the conclusion of the display path of the La Roche collection, completely dedicated only to the purist paintings of Le Corbusier and Ozenfant. Another problem related to the safety regulations occurred in 1984, when it was no longer possible to avoid the issues linked to the electric system. At that time, because of the tightening of safety

rules, it was necessary to completely remake the circuits. Therefore, it was decided to leave the original brass switches (considered as icons of a 'modern' aesthetics) in place, without electrical current, bypassing them with new wiring and switches. In 1986, it was necessary to replace the original linoleum flooring of the gallery.[8] Finding a material with the same characteristics was a very difficult task. After a long inquiry, a similar one was found, but with a slight difference in the color.[9] Unfortunately, the supplier was unable to produce a unique,

Fig. 2. **Le Corbusier**, the hall under construction, 1924, 1926
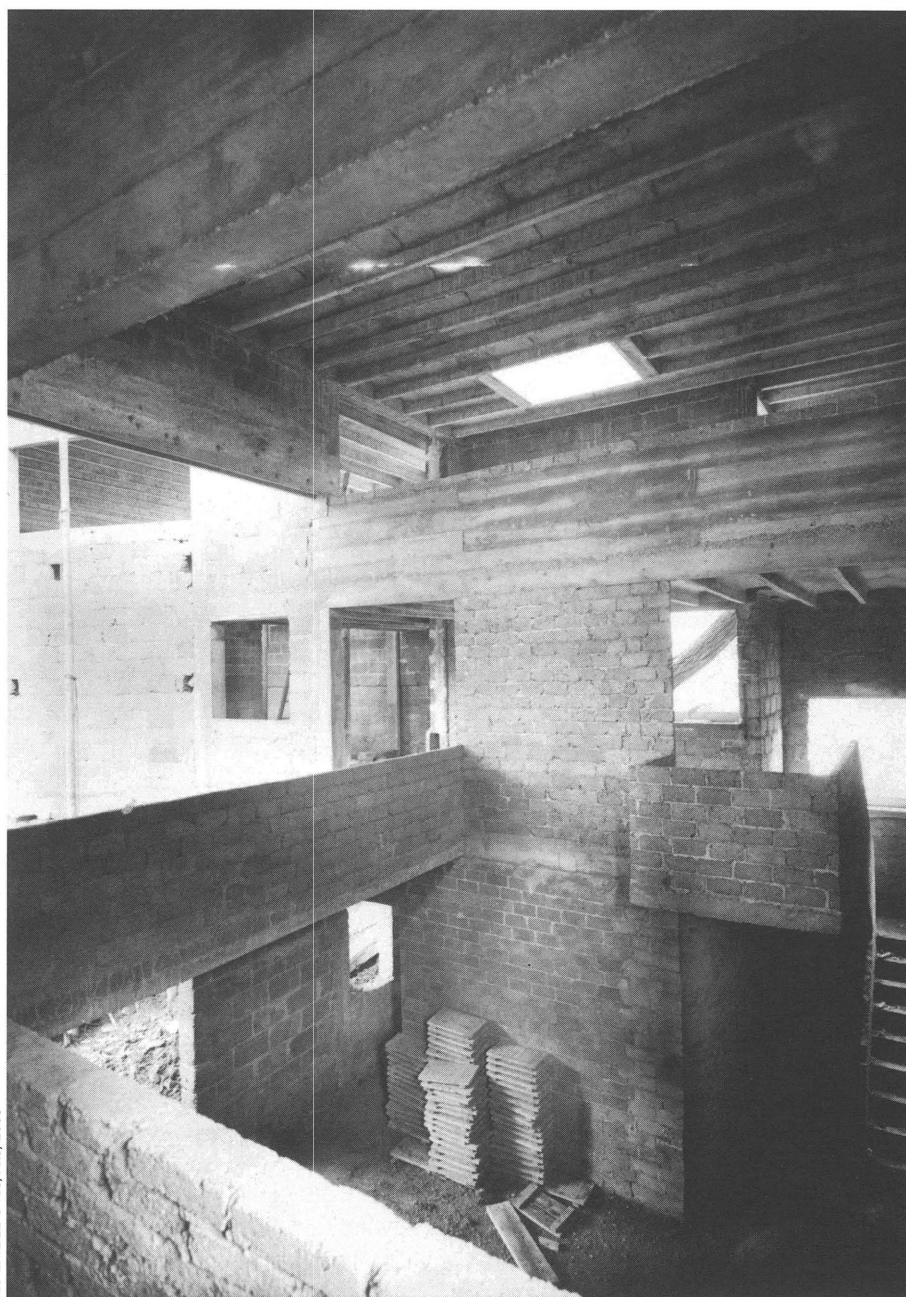
FLC L2-12-22 © FLC/ARS, 2008

monolithic, continuous surface like the original. Thus, the flooring was put in place in different pieces, attached with thin joints. A piece of the original flooring, conserved in the archives of the Foundation, is trustworthy evidence of the old color. Even the fitment under the ramp was restored in that period, under the supervision of its original designer Charlotte Perriand, who was, at that time, a member of the Le Corbusier Foundation.
The evidence of the restoration work is on the fitment's top, covered with the same material used for the gallery floor.

Regarding the window frames, from the chronology of the works carried out in the "restoration dossier" we are able to discern which windows are still original and which ones were modified or replaced over time. An accurate survey of each type of window was accomplished, and the different kinds of restoration work carried out were identified.[10] One could assert that, for the La Roche-Jeanneret houses, there never was an overall restoration work on the totality of the frames, but just many single works for groups or types of windows. Generally, wooden parts were more frequently the object of restoration/replacement, because of their fragility. As an example, in the square windows on the second floor of the front façade, all the wooden parts were replaced by Jean-Louis Veret in 1981.[11] The steel parts of the frames were just restored, but not replaced. In that time, however, those soft steel frames, typical of the early modern architecture, were commonly in production in France. Consequently, if required, it was possible to replace some broken parts with new ones.[12] One of the original wooden parts of the frames was found in the cellar of the Foundation, conserved in the underground archives. The frame was too badly damaged to make a survey with common measurement instruments, therefore some clay moulds were used to obtain a profile that allowed redrawing it.
The only completely original square window was found in a corner of

photo Boissonnas, FLC L2:12-74 © FLC/ARS, 2008

Fig. 3. **Le Corbusier**, *La Roche house*, the internal courtyard, 1926
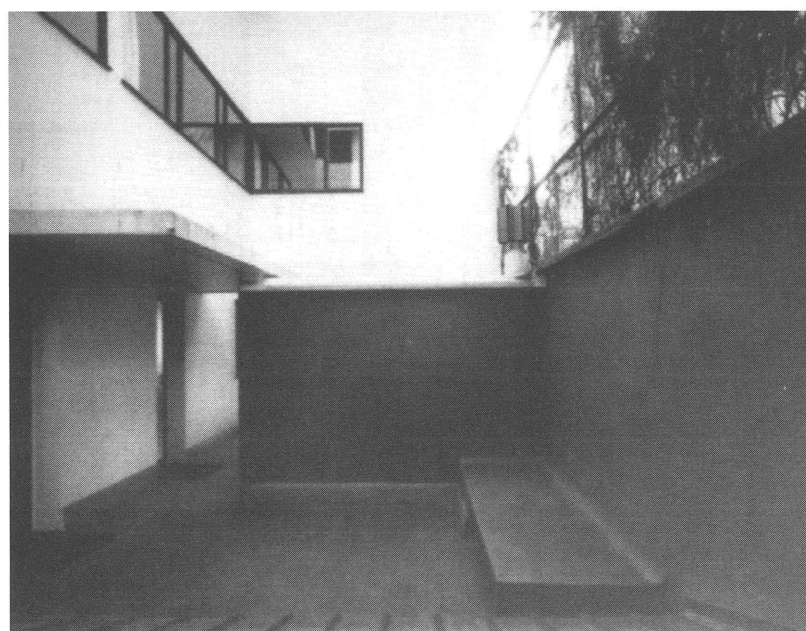

