# THE ORIGINS OF THE INTERNATIONAL STYLE IN ENGLAND 1927 - 1939

HISTORY THESIS: ROGER WESTMAN, DECEMBER 1962.

1927-1939

"The Origins of the International Style in England".

Introduction

Part I: The members and early limits of the modern movement.

Early published information on the modern movement.

Part II: The climate of the thirties in which the architecture developed.

Part III: The buildings of the thirties.

Part IV: The achievements of the modern movement in England.

H. R. Hitchcock's forecast in 1937.

The Mars exhibition.

Bibliography.

Note: All references in brackets are to issues of the Architectural Review unless otherwise stated.

Introduction.

I have felt the need to make clear to myself the pattern of modern architecture in this country before the war.

Growing up on the brow of Ladbroke Grove, looking out at Maxwell Fry's 'ship flats', 65, Ladbroke Grove, my awareness of design came to the surface in the late forties.

"Modern Architecture" was not the current austerity building but the architecture of before the war. Like everything 'before the war', continental holidays, and bananas it had an air of unreality, of never to be recalled stability. In fact it wasn't like that, but the illusion might well have provided the impetus for this essay.

Part I

For the first thirty years of this century England had no part in the main architectural movements. Previous to this the English contribution had been considerable: the engineering of Telford and Paxton, the Arts and Crafts movement, Philip Webb, Voysey and Mackintosh. This influence on the continent, especially in domestic architecture, was increased by the publication, by 1905, of the three volumes of Muthesius 'Das Englische Haus'. But Mackintosh's and Voysey's careers had ended by 1905 and 1910 respectively, and architecture was in the hands of the traditionalists, among others Sir Edwin Lutyens, W. Curtis Green, Sir Reginald Blomfield and Sir Herbert Baker. ❁

The 'new architecture' came from the continent and most of the architects who designed it, from overseas as well. The architecture, the International Style, had its roots in the artistic revolutions of the nineteen tens, in de Stijl Dutch, Russian constructivism and French cubism. In organisation it had an adherence to the programme. The building was generated by fulfilling the functional requirements of the programme.

There were buildings produced by firms established before the thirties which showed an appreciation of something slightly modern. The work of Sir John Burnet, Tait and Lorne, for example, was greatly influenced by Dudok. Other firms were practicing Swedish modern, but two men were, individually, designing in an intuitive modern manner of their own. They were Joseph Emberton and Sir E. Owen Williams.

❁ note: Nikolaus Pevsner has unearthed several respectable architects working at this time. See 'Nine Swallows - no Summer' A.R. 1942 Vol. XCI 109.

Emberton had built the Empire Hall, Olympia, in 1929 in a heavy 'machine style'. Of his other buildings, the Beck and Polizer offices on Southwark Bridge are an extremely fine handling of a facade approaching curtain walling, and the Yacht Club at Burnham on Crouch a tough straight forward concrete frame, with cantilevered balconies. Emberton was respected by the younger MARS generation - and was elected, but he never came to the meetings. Sir Owen Williams coming to architecture from engineering, produced in 1930-1931 the finest industrial building built before the war, Boots chemical plant at Beeston. He also designed the brash Daily Express building, the Peckham Health Centre and in 1936, the Lilley and Skinner factory.

For England the Modern Movement began in 1927, 'the year, scattered and indiscriminate observation of events on the Continent coalessed into an opinion - which easily became a loyalty - that such a thing as the modern movement existed and was in the nature of a cause." ❁

In 1927 John Rodker published Etchells translation of le Corbusier's book 'Versune architecture' as 'Towards a New Architecture.' Fredrick Etchells began as a Fauve painter before turning to architecture - which he later gave up - and built in 1931 Crawfords in Holborn, regarded then as the first modern office block in London, now hardly distinguishable from its neighbours. However, except for Behrens house in Northampton, for Basset Lowke, Tait's houses at Silver End in Essex, 'Dudoxy" flat roof, box architecture, rather than the Modern Movement, and early houses by Connell, Ward and Lucas, nothing important was built until after the 1929-1932 slump.

❁ note: Sir John Summerson, introduction to 'Modern Architecture in Britain.'

The modern architectural leadership came from abroad. Wells Coates was born in Tokyo, Connell and Ward came from New Zealand, Raymond McGrath from Australia, and Chermayeff and Lubetkin were born in the Caucasus. As a result of the rise of the Nazis, Mendelsohn came in 1933 and Gropius in 1934 as well as Breur, Arthur Korn and many others.

For some England was a temporary asylum, a short episode in their creative lives. Mendelsohn moved to Israel in 1936 and then to the U.S.A. in 1941. Gropius became Professor of Architecture at Harvard in 1937. For this country it was important that they had come. They had made it for a short time the headquarters of the Modern Movement and had helped to engender a tradition of modern architecture, which, if nothing else, enabled us to start reconstruction at a stage comparable with the rest of the world in 1945.

Events on the Continent in the late twenties were by no means unnoticed in this country. The Architectural Review had articles by P. Morton Shand and featured Continental buildings, especially those of Mendelsohn which were very fully illustrated. ❁

'The Architect and Building News' ran a series of articles by Sir Howard Robertson and F.R. Yerbury, a perpetual grand tour of 'moderne' Europe with the photographs by Yerbury. Paris, Sweden, Berlin: on Arthur Korn's 'Kopp and Joseph' barber's shop, an almost gleeful comment: "the nickle silver finish is, alas, already the worse for wear." The offices of the 'Berliner Tageblatt'; Haus Moss "Mendelsohn is architecturally a volcano" - but wears a tie like you or me. In these weekly articles there is a wide eyed enthusiasm for everything Continental, a great uncritical reportage. Nevertheless the issue for 6th September 1929 contains a report of the first CIAM meeting. "In June of last year was held a small but by no means unimportant architectural congress, of which but little has been heard in England." Later in the year there are photographs and a report of the Weissenhof exhibition. Illustrated are houses.

❁ (A.R. 1933 i 57 The New Columbus Haus)

by Bruno Taut, Mart Stam, Peter Behrens and Mies van der Rohe.

Many of Yerbury's photographs were collected and published, without comment, in book form. Ernest Benn, who had published some of Mendelsohn's sketches in 1925, published, among other anthologies 'Examples of Modern French Architecture' in 1928, work by Tony Garnier and Corbusier's houses - Carches, Maison Cook and Maison la Roche - and 'Modern Dutch Buildings' in 1931'. 'Modern European Buildings - First Series' - there was no second series - was published by Victor Gollancz in 1928. It contained something from everywhere, beginning with pictures of the Royal Horticultural Society's exhibition hall, its interior looked like many continental examples of similar buildings. It was in fact derived from Bjerke's concert hall at the Gottenburg exposition of 1923. A selection of photographs was shown at the R.I.B.A. in 1929 in an Exhibition of Commercial Buildings in Germany and Holland. In all these collections and anthologies there seems little attempt to distinguish between teutonic weight, citroen styling and the Modern Movement.

However, a more selective series of books was published in Vienna by Schroll in 1930: "Neuer Bauen in der West." There were three volumes "Russland" by Lissitzky, "Amerika" by Richard Neutra and Frankreich by Ginsberger. Ginsberger's book begins in a way then new, with Eiffel's bridges and his tower, with the Gallerie de Machines and the Marseilles transportation bridge, and finishes with le Corbusier's houses, the League of Nations building, and a plan and sketch of the Villa Savoie then under construction. The Russian volume is firmly constructivist: projects by Malevitch, Tatlin's scheme for the Communist International, buildings by Lissitzky himself and Ginsberger, but an overwhelming number of examples is in project form only. Compared with the first two books Neutra's volume is remarkable for the difference in the scale of building

illustrated which is that of large industrial and commercial groups, interesting for their organisational complexity rather than architectural merit. The two European volumes in this series seem to be the first critical works available here devoted to buildings of the Modern Movement, the beginning of the International Style.

The most considerable organ of publicity for the Modern Movement was 'The Architectural Review". While it covered a wide field, there were brilliant features on all the most important buildings of the time. Just after 1930 the sumptuous format of the magazine changed. Photographs began to 'bleed off', the appearance of the pages became fuller, and the typography more various. There were elaborate explanations of functional solutions using exploded isometrics and photographic montages, keyed to innumerable details. Among those writing for the magazine were F. R. S. Yorke, J. M. Richards, Maxwell Fry, Chermayeff and Lubetkin. Yorke's photographs in the early years parallelled Yerbury's for 'the Architect and Building News". Special numbers appeared; some devoted to various materials, others to Electricity, Russia (May 1932), the Modern English House (December 1936), and leisure (December 1938). The layout for the latter was by Moholy-Nagy and featured the de la Ware Pavillion.

The critical writings of P. Moreton Shand were outstanding. He seems to have been the only person writing in England to understand completely the development of the Modern Movement, and to maintain a standard of criticism compatible with the events that were taking place. In July 1934 began a series "Scenario for Human Drama," tracing back the roots of the modern house, from Gropius to Behrens, from Behrens to Ruskin and then to Soane. Shand's articles covered the same

ground as Pevsner's "Pioneers of Modern Design" and anti-date it. The importance of Mackintosh and the links with Holland and Germany were traced. Of the "Dutch Contribution" he said "The theoretical European school and Wright's intuative American individualism coalesce in Holland during the fourteen eighteen war." Although after seven articles Shand was only half way, the series came to a summary conclusion.