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Fig. 4. **Le Corbusier**, the internal courtyard, current state

the building between the gallery wing and the entrance of La Roche house. Its position, protected from bad weather, helped to preserve it and keep its originality. Among the restoration work carried out in the other types of windows, one can take as an example the ribbon
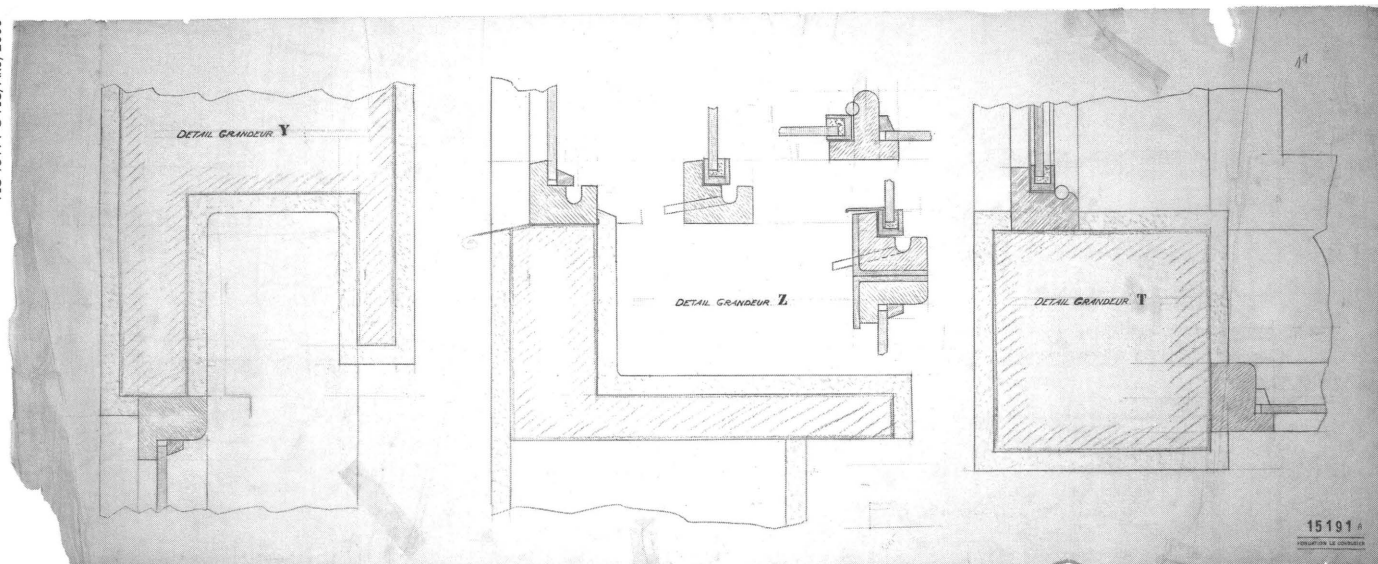
Fig. 5. **Le Corbusier**, details of window sills and frames

window of the La Roche dining room. In that frame, the wooden base was replaced, as well as the thin wooden frame used to block the glass to the main frame of the window. The other wooden and steel parts, according to the sources, should be original, except for the window locks that were replaced with replicas in 2000.[13]

THE POLYCHROMIES
Regarding the interior polychromy, very few works are actually documented. Even if many traces of repainting work were found in the archives, it is impossible to understand exactly on which surface the work have been done. In order to achieve more detailed information on the original state of the polychromy in 1925, taking into account even the first modifications carried out by Le Corbusier in the gallery in 1928 and 1936, it is necessary to examine the results of the stratigraphic assays. One should immediately specify, nevertheless, that these assays are currently in progress, and further investigations and laboratory verifications are necessary. The first series of assays, indeed, has given just a fragmentary and incomplete chart, therefore considered so far not fully reliable by the Le Corbusier Foundation. Before officially confirming the results, the Foundation is waiting for the

outcome of an additional series of assays to be implemented on the La Roche house.

THE FAÇADES
Regarding the façades, in 1970 Gimonet had to deal with the problem of choosing the right color tonality. In that time,[14] the façades were very dirty and ruined, so it was very difficult to understand which coat was the original color, as the exterior coat was not the original. The testimonies gave different versions. After a long inquiry, he decided to apply a coat of Polistrat, a synthetic paint made

like a thin film attached to the wall. The color of this coat was cold white, and its surface perfectly smooth, so, according to the common opinion, respectful of the aesthetics of purism. Unfortunately this Polistrat coat made the wall unable to transpire, and this caused serious and continuous damage to the interior polychromies, so that the Foundation was forced to repaint the interiors very often. This synthetic coat was completely removed only in 2001.[15]
Lotti Raaf asserted, in a letter of 1970,[16] that the original mortar was mixed with stone powder, and

Fig. 6. **Le Corbusier**, *La Roche house*, details of window frames

from L'Architecture Vivante (Éditions Albert Morancé, Fall 1927) © FLC/ARS, 2008
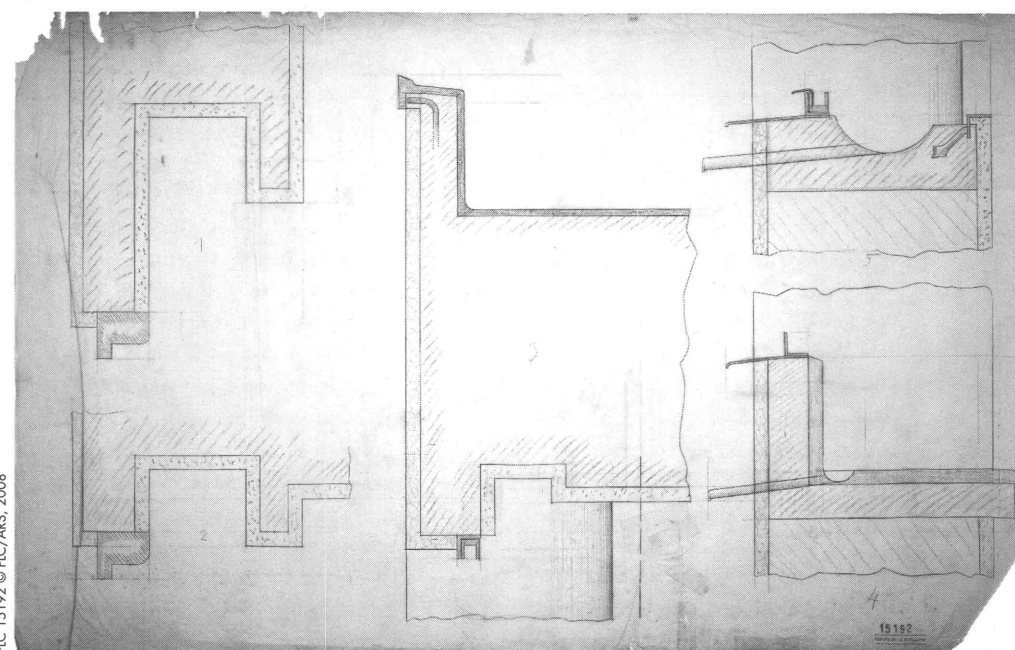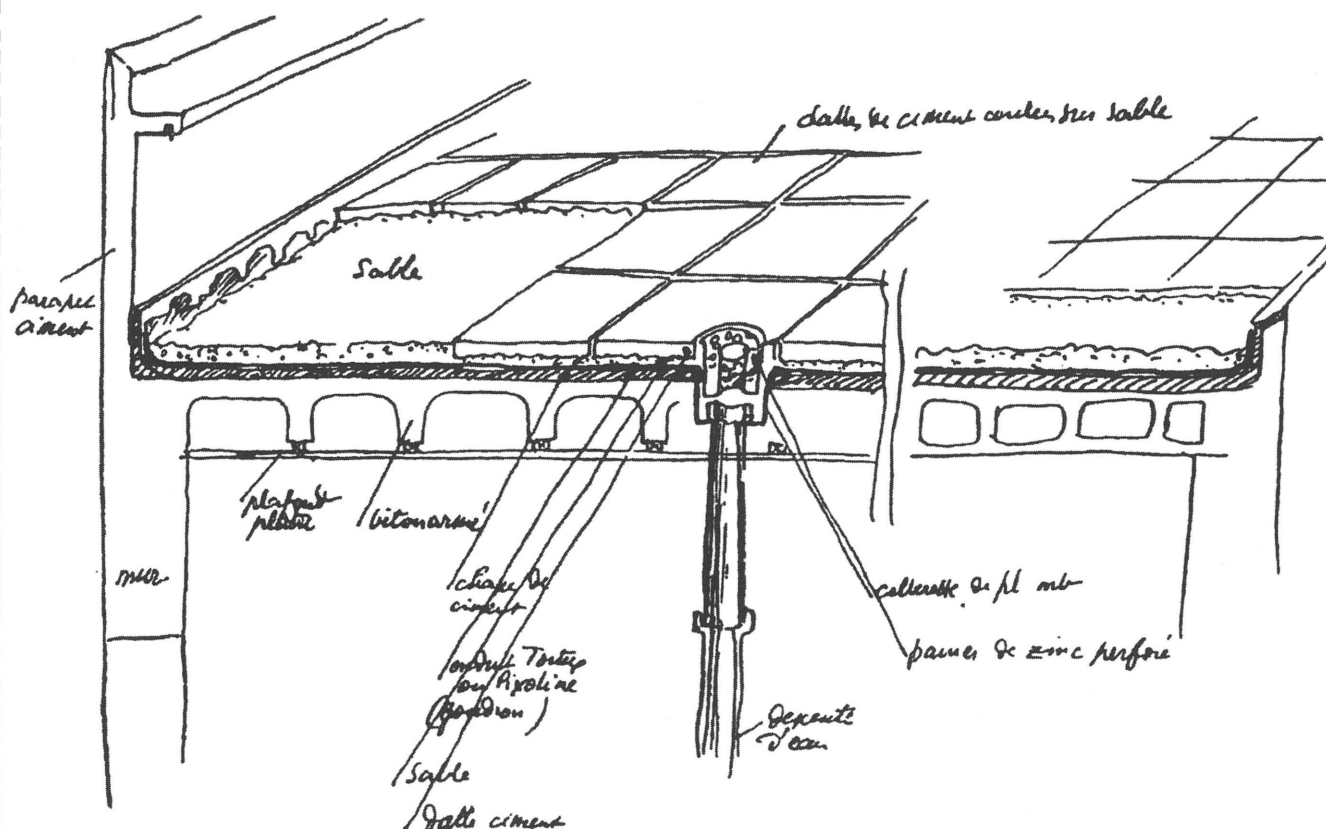
COUPE A TRAVERS UN TOIT·JARDIN EN BÉTON ARMÉ