The 'Immediate Background' was standardisation and prefabrication. He saw Gropius as the most important architect of the time. His influence was greater than le Corbusier's. No contemporary had passed beyond the orbit that Gropius had encompassed and his architectural morality had crystallised before the war. Of le Corbusier he found that until 1916 he was still using pilasters and cornices, still tied to Perret's classical symetry. Finally he wrote, "One can never quite dismiss the hypothesis that he (le Corbusier) may have started by evolving a modern aesthetic of his own - though that alone ranks him as an outstanding genius - and then looked round him for a new structural technique to realise it."

The influence of le Corbusier was 'sporadic compared to the corporate' influence of Gropius.

Reviewing York's "The Modern House" Shand voiced a basic truth about the situation in England in the early thirties when he wrote, "We should welcome Yorke's foreign-born descendants not as bolshevising foreigners, but as returning emigrés."

Part II

The slump in this country lasted from 1929 to 1932. One of its effects was to coalesce the thoughts of people on several distinct subjects. It was seen that laisse faire policies would no longer suffice. In 1933 'Political and Economic Planning' (P. E. P.) was started, and a splinter group Tec plan, among whose members were Julian Huxley and Hugh Morris, gave itself the task of studying the techniques of National Planning. The periodical "Weekend Review", edited by Gerald Barry, produced its own national plan. All these were symptomic of a greater general awareness of a changing social pattern, the emergence of the Welfare State. The General Election of 1929 was the first in which universal suffrage operated.

Commitment, both political and artistic, characterised the thirties. Those with similar interests, participating in similar movements, associated themselves into groups. Architects joined the MARS (Modern Architectural Research) group. Cornell, Wells Coates and Lubetkin had formed the group in 1931, with an affiliation to CIAM and Wells Coates as first chairman. It was a 'casual' association, for after agreeing on the desirability of modern architecture, it was found there were as many solutions as members of the group. Typically Lubetkin soon resigned. Other groups aimed at the integration of painting sculpture and architecture. Wells Coates was active in 'Unit One', formed to facilitate joint exhibitions, as well as spiritual co-operation. There were eleven members, another architect Colin Lucas, two sculptors Henry Moore and Barbara Hepworth and seven painters Wadsworth, Nicholson, Edward Burra, Paul Nash, John Armstrong, Francis Hodgkins and John Biggs. Circle was a group devoted to constructivism. In 1937 Faber and Faber published 'Circle', an international survey of constructive art, edited by J. L. Martin, Ben Nicholson and Naum Gabo. An organisation of a different sort was the Left Book Club, published by Victor Gollancz. For some time the progress of Russian communism

had been a source of great interest. The social functions of architecture were classified. New possibilities in urban housing, the importance of education, leisure facilities and healthy workplaces were publicised. The idea was gaining ground that leisure time was increasing and therefore education should be for leisure.

The emigré architect from Europe was even characterised by Evlyn Waugh in "Decline and Fall" published in September 1928. One was given a slightly carefree, pre-slump view of young Professor Otto Friedrich Silenus who "had first attracted Mrs. Beste-Chetwynde's attention with the rejected design for a chewing gum factory which has been reproduced in a progressive Hungarian quarterly." "I saw some of Otto Silenus' work at Munich ..... I think he's a man worth watching. He was at Moscow at one time and in the Bauhaus at Dessau. He can't be more than twenty five now." An amazingly prophetic if slightly hectic biography. Of the new house at "Kings Thursday", "it's said to be the only really imaginative building since the French revolution. He's got right away from Corbusier." Corbusier is a pure nineteenth century Manchester School utilitarian." Many people jumped the gun, John Betjeman among them, trying to anticipate le Corbusier as passé in the early thirties: the illusory speed of obsolescence in design. His influence before the war was confined really to three buildings, the Pavillon Suise, Maison Cook and the Villa at Garche, having much less impact than, say, the postwar Maison Jaous and the Unité d'habitation. In 1930 le Corbusier produced his only construction in this country, a furniture stand designed for the furniture company, Venesta.

A development of Venesta was Isokon (Isometric Unit Construction) directed by J. C. Pritchard and Wells Coates, the only company producing good modern furniture at the time, designed by Breuer and Gropius and using predominantly plywood construction. Classical designs were the long and short chairs by Breuer. "An Isokon chair for the rest of your life", was Moholy-Nagy's slogan.