Fig. 7. **Alfred Roth**, *Weissenhoff houses*, detail of the roof garden and balustrade, the same used for the La Roche-Jeanneret ones

it appeared as a raw coating, with a warm color, completely different from the cold and smooth white that exists today. This may be confirmed by the current stratigraphic assays,[17] that are attempting to discover, with many difficulties, some residual traces of the original mortar (removing the Polistrat layer had removed all the layers underneath).

ISSUES OF RESTORATION
A restoration project should confront several unsolved problems of the La Roche house's current state. First of all, it is indispensable to look at the principles that Le Corbusier put in his project. Today indeed, after many modifications have been carried out, some of these principles currently appear deprived of their original sense and forgotten. As Le Corbusier affirms in the *Œuvre Complète*, the main principle applied in the design of the La Roche house was the architectural 'promenade,' mostly coincident with the display path of the art collection. The hanging of

art and the sculpture arrangement of 1926, indeed, were also prepared by Le Corbusier, following specific programmatic rules and taking care of a thoughtful balance between works of art and architectural spaces. Thus, a restoration project should take into consideration the reinstatement of the principle of the promenade, restoring its last episode, the La Roche's bedroom, in its original shape. An unsettled issue, unfortunately, will be the absence of the La Roche art collection (today owned by the Kunstsammlung of Basel), which significantly influenced the design of the architectural spaces.
A further open problem is, in this context, the possible reinstatement of the original furniture. If some original pieces could be found in the antique trade market of the early twentieth century, a remake of some particular furniture custom-designed by Le Corbusier may be possible from the original detail drawings.

Another issue concerns the interior polychromies. For their restoration, one shouldn't simply restore just the oldest paint layer found in the assays, but also to implement a correct interpretation of the rules used by Le Corbusier in their

Fig. 8. **Le Corbusier**,
La Roche house, brass switches

photo Jesús Villanueva © FLC/ARS, 2008
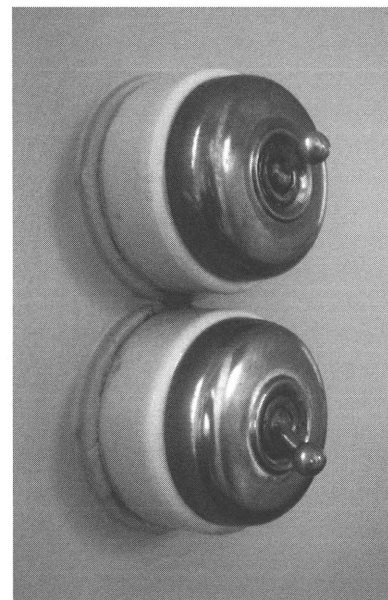
choice. Indeed, as Le Corbusier himself affirmed[18] regarding the La Roche house, at the beginning he often proceeded in many changes of the interior colors, testing empirically the color effect on the wall's surface. A further related problem to confront, today, is the choice of the right kind of paint. The original paint used in 1925 was a glue and oil paint that allowed a matte and warm color effect to be obtained, but was extremely fragile. Its use today is inappropriate; because of the intense flow of visitors of the La Roche house, it would lead to frequent repainting work. Therefore, it will be necessary to carefully define the choices, in a thorough decision-making process that will involve, besides the Le Corbusier Foundation, experts and officials of the French Ministry of Culture. A particularly difficult task is the negotiation with the relevant authorities that could allow, as in the past, the attainment of

a derogation from the regulation issues preventing the public to have access to the roof terrace. The balustrade height of the terrace, indeed, is not adequate according to the current French law. Moreover, a part of the terrace, over the hall and the gallery roof, is completely without handrails and definitely will never be open to the public. An appropriate solution should be agreed to by the architect, taking into consideration the different instances.

In conclusion, as seen, the range of matters to confront with the restoration project is quite wide. The status of institutional protection of the La Roche-Jeanneret house engages in its safeguard a large number of players that will control each stage of the restoration, sharing decisional responsibility. Thus, some good premises are arising to restore this early masterpiece of Le Corbusier to new life.

TIZIANO AGLIERI RINELLA, architect, has carried out a PhD thesis on "Restoration of Modern Architecture: La Roche-Jeanneret House, a Case Study of Le Corbusier." His work is currently under publication in Italy: Le Case La Roche-Jeanneret di Le Corbusier – Riflessioni per un Progetto di Restauro (Rome: Officina Edizioni, 2008). tizianoar@alice.it

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Fig. 9. **Tiziano Aglieri Rinella,** window survey of the La Roche dining room

Type 2 - Fenêtre en longueur (salle à manger La Roche)
Vue interieure

Coupe B-B'

Coupe C-C'

Coupe A-A'

Note: Tous les châssis ont été objets de restauration à l'occasion des travaux dirigés par C. Gimonet en 1970 sur lesquels la documentation est insuffisante et fragmentaire.

Restauration et entretien

3. Menuiseries et châssis
3.2 Modifications et remplacements
3.2.2 Fenêtre en longueur (salle à manger La Roche)

Remplacement à l'identique des parcloses, 1981(veret), et 2001(Lamouche).
Remplacement à l'identique de la base d'appui en bois

Sources:
Relevé, novembre 2003
Documents recents:
Casier: TRAVAUX DIVERS 1979-93, dossier: Travaux de refection hisseries et peinture villas La Roche Jeanneret 1979-81: - demande de subvention.
Interviews:
J.L. Veret, dicembre 2003

MAISONS LA ROCHE-JEANNERET DOSSIER DE RESTAURATION

FLC Fondation Le Corbusier

UNIVERSITÉ DE GENÈVE INSTITUT D'ARCHITECTURE

UNIVERSITÀ DEGLI STUDI DI PALERMO
DIPARTIMENTO STORIA E PROGETTO NELL'ARCHITETTURA
Dottorato di ricerca in progettazione architettonica - XVI ciclo
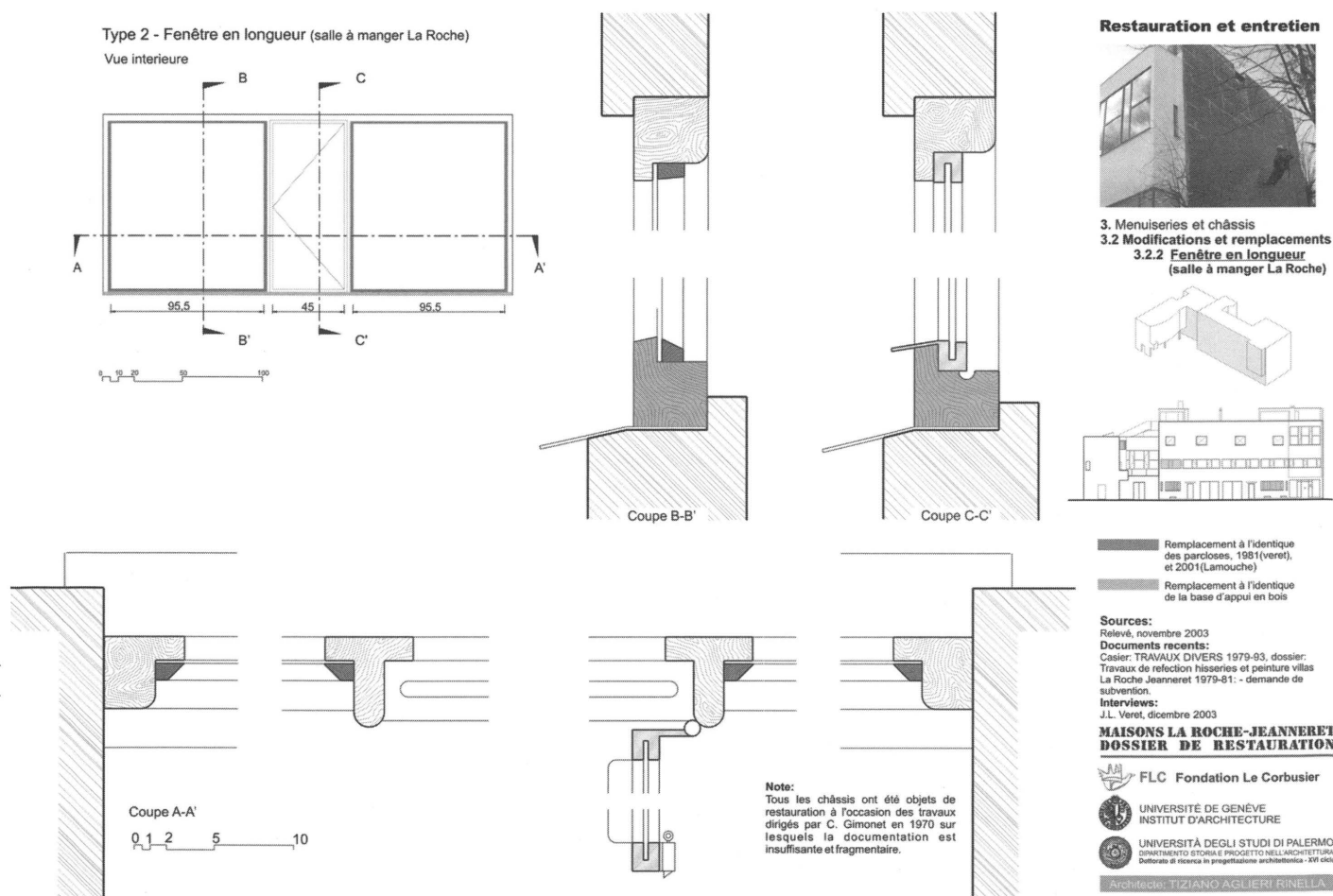
Architecte: TIZIANO AGLIERI RINELLA

Fig. 10. **Le Corbusier**, *La Roche-Jeanneret houses*, front façade, Paris, built 1923–5

Mardaga, 1985.

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NOTES

1 Annexes of Vincenzo Tiziano Aglieri Rinella, PhD thesis "Il Restauro del Moderno: la Villa La Roche-Jeanneret di Le Corbusier," tutors: Prof. Bruno Reichlin (IAUG, University of Geneva) and Prof. Pasquale Culotta; Dottorato in Progettazione Architettonica, Dipartimento di Storia e Progetto nell'Architettura dell'Università di Palermo, XVI ciclo, 2001–4.

2 The so-called "archives vivantes," of the FLC, not recorded yet. An index of these documents, implemented by the author, is included in the annexes his PhD tesi. Cf. Aglieri Rinella, *Il Restauro del Moderno.*

3 Christian Gimonet, "Restoration of Buildings of Le Corbusier," in *Docomomo Conference Proceedings* (1992): 276. See also FLC H 1-2-411.

4 FLC 15298; confirmed by the interview of Christian Gimonet, 22 May 2003.

5 Photo Boissonnas, 1926. Dossier La Roche, FLC.

6 In the Le Corbusier Foundation archives, no documents concerning this modification have been found. By the interviews, one know that the wall had to be still intact on 1973 (interview of Christian Gimonet), and the door was probably open between 1975 and 1976, on the occasion of the inauguration of the microfilm room (interview of Evelyne Trehín, past director of the FLC).

7 Le Corbusier, *Œuvre Complète 1910–29*, vol. 1 (Basel: Birkhäuser, 1929), 60.

8 Cost estimate of SIS company, 5 December 1986, and related invoice of 30 March 1987, in current unrecorded archives of the FLC: file "Travaux Divers 1979–93," dossier: "Galerie La Roche: Revêtement du Sol 1986."

9 Recently found by Gatier's staff.

10 Aglieri Rinella, *Il Restauro del Moderno*, annexes.

11 Current unrecorded archives of the FLC: file "Travaux Divers 1979–93," dossier "Travaux de Réfection Huisseries et Peinture Villas La Roche Jeanneret 1979–81:" cost estimate (approved by the FLC) of Guguin, Touzot & C, 8 December 1980, replacement of frames "à l'identique des menuiseries existantes" (similar to the original ones); confirmed by the interview of Jean-Louis Veret (December 2003).

12 Interview of Jean-Louis Veret (December 2003).

13 In 2000 many of the window locks were broken, and it was impossible to find the same kind on the market, so an original brass lock was taken to a workshop to make a mould so as to reproduce some new ones. Current unrecorded archives of the FLC: file "Ravalement Villas La Roche-Jeanneret," dossier "Entreprises 1999–2002," sub-dossier: "Serrurerie Ets Petit 2000."

14 Gimonet, *Restoration of Buildings of Le Corbusier.*

15 Current unrecorded archives of the FLC file "Ravalement Villas La Roche-Jeanneret."

16 "Le Corbusier made a mortar of cement mixed with powder of stone, which made the surface slightly wrinkled and with a sand-yellowish color of a very beautiful effect, warmer than this cold and sterile white." Letter of Lotti Raaf to the Le Corbusier Foundation, 22 December 1970, FLC.

17 Interview of Ariel Bertrand (July 2007).

18 Arthur Ruegg, *Le Corbusier Polychromie Architecturale* (Basel: Birkhauser, 1998).

Fig. 11. **Tiziano Aglieri Rinella**, *La Roche-Jeanneret houses*, ground floor, current state, survey, May 2003
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Fig. 12. **Tiziano Aglieri Rinella**, *La Roche-Jeanneret houses*, first floor, current state, survey, May 2003
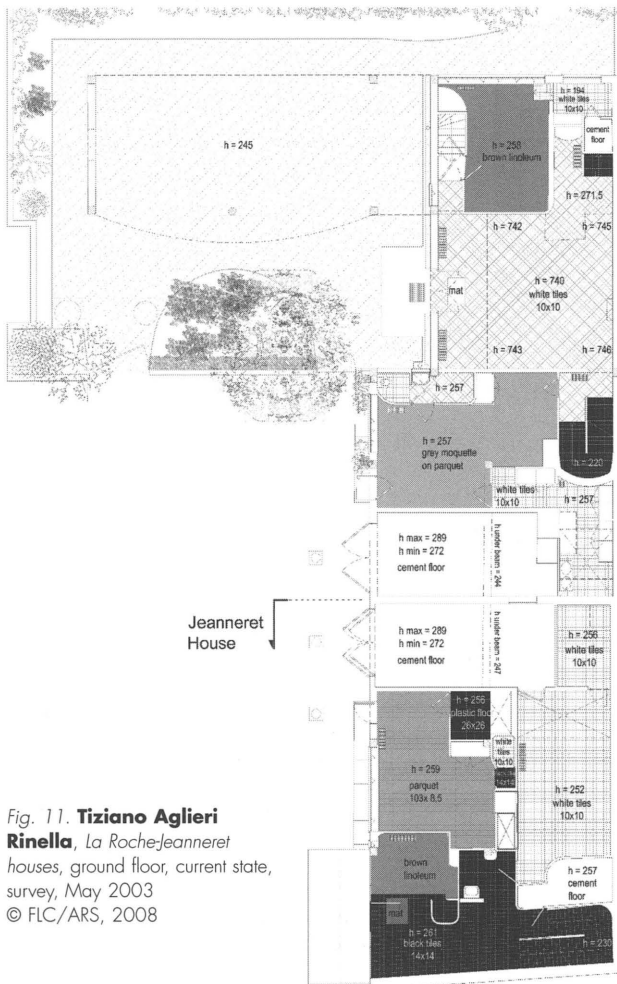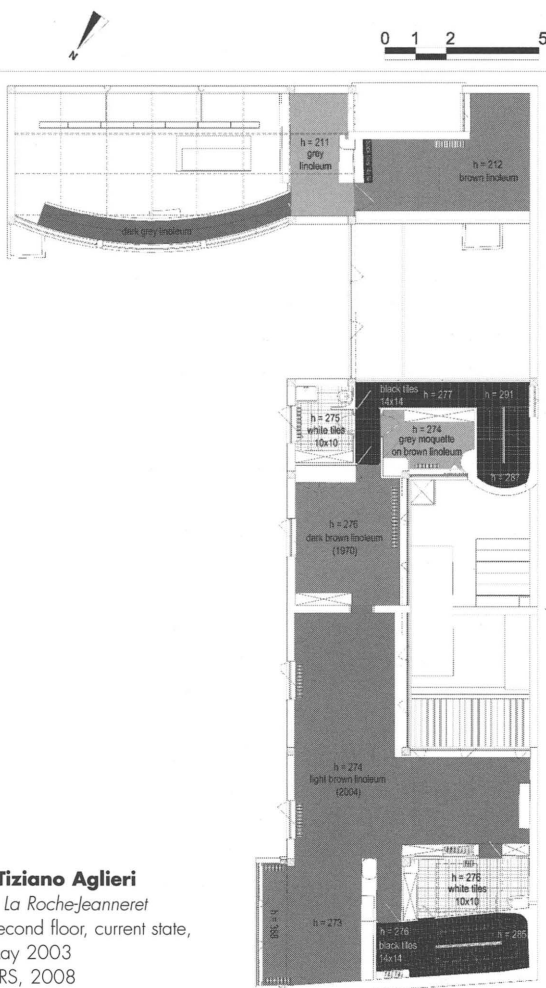© FLC/ARS, 2008