Isokon's commitment to modern design was soon parallelled in larger organisations. One was the London Passenger Transport Board, its importance as yet undiminished by almost universal car ownership. Through the effort of Frank Pick, made its managing director in 1928, new standards of publicity and design were achieved. Posters by Bawden and E. McKnight Kauffer, a uniformly outstanding series of underground stations in brick and concrete by Adams Holden and Pearson, and a standardised typography were all the result of Frank Pick's patronage.

Raymond McGrath was appointed decorative consultant to the British Broadcasting Corporation in 1931. His main task was to co-ordinate the work of designers, among whom were Chermayeff and Wells Coates, completing the interiors of the new Broadcasting House, in Portland Place. The image of broadcasting was fresh and exciting. New design problems involving accoustics and the housing of complex electronic gear had to be solved. The solutions are in many ways over-mechanistic in a decorative sense. But they represent the most consistent series of interiors produced in the thirties. The Corporation, at least in its innards, was on the side of modern architecture.

There was general agreement that automation was coming fast, that leisure time was increasing, and that people should be educated in how to spend their leisure. One of the B. B. C. 's functions was to educate. In 1932 a series of six talks on modern art was produced entitled "The Changing World". In 1933 a wider field was covered: design in modern life, planning and the countryside. Frank Pick was one of the speakers. These were later published in book form, but both series had illustrated introductory pamphlets. The aim was of the simplest: to encourage an awareness of appearance, to applaud the simplicity of the functional, to be aware of the need for planning. If there was an emphasis on anything it was on the social implications of design: design as it affected daily life, in fact the morality of good design. That acceptable products existed had been proved by the British Industries Exhibition at Dorland Hall in 1933.

Good design and modern architecture were not, however, all plain sailing. As will be seen when considering individual buildings, these were often influenced radically by the objections of various protection societies or planning committees. It was emphatically a minority alliegence and the argument generated made it 'hot news'. The B. B. C. with a combination of worthiness and opportunism, asked in July 1933 several speakers to reply to six questions under the general heading "Is Modern Architecture on the Right Track?" The questions were:

1. Is the engineer making the architect unnecessary today?
2. Has functionalism in building gone too far?
3. Can the English town assimilate the new architecture?
4. Is the new architecture ugly?
5. What will the next generation think?
6. Are we likely to evolve in the future a new style of ornament?

Wells Coates felt the questions had the "authentic irritating twang of the platform moralist". The arch traditionalist was Sir Reginald Blomfield. He said: "As an Englishman and proud of his country I detest and despise cosmopolitanism", and this meant Modern Architecture. This sterile argument, in which no ground could be given or taken, in the nature of the thing, continued in an exchange between Connell and Blomfield. Connell accused Blomfield of being "Afraid of the present phase of evolution", because he could "neither understand nor use it." To this Bloomfield replied with charges of Bolshevism and Hitlerism". In the same year he wrote a book "Modernismus" decrying modern architecture. Such were the outward manifestations of an opposition of more impenetrable blimpishness than is easy to imagine today.

Despite the obstacles modern buildings were being put up, and anthologies illustrating them began to appear. Yorke compiled "The Modern House" in 1934 and in 1937 with Frederick Gibberd "The Modern Flat". In many ways better was Raymond McGrath's "Twentieth Century Houses". It included a very large number of modern European and American houses and had standardised plans and excellent photographs. The book was prefaced by Ogden and was in fact written in basic English, justified as functional language. Indeed it only occasionally led to such descriptions as "apparatus for the cooking room". At the back of the book was an exchange between McGrath, drawn, a vignette in a circle and an elderly gentleman with a white beard. The device enabled McGrath to explain modern architecture in orthodox functionalist terms. The old man, true to type, wouldn't budge an inch. Of the Tugendhat house, "Free planning is quite as bad as free love and free trade", and he is given the last word: "You twentieth centure architects are only a small group. The great public is still on the side of the old men like myself and nothing you are able to do will have much effect on the great mass of men in the street." Only too depressingly true at that time.

Symptomatic of mounting general interest in architecture and planning were the numbers of guides for the layman that appeared. One of the first must have been "Architecture here and now" by John Summerson and Clough Williams Ellis, another "Fine building" by Maxwell Fry. Pelican books appeared in the late thirties; J. M. Richards "An Introduction to Modern Architecture" and Thomas Sharp's "Town Planning". But these later books soon began to satisfy, not the general interest in architecture, but the overwhelming concern about post war reconstruction.

The attitudes of the thirties towards 'modern' life are accurately represented in the poetry of the time, from Spender's "Marching Pylons" to Auden's

'Look shining at
New Styles of architecture, a change of heart.'

or C. Day Lewis' vision of a New Jerusalem, 'You that love England'.

"You who go out alone on tandem or on pillions
Down arterial roads riding in April
Or sad beside lakes, where hill slopes are reflected
Making fires of leaves, your high hopes fallen,
Cyclists and hikers in company, day excurtionists
Refugees from cursed towns and devastated areas
Know you seek a new world, a savior to establish
Long-lost kinship and restore the bloods fulfilment.

You above all who have come to the far end, victims
Of a run-down machine, who can bear it no longer
Whether in easy chairs chaffing at impotence
Or against hunger, bullies and spies preserving
The nerve for action, the spark of indignation -
Need fight in the dark no more, you know your enemies.
You shall be leaders when zero hour is signalled,
Wielders of power and welders of a new world."

Part III

In an era of seemingly endless waves of cinemas and banks, modern architecture was far more talk than building. As the client was almost always a private individual, it is not surprising that the majority of modern buildings were domestic. Other building types often came into being to satisfy the needs, and represent the interests of the intelligentsia, for example, Huxley's Zoo buildings.

Concrete was the avowed material for functional buildings. It was smooth-shuttered and then painted and its use for a small building lacked scale and produced a surface monotony. The modulation effects used for example in the expressed jointing on the curved face of the gorilla house would have been completely out of scale with small house construction. Something else was needed involving the properties of concrete to really justify its use. The plastic possibilities of the material were exploited in a variety of ways. F.R.S. Yorke's house at Nast Hyde, near Hatfield (1935 ii 97), for example, had an over complex interlocking plan, possible in reinforced concrete, but a dead pan block exterior, the internal complexity being reflected in a multiplicity of block forms. The forms are not'form' but a seemingly haphazard assembly of shapes. This lack of 'will to form', perhaps a British characteristic, is particularly noticeable in Yorke's work. In his studio for Augustus John (1935 i 65) Christopher Nicholson contrasts the square block of the studio with the plastic form of a reinforced concrete spiral staircase, as Havlivek and Honzik had done in a house in Prague in 1931, illustrated by McGrath in 'Twentieth Century Houses'.

The partnership of Connell, Ward and Lucas was among the most effective in solving the concrete problem. As has been mentioned, Connell and Ward came from New Zealand. They had worked their passages to England and travelled in Europe in 1927 with the help of scholarships, looking at le Corbusier, Lurcat and Peryet on their way to and from Rome. Connell had met in Rome, Professor Bernard Ashmole, director of the British School, and his first building was a house for Ashmole, High and Over at Amersham in 1929. Three regular wings spring from a central space. The building's appeal comes from the way in which the smaller units are disciplined to be incorporated without being forced, into the larger forms. Similarly in New Farm, where the organisation is more complex, the dwelling units being spread on one side, fan wise, from a staircase landing. The partnership with Ward dated from 1931, Lucas joining in 1933. Each partner worked independently, except on some of the larger projects. Lucas has always been interested in the possibilities of concrete construction and had, at one stage, formed his own building company. He built the first monolithic reinforced concrete house in this country, in 1930: a single storey building for his father at Bourne End.

Further two storey houses at Saltdean in Sussex by Connell and Ward were three simple cubes, with the staircase from first floor to roof expressed externally in the same way as le Corbusier's Pessac housing. Lucas designed "The Dragons" in 1936, the most wilfully 'cubistic' building the group produced. Henceforth a less extreme plastic line was taken, initiated perhaps by Ward with 6 Temple Gardens in 1937. Continuous strips of glazing alternating with solid bands wrapped round the building, its projecting semi-circular bay echoed

in external staircases. The elegance of this building is carried further in the house in Frognal by Lucas. Here brick is used, and its function becomes even more important in the last building of the partnership, a house in Bessborough Road, Roehampton.

The change that can be seen in Connell, Ward and Lucas's work around 1936-7 is not only true of house building at this time, but of the Modern Movement as a whole. There was a move from the sheer cubistic forms influenced by early le Corbusier, Mallet-Stevens, and especially Lurçat towards less dogmatic forms, delicate bands of steel patent glazing, constructivist semi-circles and a use of textured finishes applied to concrete, as well as a use of brick and timber. The questionable, partisan, aspect of the total use of concrete in house construction is emphasised in the difficulties encountered in obtaining planning permission for Maxwell Fry's house at Chipperfield (1936 i 25). The design was for a reinforced concrete house with a flat roof. For the scheme to meet with approval, the use of more traditional materials, or the addition of a hip roof was required. The house was eventually built in brick and timber and is as successful, if not more so, than if it had been built in concrete.