Fig. 13. **Tiziano Aglieri Rinella**, *La Roche-Jeanneret houses*, second floor, current state, survey, May 2003
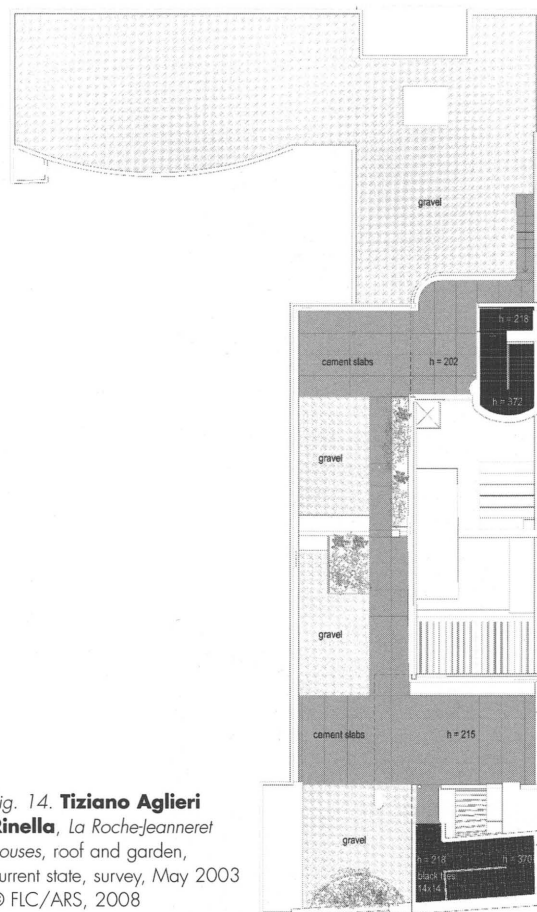© FLC/ARS, 2008

Fig. 14. **Tiziano Aglieri Rinella**, *La Roche-Jeanneret houses*, roof and garden, current state, survey, May 2003
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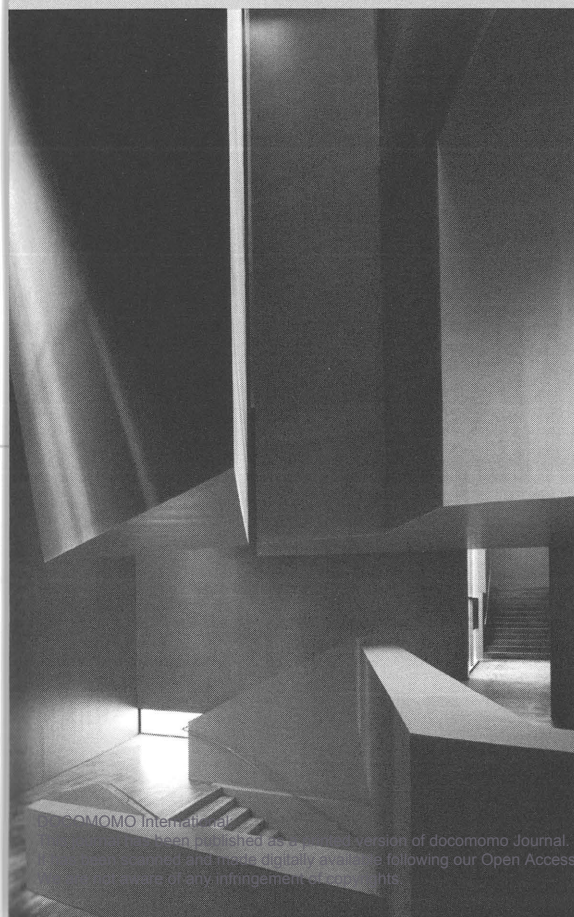www.kremer-pigmente.de

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GUILLERMO JULLIAN DE LA FUENTE
(1931–2008)

Guillermo Jullian obtained his architect's degree in 1957 from the Catholic University of Valparaíso and left immediately for Europe, seeking broader horizons. He had one thing on his mind: he wanted to work with Le Corbusier, no matter what. As we all know, he not only worked with him, but remained one of his last and closest collaborators until 1965, after which Jullian remained in charge of some of the atelier's unfinished projects, the most relevant one being the Venice Hospital. At 34, with this invaluable experience behind him, Jullian started his own *recherche patiente* for his architectural expression. He learned how to be an architect in Paris, under Le Corbusier's guidance, but he knew how to draw his own lines; not being openly critical of his teacher, but always trying to go a step forward.

During our student years at the School of Architecture in Santiago de Chile, Jullian became a sort of myth. We looked up towards this

Chilean architect worked hand-in-hand with Le Corbusier, and had developed a strongly interesting architecture. We took his projects as sources of a true way of creating architecture, stopping at each detail and learning from it. Coincidence led me to meet him on the occasion of his travel to Chile in 2003, to donate his archives and give a workshop at the Catholic University in Santiago. We started to collaborate on what would be his last project, a house on the coast of Chile that would never be built. I had the opportunity, in those months, of witnessing the design process, the slow rumination through which the first lines turned into torn and glued pieces of paper, and then turned into architectural plans and sections. In this process, I was surprised by his humility and spirit of collaboration, often asking us, his young collaborators, to comment on and criticize his work. He honored me with his friendship, his simplicity, and his love-for-life

attitude that he transmitted while discussing a project or while enjoying a glass of calvados, his favorite drink from his Parisian years. He enjoyed being surrounded by students, as he felt that teaching and lecturing kept his mind young and alert, and he never prevented himself from making a joke during a conference, no matter how serious and scholarly it was. He was always playing like a child, and he enjoyed life to the very last. Since 1958, when he left Valparaíso to wander around Europe before stepping into Le Corbusier's office, Guillermo never stopped being a traveler. He made himself by traveling, by the sheer condition of being a foreigner, and he was always very conscious of the strength of strangeness in his work and in his life. From 1965 to the beginning of the 1980s, he designed several buildings for the French state, the most relevant being the embassies at Rabat and Brasília, where he dealt with the different contexts with ease. In spite of this, the last time we met, in January 2008 in Paris, he strongly wanted to return to Chile, as if he wanted to close the circle. That day, in the severe salon of a Parisian apartment, in a city that was no longer "his" Paris, looking tired and resigned to his failing health, a spark in his eyes let me know that he was ready for his next trip.

MAXIMIANO ATRIA LEMAÎTRE,
secretary general Docomomo Chile

89

HOUSING
THE TWENTIETH CENTURY NATION

A scholarly journal devoted to mass housing design in twentieth century Britain is a challenging venture. The study of housing production and reception is diverse and multi-disciplinary, and should encompass social-economic, architectural/planning, and political history; to approach the subject from a purely aesthetic or art-historical angle would result in a biased and impoverished account.

Fortunately, this issue of *Twentieth Century Architecture*—all 176 pages of it, consisting of twelve substantial articles—has successfully navigated the potential pitfalls of contemporary housing studies, and doesn't shirk from the complexity of the subject. This is chiefly due to the experienced editing partnership of Elain Harwood and Alan Powers. As one would expect of an architectural preservation society, the focus is on the heritage value of housing. Harwood is concerned about loss and insensitive alterations to protected sites, and claims the journal was prompted by research suggesting that there was almost no social housing left to protect. Yet, despite foregrounding architectural heritage, the journal clearly reflects diverse academic approaches—housing specialists, architectural historians, architect-planners and housing administrators—all attempting to tell the fascinating and complex story of UK housing production through individual case studies and the odd general overview (most notably the essay on Welsh housing). To this end, only a couple of papers tackle the contentious issues surrounding postwar housing preservation. Diversity and balanced geographical spread is attempted: two papers are devoted to Scottish and

TWENTIETH CENTURY ARCHITECTURE 9

Housing the Twentieth-Century Nation

THE JOURNAL OF THE TWENTIETH CENTURY SOCIETY

Welsh subjects, but disappointingly nothing on the highly distinctive mass-housing program of Northern Ireland.