Maxwell Fry's best work in the mid-thirties was the house in Frognal Way (1936 ii 55). i In a private road, the house sits above it on the sloping site and looks south-west over London. The Balcony comes forward over the garage which is built in below the house. Everything is taken advantage of, the site, the view, and yet seeing it today it lacks the punch one would have liked or expected. It is not as successful as the garden front of Lucas's house, at the end of the road. Perhaps it is the deadness of the ubiquitous cream painted concrete, or an over resolution - a lack of plastic experimentation. The use of bands of glazing and semi-circular forms, as a mature style, can be seen in the houses Mendelsohn and Chermayeff did. In, for example the Chalfont St. Giles house (1935 ii 174) semi-circular landscaping forms echo the plan form and curved staircase.

By far the best country house and the most expensive, it cost £16,000, was Chermayeff's own house at Halland (1939 i 61). Anacronistic in the sense that it was a single house in a landscape, in the manner of the "English country house", it is this that gives it such great appeal. The house is of wood, a simple box, with the south side a continuous first floor balcony onto which the bedrooms look, and below, the living rooms with large sliding windows opening onto a terrace. The building is 'anchored' on the east side by a north-south wall which runs at right angles to the house and beyond it, embracing the terrace to the south and garages to the north. The entrace drive 'pierces' this wall and opens into the yard on the north side of the house. With its Nicholson and Piper paintings, Moore sculptures, 'long' chairs and built-in furniture Christopher Tunnard the landscape architect and Chermayeff produced in Halland something completely of its time, unrepeatable as a single private unit, but a goal nonetheless for civilised living.

Two town houses, by Fry and Gropius, and Mendelsohn and Chermayeff built in 1936 are arranged in a similar way in that they face onto gardens beside the road. Welcome in a special number of "The Architectural Review" as a return to the good manners of Georgian town architecture, (1936 ii 249) they seem nothing of the sort. The houses face away from the road as the Connell, Ward and Lucas house in Frognal does. By not actually facing the road but abutting the pavement with garage and entrance doors, the houses form an intimate and very satisfactory relation to it. Denys Lasdun's house in Newton Road, his first work, was an 'in fill' attempt. (1939 i 119). Influenced by the Maison Cook and Lubetkin it is very much a 'facade' with a brick back, although it has a reinforced concrete frame.

Some speculative group housing of modern design was produced before the war. Lubetkin and Tecton built a group around a cul-de-sac at Haywards Heath in 1936, and Lubetkin and Pilichowski a row of houses at Plumstead in 1934. Despite a rationalisation of plan form at Haywards Heath it was impossible to get away from the boxy semi-detached. The Plumstead terraces are somewhat better. But the best speculative housing must be that by Ward on the High and Over Estate in 1939.

The demand for small flats in London had increased greatly after the First World War. The demand in the thirties was met by such monstrous blocks as Mount Royal, Dolphin Square and the White House. However, at least two of the key buildings of the thirties were flat blocks. The appeal to the Modern Movement of the small flat demanding a maximum economic use of space and therefore a rigorously functional solution, is obvious.

In 1933 Frederic Gibberd designed Pullman Court, Wells Coates, the Lawn Road Flats and in 1935 Embassy Court in Brighton. Lubetkin and Tecton designed Highpoint I in the same year. Highpoint II was built in 1938. Wells Coates' Palace Gate in 1939. These were all projects for the professional classes. The London County Council was producing large housing schemes still wedded to the Arts and Crafts movement. Of the little low-cost housing that was at all modern in spirit Kensal House at the bottom of Ladbroke Grove must be mentioned (1937 i 207). Designed by a committee of architects Robert Atkinson, C. H. James, G. Grey Wornum, with Elizabeth Denby as Housing Consultant and Maxwell Fry

executant architect, the scheme of sixty-eight flats in two five-storey blocks was subsidised by the Gas, Light and Coke Company. The scheme included a clubroom and a circular nursery school on the site of an old gas holder. The bedrooms are on the east side and the blocks are curved to catch the morning sun. Three large trees helped to make this more successful than the rather untidy living room and balcony side. Connell, Ward and Lucas built in 1935 two small low-cost blocks in Camden Town. The ground floor has a single flat and the upper floors, two flats on each floor making a total of sixteen flats. The open staircases are expressed at right angles to the block. The site was extremely constricted and the roofs were used as play areas.

In 1933 Wells Coates designed the Lawn Road Flats. The project had been initiated by J. C. Pritchard, and his wife had formulated the programme. The flats were to be for single professional people who worked and therefore had little time for household chores. They were to be of a bachelor type and therefore easy to run. Service facilities would be available though not of the hotel variety. The washing-up would not be done, though the windows would be cleaned, beds made and laundry collected. The services were to be optional. A basic stipulation was that the scheme should provide 'living spaces which will not be obsolete in 1950'. Wells Coates' scheme was boldly constructivist, bands of cantilevered access balconies and a further cantilevered secondary staircase. A styalised axonometric was printed upside-down on the cover of the Listener. It had been proved that there was sufficient interest to make the scheme pay when a prototype 'minimum' flat had been exhibited at the first exhibition of British Industrial Art at Dorland Hall in 1933. Eventually the planning authorities 'could see no particular objection' to the scheme and construction went ahead.