The journal runs chronologically, and divides almost evenly into two sections: the first covers the interwar and early postwar years within the fluid transitional design context of traditionalism and modernity, and the second section examines the late 1950s, early 1960s period of modern movement ascendancy, and its fracturing into complex architectural movements. The first four essays are case studies covering the pre-1945 era: atypically almost all the case studies provide social, economic, political and architectural contexts, and examine different clients, ranging from local authorities (Barbara Linsley's solid account of rural housing in Norfolk) and philanthropic reformers, to international industrialists (Joanna Smith's account of the Czech-modernist inspired Bata company village at East Tilbury, 1936–66).

Two contrasting housing providers are highlighted in the essays by Roland Jeffrey and Matthew Whitfield. Jeffrey's fascinating interwar case study details one of London's many philanthropic housing improvement ventures, that of the St. Pancreas Housing Improvement Society at Somers Town in the 1920s. Founded under the auspices of an Oxbridge Christian mission (reflecting middle class concerns about slums) it started the refurbishment of slum tenements, and soon shifted to a program of building new flats of a traditionalist brick neo-Georgian style by the architect Ian Hamilton; the society then dabbled in modernist designs in 1930s.

The community cornerstones of the venture were low rents, the retention of existing communities, and new social infrastructure. Whitfield's striking case study of Liverpool's 1930s multi-storey housing developments is more concerned with aesthetic-architectural innovation (primarily through the work of architects steeped in
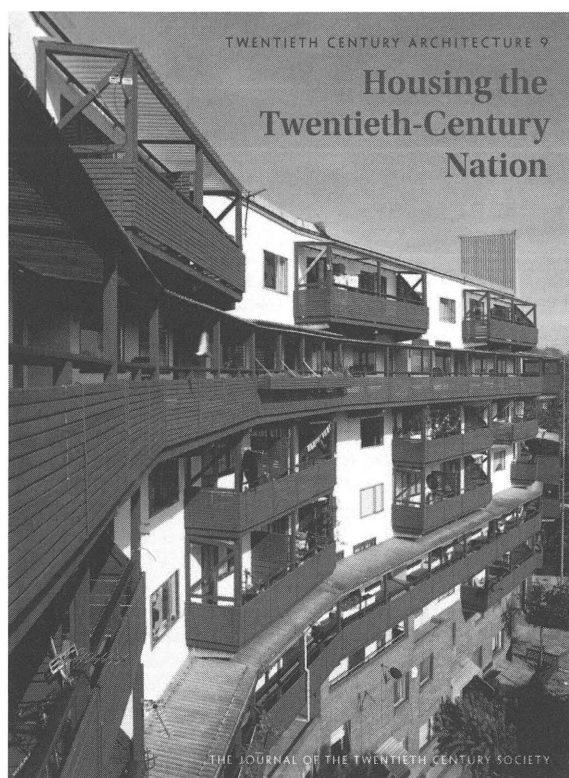
the beaux-arts inspired modernism of the Liverpool School of Architecture). Despite Liverpool's grand commitment to provide 5,000 housing units per year from the mid-1930s onwards, many projects remained on paper, and only a chunk of St Andrew's Gardens survives today.

Judith Alfrey's ambitious architectural-planning chronological overview of interwar and early postwar social housing in Wales acts as a buffer to the second section of the journal. She examines the evolution of a prominent, modest, neo-vernacular strain closely related to its rural landscape setting, in Welsh housing design up to the 1950s. The interwar garden village movement was spurred on by the Welsh Town Planning and Housing Trust Ltd (founded 1913), and the Welsh Housing Development Association (1916), under the broader cultural impact of Plaid Cymru (founded 1925)—which identified Wales as a chiefly rural culture. In Scotland, a similar campaign to promote the humble homes of the urban historic burghs, and promote traditionally inspired vernacular design, parallels these Welsh activities. Architectural and landscape harmony, and traditional harled cottages, steep gables, and local slate typified the housing of the interwar period. Postwar town and country planning, for economic reasons, further developed the concept of rural Wales with the formation of the hill village: striking new rural communities were established by the Forestry Commission after 1945.

The postwar section also follows a roughly chronological pattern, and successfully mixes historical case studies and overviews by housing and architectural experts, with important first-hand architect accounts of key public and private housing projects—most notably architect Michael Drage's intriguing account of his thirty-year involvement with Ralph Erskine's Byker redevelopment, Newcastle upon Tyne, and architect Chris Whittaker's first-hand account of

a highly successful speculative development on London's Edgware Road, by Trehearne and Norman, Preston & Partners. Elain Harwood tracks the career of the idealist housing provider-manager Arthur Vivian Williams, and in particular, his impact on the design of two new towns: Bilston, Staffordshire, and the Durham coalfield town of Peterlee. Williams created a web of talented designers around him as housing manager at Bilston (1942–43), with architect-educator Charles Reilly, and at Peterlee (manager 1948–1974), where he appointed the landscape planner Victor Pasmore to create a picturesque Gibberdian-inspired housing solution. Bilston's 'Reilly Greens' were largely unbuilt, but Harwood manages to capture the complex social and political visions of these significant characters. Utilizing similar sources—chiefly the influential elite British architectural press—the two papers by Peter Carolin and Miles Glendinning examine the heated design debates on postwar housing in the 1950s and 1960s, and their ultimate impact on the built form. Carolin, a former editor of the Architect's Journal, examines in detail the influence and impact of Scandinavian housing design in England, through the ign of two new towns: Bilston, Staffordshire, and the Durham coalfield town of Peterlee. Williams created a web of talented designers around him as housing manager at Bilston (1942–43), with architect-educator Charles Reilly, and at Peterlee (manager 1948–74), where he appointed the landscape planner Victor Pasmore to create a picturesque Gibberdian-inspired housing solution. Bilston's 'Reilly Greens' were largely unbuilt, but Harwood manages to capture the complex during the 1950s, working as he did on the later, Corbusier-influenced phase of Roehampton.

A very different, more nervously-complex design approach, belonging to the next generation of Britain's kaleidoscopic postwar housing architecture, typifies the country's most significant Mark II

new town—Cumbernauld—although, even here, Scandinavian influence was not completely absent, as seen in the 'Y' housing blocks of Kildrum 5 (1959–61), and echoed in Backström and Reinius's 1946 'star block' housing at Gröndal, Stockholm. Glendinning examines Cumbernauld's late-1950s housing design context, the ever-shifting, elite architectural reception of the town, and its ultimate decay and denigration—highlighting the fact that the state heritage organization Historic Scotland has been unable to protect innovative complex urban ensembles, like Cumbernauld, through its traditional heritage preservation powers.

The journal concludes with an unexpected but welcome disciplinary shift: John Lowenfield's case study of housing regeneration theory and politics as played out between 1985 and 2004 in a large mixed development, the Mozart Estate, Westminster (built in 1968, and later dogged by social problems). Lowenfield skillfully traces the 1980s scholarly critiques of the social impact of postwar housing redevelopments, and notes the ironic way in which competing recommendations by geographer Alice Coleman and architect Bill Hillier for the Mozart estate mirrored the modernist architectural-determinist approach, by arguing that the 'fixing' of the modernist 'design flaws' could cure the social problems of these areas: the subsequent scale of regeneration at Mozart puts Harwood's initial conservationist concerns over insensitive alterations into a broader and more complex perspective.

DIANE M. WATTERS is a buildings investigator at RCAHMS, teacher at the Scottish Center for Conservations Studies, and a member of Docomomo ISC/Urbanism+Landscape.

THE PUBLIC CITY MODERN ARCHITECTURES IN HISTORY

If we observe the Italian city of Turin today from a height, by looking at a map or an aerial photograph, the housing estates and the residential complexes are easily recognizable. It is a type of city that Paola Di Biagi defines as "public," not just as a result of public policies and not just because it is built on public land involving programming, planning, and building coordinated by a public authority, but most of all because throughout the twentieth century it guaranteed fundamental rights, such as that of "a habitable space for everyone." It is "a sort of 'city within the city,'" which, as elsewhere, gradually took shape in twentieth-century Turin and can now be seen in different forms and different places." However, the different parts of this public city have some characteristics in common, which Di Biagi identifies as a plural city (of actors, tools, and people who have lived there); a fragmented city (various areas of the city); a heterogeneous city (for dimensions and shapes); a stratified city (in the same places in different periods); and a changeable city (changeability of the social and urban objectives pursued). These

6 CONTEMPORARY ARCHITECTURE IN TURIN

The **Public City** Social housing and urban redevelopment in Turin

Paola Di Biagi

ENGLISH EDITION

Umberto Allemandi & C.

five aspects, which have historically characterized Turin as a Public City, today make it a recognizable place, as well as a fertile Laboratory for new design practices.

In trying to read this modern heritage as a resource for the city both now and in the future, Di Biagi's book follows a double path.

In the first part ("Journeys through Forms of the Public City of Turin") she presents some interventions carried out in Turin in the course of the 1900s. These are a result of ideas that have changed over time, acquiring the shape of an open block, a housing estate, a part of the city, a city-building, and so on. After the initial, local experiences that came from the creation of the Istituti Autonomi per le Case Popolari (Autonomous Institutes of Public Housing), the ideas were implemented to a greater degree in the 1950s with the INA Casa project, and in the following decades with plans for low-income housing that implemented Law no. 167 in 1962. Some of the best-known projects were the Falchera housing estate (1950–51) and the Mirafiori Sud project (1962–65), built during the first and the second seven-year periods of the INA Casa plan, and the CEP Le Vallette housing estate (1957–61). It is projects from this period that leave the most significant mark on the Turinese soil. In addition, the author does not think it possible to separate the origin of the public city from that of modern town planning, so much so that the term "public city" also becomes "a sort of metaphor that alludes to a series of aspects in the history of public policies, plans, projects, ideas of space and society, and of physical and social places."

In the second part of the book ("Urban Policies and Public Estates in the Second Half of the Twentieth Century"), Di Biagi focuses on the more recent years, spanning from the postwar period to the most recent policies of suburban redevelopment. The end of the twentieth century in Turin saw the start of a new and innovative period of urban planning, in which a large part was played by

the redevelopment of public buildings. A suburbs project (Progetto Periferie) was started up by the City of Turin in 1997 with other institutional bodies such as the Territorial Housing Agency and other local players outside the public administration, including residents' associations, volunteer groups, trade unions, parish priests and teachers. The housing estates that were built placed themselves at the "center" of the new policies, also thanks to the availability of open spaces.

This small book, published in English as well as Italian, invites us to continue to reflect on the Public City, leaving aside the old cliché that it produced only degradation and social exclusion, at a time in Italy when it is necessary to imagine a new period of social housing to meet the ever-increasing housing demand.

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PRESERVATION OF MODERN ARCHITECTURE

A one-book reference on the preservation of modern architecture is long overdue. The global frequency of conferences, papers, monographs and designations of the past dozen years justifies the need. Fortunately, this first comprehensive volume by Theodore Prudon is a theory and practice book which does not follow the dry and derivative pattern of many professional architectural compilations. Although there is an enormous amount of referenced information and history elegantly organized into the work, which will

be very useful to students, educators, researchers, practitioners and the involved public, Prudon is giving something more. His book is about issues, and best practices in light of those issues. Prudon's work is, pointedly, about engaging in the historical and current controversies at the heart of preserving modern buildings. The vexing issues of a new field are laid out and framed in such a way that they can become tools rather than obstacles in the advocacy of the evolving process.

Prudon has organized the work into two main parts. Part 1, "Preservation of Modern Architecture: An Overview," is a thorough series of chapters on history, precedents, philosophical issues, construction technology, standards and methods. Chapter 1 traces the beginning of preservation of modern icons in Europe in the 1950s and 1960s, the broadening of scope by the late 1980s (not the least of which was the founding of Docomomo), post-World War II developments in the US, and current and future challenges to the evolving practice of preservation. Chapter 2, which concerns philosophical issues, is where things get really interesting. It is not news to many that modern architecture is not universally accepted, understood or appreciated. Nor has it been deniable that there have been some unfortunate consequences that have a direct relation to modern design. What Prudon addresses within this old debate, however, is the effect on the value given to a particular building by the public which might have a generally negative perception of modern architecture. This is a clear challenge to advocating the preservation of a wide range of buildings, especially structures from 1950 to 1975, which pervade our environments. To dare to say that it may take some education to appreciate any modern architecture, and saying there may be viable social and aesthetic values worth advocating among modern buildings, are contentious statements of the cultural divide over design which

has been strong, especially in the US, since 1975. Not helping is the fact that many modern buildings were programmed and designed for a very specific purpose and constructed not, necessarily, to last for more than a few decades. "Functional and physical obsolescence," as Prudon states, "are central to the discussion and the dilemmas of preserving modern architecture." Added to this is the difficult need of upgrading a structure to current code compliance and introducing new systems, while trying to maintain a sense of the original design. There is wide currency for the argument against preserving because the inherent value of a building is considered to be far outweighed by its cost to be of continued service. Prudon writes that another challenging and unique aspect of preserving modern architecture is the level of regard held for the original design intent or design concept. To "shift to a focus on the more intangible expressions manifested in a building," as Prudon states, is to give value to the idea behind the design. This is a key point in Prudon's book, and reflects the movement toward evolving reinterpretations of historical/cultural concepts attached to the physical work. Most apparent in many modern buildings is the ambient experience dependent on a few materials, interpenetrating space and transparency, all totally integrated. It is all too easy to alter this effect radically by changing even one element. Prudon's thesis is that preserving modern architecture is a new kind of preservation that challenges traditional principles and methods by foregrounding the design intent. Chapter 3, "Evolving Preservation Philosophies and Standards," is an overview of the preservation charters, guidelines and treatment criteria that have changed with the field. This chapter makes it clear Prudon believes continued reevaluation of approach and broadening of subject in contemporary preservation places modern architecture heritage at the center of this transformation.

Preservation of
Modern
Architecture

THEODORE H. M. PRUDON, FAIA
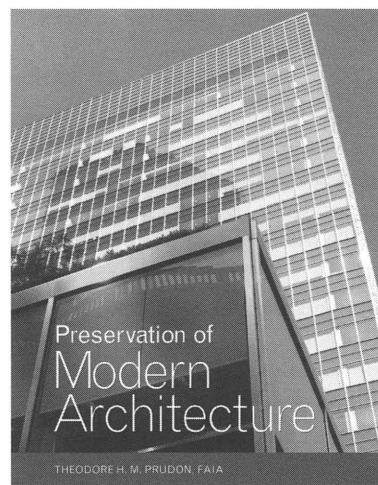
For those who were taught the lessons of the technological revolution as essential to the modern movement by Giedeon, Banham, and Frampton, Chapter 4, "Preservation Issues for Modern Materials and Systems," is a revisit to those interpretations of icons we have known, but from the diagnostic perspective, with their aging constructive and material reality made palpable. On the issue of determining significance of specific projects of modern architecture, Prudon, in Chapter 5, reasserts the trend in thinking which does not rely exclusively on the historical notions of rarity and integrity (subject in original place, configuration and state of wholeness). He concludes here that authenticity, integrity and design intent, as they occur in modern architecture, must be considered in balance, and this needs much continued research.

The chapters of Part 1 become the theoretical and practical basis for the narratives of the project examples in Part 2, "Building Typologies: Case Studies." This is a wide-ranging account of over thirty preservation projects by type, many of them icons of modern architecture. The case studies form the larger part of the book, and this serves a great purpose. Each case study is a succinct but detailed narrative of the birth, life and "geriatric" stages of projects, focused on the physicality of the subject and the preservation process. While noting the particular cultural and conceptual generators of a project, Prudon has carefully

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edited each case study to highlight the key applicable issues, controversies and techniques outlined in Part 1. There is something to be learned in each and every case study, because the perspective is investigative, not speculative. Along the way, we learn about architects, owners, the government, philanthropists and the public.