This was Isokon I. There were two further projects but these were not so successful. Isokon II was a still-born scheme for flats of a similar type to those at Lawn Road to be built at Wythenshaw which did not reach the planning stage. Isokon III was a much larger scheme (1935 i 188) at St. Leonard's Hill near Windsor. Planned by Gropius and Fry in 1935 the scheme incorporated two slab blocks in park land, with restaurant, tennis courts, swimming pools and a school. The flats were large and intended for families. Workers could commute to London by car and return to live in the preserved landscape of the park. The King's permission for the scheme had been successfully sought as the blocks overlooked Windsor Great Park. Everything was ready to begin but J. C. Pritchard became ill and, denied his energy and determination, the scheme came to nothing.

Wells Coates' next block was Embassy Court in Brighton, (1935 ii 167) sixty-nine luxury flats for well-to-do commuters. The L-shaped block has continuous balconies in bands, enclosed in part to form sun rooms. This front is good but not outstanding. The ground floor, containing a bank as well as flats and access lobbies, lacks emphasis. The elevation from the service yard however continues the dramatic theme of the access balcony seen at Lawn Road. At Embassy Court there are service galleries, the main access to flats being direct from lobbies. Standing out from the galleries are staircases and goods lift towers which contribute to the rigidity of the structure. · Wells Coates also designed furniture for this scheme using steel tube: a divan with an adjustable back rest, and cushions on canvas webbing, and a desk with three standard U-tube supports in two directions making the structure rigid. The top and cabinet were made of $\frac{3}{4}$" laminated board.

In 1938-39 came the flats in Palace Gate. Wells Coates had explained the planning conception in a "Review" article 'Planning in Section' (1937 ii 51). The flats were arranged in two three-floor units, access being from the middle lever in each unit. The permutations of flat types available are considerable, but, because of the limited size of the block, the majority of flats (sixteen) have one and a half height living rooms, the two half floors coming together on the access level, and two, three or four bedrooms. The use of artificial stone slabs to form the permanent shuttering for the reinforced concrete construction shows that, although the building was expensive (2s. 3d. per cubic foot compared with Lawn Road 1s. 4½d.), the standard of detail and finish of modern buildings had become much finer. "Planning in Section" was a characteristic of Wells Coates. He had the ability to organise interconnecting spaces in the manner of a Chinese puzzle. One has only to think of the shiplike compactness of his own flat in Yeoman's Row or the Telekinema for the 1951 South Bank exhibition.

Frederick Gibberd and Maxwell Fry both designed noteworthy 'middle income group' flat schemes, much influenced by Walter Gropius. Pullman Court (1934 i 41) contemporary with Lawn Road, is probably Gibberd's best work. The handling of the detail is direct, with Bauhaus-like balconies standing away from the facade, and bands of simple steel windows. The disposition of the main blocks is however rigidly symetrical; two long blocks parallel to the axis, a private road which leads up to a higher end block. In another building, a nurses' home at Northampton as well as in the Southgate flats of 1937 Gibberd initiated the use of a reinforced concrete slab spanning between brick cross walls, which has since became a standard L. C. C. practice for terrace housing. Fry's flats at 65 Ladbroke Grove were built in 1938, after Gropius had left for America. Here the reinforced concrete frame had disappeared, covered by the eleven

inch cavity brick filling, except where the balconies occur. Blue vitreous tiles were also used, as they were on the Cecil Residential Club in Gower Street (1940 i 79), together with white tiles and glass bricks. Here again one can see the later more varied use of surfacing materials, as was found in house building. An earlier and very accomplished use of reinforced concrete was a block of thirteen flats designed by A. V. Pilichowski, Highfield Court in Golders Green (1935 ii 47). The L-shaped block is thirty feet wide with a central spine beam, and eight inch columns at eleven foot centres, similar to the 'fish bone' structure of the two-storey block in the school at Preston Park, Brighton (1936 i 275).