Because of the consistent editorial and narrative style throughout, one is able to read Prudon's book at length, or look up a specific subject, without loss of the issues typical of references of this scale. The legacy of modern architecture as subject for preservation, is to Prudon a living and ongoing process which is always concerned with the positive meaning and value of modern architecture. He asserts that the temporality of modern architecture is one of the reasons to focus on conserving the design intent. And with this goal, physical rehabilitation issues can be more cogently addressed.
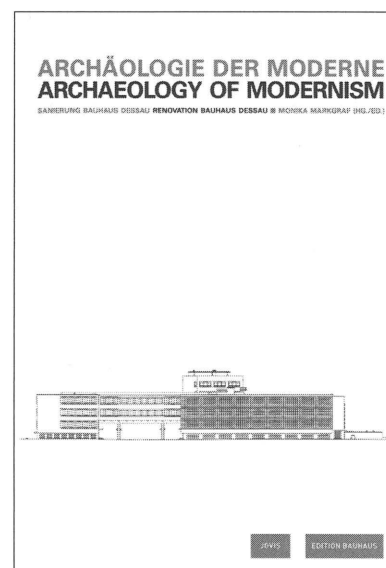
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Theodore H.M. Prudon.
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ARCHAEOLOGY OF MODERNISM
BAUHAUS DESSAU RENOVATION

The Bauhaus building in Dessau uniquely embodies the aims and ideas of the architecture of classical modernism in 1920s Germany. After a relatively short construction time, its official opening was celebrated on 4 December 1926. Just six years later, the Bauhaus was forced to move to Berlin, where the institution was soon to close. Eighty years later, on 4 December 2006, another large celebration took place at the Bauhaus, to mark not only the building's inauguration, but also the

end of a comprehensive renovation program lasting ten years. The expectations placed on this restoration process were high, not only because the Bauhaus building and Masters' Houses were included on the Unesco list of World Heritage sites in 1996, but also because it had to meet different needs. These were dictated by the building's contemporary usage, the desire for an 'authentic' reconstruction, and respect for the various modifications made to the building since 1926. The building, which consists of five different parts, continued to be used for teaching and administration purposes after its closure on 30 September 1932, until it was hit by several bombs in an air raid in March 1945. The workshop wing was particularly badly damaged, and the famous curtain wall was almost completely destroyed. Because the fundamental structure remained intact, essential repairs could be made to the building in the immediate postwar period. The curtain-wall was replaced by a brickwork façade with single windows. In 1960, these were replaced by horizontal steel windows. When architecture in the GDR turned to the industrialization of building production, the country took its cue from prototypes in the country. These included the Bauhaus building, where a process of 'reconstruction' in 1976 was carried out with the objective of recreating the building's original appearance. The most important part of the process was the reconstruction of the glass curtain-wall of the workshop wing. The re-opening was celebrated on 4 December 1976, fifty years after the 1926 opening. Only a few further changes were made until 1994, when the Zentrum für Gestaltung der DDR (Center for Design of the GDR) installed in the Bauhaus building was rendered unviable by fall of the GDR in 1989. The Bauhaus Dessau Foundation became the new owners, in charge of the further usage of the building and the implementation of a diligent and careful restoration process.
While the Bauhaus building was

ARCHÄOLOGIE DER MODERNE
ARCHAEOLOGY OF MODERNISM
SANIERUNG BAUHAUS DESSAU RENOVATION BAUHAUS DESSAU ■ MONIKA MARKGRAF (HG./ED.)

being restored, work also began on the restoration of the Masters' Houses, starting in 1992 with the Feininger House, half of the semi-detached house formerly known as the Moholy-Nagy/Feininger House. All the houses are owned by the City of Dessau, which endeavored to find investors and uses for them. Thus, the Klee/Kandinsky House was adapted as a museum, accepting the loss of original substance that this entailed. The restoration of the Muche/Schlemmer House, funded by the Wüstenrot-Stiftung (Wüstenrot Foundation) was the first to meet acceptable standards for the conservation of historical monuments.
These measures also became a learning process, which influenced the way work on the Bauhaus building was organized and carried out. The renovation was thus accompanied by a series of research projects; an archive was formed of building components, structural elements and materials, and building research was pursued with intensity. These steps precipitated, in turn, complex demands on the renovation process, which adhered to the following principles:
- "Preservation of the building's structure, or its replacement where it is damaged
- Usage is adapted to the building; the building is not adapted to new usages
- Installation of minimal technical equipment/facilities

- Preservation of historical traces, provided they do not compromise the building's integrity
- Conservation and upkeep of the monument in its current state
- Reconstruction of the original where building components are no longer available and a scientifically substantiated reconstruction is possible" (p. 56)

The result is impressive. The building does not have the 'sheen' of a new building, but shows the traces of its history. Reconstructions and restorations of original features are not recognizable at first glance. However, the so-called "white modernism" has become a colorful one that is both imposing and convincing. What a wonderful building!

The renovation measures are described and documented in depth by Monika Markgraf, who guided the renovation project as architect and member of the Foundation's staff. The title of the book *Archaeology of Modernism* alludes to the fact that the renovation has shed light on what was once concealed. As in archaeology, one must endeavor to conserve this treasure, so that it does not lose its brilliance again.

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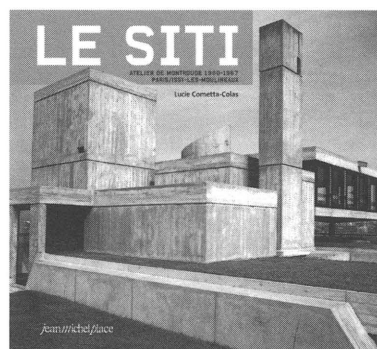
LE SITI, ATELIER DE MONTROUGE 1960–67

The SITI (Service de Traitement de l'Information) is located beside the access to the ring road which encircles Paris, on the border between Paris and Issy-les-Moulineaux. Inaugurated in 1965, the building housed the department of Engineering and Computer Graphics (the center for data processing) for EDF (Électricité de France), a large, international company. A design brief to transform the existing structure symbolizes a new era in French development, which announces the future 'security services' civilization, such as we know it today.

While nuclear power was being established as a source of energy, the idea of all-electric home heating began take off, and the company expanded to build an electronic data center to house one of the first information management systems installed in France to punch cards (comparable to the system used at that time by the Center for Atomic Energy and Ministry of Defense).

In 1960, Pierre Riboulet directed the SITI project, and it was the center of heated debates with his associates at the Atelier Montrouge. An existing building, a coal dust factory with a large thermal plant, built in 1927 between the two wars, was to be rehabilitated to house a highly technological and innovative program. This was no small paradox: by imposing the reuse of the existing concrete structure, EDF wanted to give a flattering and modern image to the building's new function.

The resulting building has a curtain wall on all four sides of the building above ground level, with reinforced concrete pillars forming a portico that is visible on the ground floor. The transparent upper floors' rhythmic, modular space division is defined by the fine metal frame, alternating with colorful banners of (now replaced) pre-oxidized copper. The formal plan, with a regular grid, suggests influences from the works of Louis Kahn, while the roof terrace evokes the spirit of Mies van der Rohe. The section gives priority to the passage of fluids, the presence of 'the machine.' This is evident on the second, third and fourth floors. The restrained aesthetics is influenced by Le Corbusier: the entry canopy, the vertical circulation, and a concrete enclosure displaced to the outside of the building. Similarities can be made to the electronic laboratory museum envisaged at Chandigarh, and relatively close to the Olivetti program of works, or at least the lexicon.

The most original piece, without a doubt, is a synthesis of all the different influences: the staff room, in exposed reinforced concrete, posed on the building, detached, hanging over the roof on a garden made up of compartmental topsoil. It contrasts with the metal and glass envelope. It is discovered and can be read only at a fair distance. Soon abandoned by the intended occupants, computer scientists, it was used by EDF for other purposes. The SITI was completely abandoned in 1996. In 2000, it received the label "Heritage of the Twentieth Century." It is listed as " a building of the twentieth century with a major urban and architectural interest which can justify protection as a historic monument."

Following negotiations with the concerned authorities and Bouygues Immobilier, the new owner of the land, the extension added by the Atelier Montrouge in 1975 was disassembled and removed. It will be replaced by buildings designed by the American architectural office Arquitectonica. An office complex, designed by the architectural office Wilmotte & Associates, will incorporate the SITI.

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contribute to the next journal

Journal 40 is scheduled for March 2009.
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Authors who would like to contribute to this issue are kindly
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- Bringing the significance of the architecture of the modern movement to the attention of the public, the public authorities, the professionals and the educational community.
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- Fostering and disseminating the development of appropriate techniques and methods of conservation.
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- Gathering funds for documentation and conservation.
- Exploring and developing knowledge of the modern movement.

Docomomo International wishes to extend its field of actions to new territories, establish new partnerships with institutions, organizations and NGOs active in the area of modern architecture, develop and publish the international register, and enlarge the scope of its activities in the realm of research, documentation and education.

Docomomo *International est une organisation non gouvernementale dont la mission est la* **DO***cumentation et la* **CO***nseravtion de l'architecture, des sites et du patrimoine bâti du* **MO***uvement* **MO***derne.*
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- Aider au développement et à la dissémination des techniques et des méthodes de conservation.
- S'opposer à la destruction et à la défiguration des œuvres architecturales importantes.
- Collecter des fonds pour la documentation et la conservation.
- Explorer et développer la connaissance du mouvement moderne.

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