A consideration must now be made of the block of flats, High Point I, that caused great interest, and gave encouragement to the protagonists of modern architecture when it was built, the work of the most prolific and consistant firm of the period, Tecton. Bertold Lubetkin and Godfrey Samuel had formed Tecton in 1932. Lubetkin had come to England in 1930 and was one of the few people who had experience of building modern buildings. Godfrey Samuel was a newly qualified A. A. student, as were the other five members of the group: Anthony Chitty, Lindsey Drake, Michael Dugdale, Valentine Harding and R. T. F. Skinner. In crediting work, the name of the group members came first and then the group name Tecton. This resembled somewhat the groups that Lubetkin had mentioned in the special number of "The Architectural Review" on Russia (May 1932), the 'social-architectural organisation ASNOVA' or the 'section of architects of Socialist construction, SASS'. In a way Tecton was such a 'cell' but its operation in a capitalist society precluded any qualms about the proletariat. However, the unity of the group's work, even when someone else is named as principal, must be ascribed to Lubetkin.

In 1933, commissioned by Chalmers Mitchell and Julian Huxley, Lubetkin and Tecton designed the Gorilla House at the London Zoo (1933 i 241). The analysis of the problem was broken down into two main considerations: to house a delicate animal in a northern climate and, second, to enable the public, who in winter would have colds to which gorillas are susceptible, to see the animals as well as possible. The solution was a circular building, the northern half having a four inch concrete wall and roof with a clerestory light. This contained two individual cages and the winter day cage. The southern semi-circle was a barred structure, the summer day cage, and in winter the public viewing space, protected by a movable wall and roof of birch, steel-framed, which pivoted at the centre of the plan. In winter the gorillas were protected by a plate glass screen from the public's germs. Teak blocks were laid at the front of the day cages to encourage the gorilla to sit at the front. This, almost wayward functional analysis of the problem is typical of the group's approach to its many projects. In 1934 came the penguin pool (1939 ii 17). Its eliptical shape was to act as a sounding board for the penguins' cries as well as giving some direction to the site. The spectacular feature of the pool was two interlocking half-spiral ramps in reinforced concrete, to show off the 'attractive and faintly ridiculous quality' of penguins. Its Max Bill-like sculpture qualities, and the penguins, made it an immediate success. Several more Zoo projects followed at London, Whipsnade and Dudley. Of the London schemes only the penguin pool looks as it should. The last occupant of the gorilla house was a brown bear, and now the building is deserted, perhaps the victim of its own over precise functional programme.

Highpoint I was built in 1935 (1936 i 5). Even today, twenty-seven years later, it is not too difficult to imagine the impact it must have made, the most modern building in London, at its apex, and to try and explain the puzzlement at Highpoint II typified by Anthony Cox's Focus article (Focus 2, Winter 1938). The plan of Highpoint I is a double cross which rises for seven floors above a free planned ground floor. The long axis, running north-south, contains three-room flats and the cross axis, four-room flats, which are entered from lobbies in two cores. The external walls are structural and formed from continuous climbing shuttering, giving the block a direct, smooth quality accentuated by the painted concrete. Here the only plastic relief for the block was obtained from the projecting balconies, and by virtue of the double cruciform shape, from the varying planal positions of the wings. As Furnaux Jordan has pointed out (A. R. July 1955) Highpoint I "was not a Ville Radieuse - but it could have been a unit in a Ville Radieuse". This was its great appeal, as an example. While the ground floor took care of the site, orientating itself towards North Hill, as le Corbusier remarked "absorbing easily the lines of traffic", the block itself was a universal solution. The blank end walls give an expression of continuity, show where the next unit could join on. And this was the immediate reaction of Tecton, the adjoining site having been bought in order to preserve the amenities of sunlight and air for the inhabitants of Highpoint I. But in the three years that separated Highpoint I and the new project the opposition to modern architecture had organised itself. The raison d'etre of the Highgate Preservation Society was to prevent the construction of any more High points in the village. However, after much dispiriting argument, Highpoint II was passed by the district surveyor and built (1938 ii 161).

The land had been more expensive and fewer flats could be built than in the original scheme and so, in order to obtain a sufficient return, the flats had been made larger and more luxurious, and the rents correspondingly increased. This explains the radical difference in programme between Highpoints I and II. The structure was different too. Lubetkin had been conscious of the lack of scale and bareness of treatment in Highpoint I which he tried to solve, first in Tecton's scheme for the Cement Marketing Company's competition in 1936. Here the long balcony was recessed as well as being projected, though the external walls were still structural. In Highpoint II the end wings have the same structure as Highpoint I in order to relate to it more fully, but the central section, with the double height living rooms has transverse carrying walls. This made possible a much richer treatment of the elevation, which is what Lubetkin had always thought was necessary.

Although Anthony Cox has been ready to forgive the "slightly zooish flippances of some of Highpoint I's details", perhaps the portholes in the roof structure for the comfort of weary homing pigeons, he was not among those to acclaim Highpoint II as "an important move forward from functionalism". "Highpoint I stands on tiptoe and spreads its wings: Highpoint II sits back on its haunches like Buddha. That this effect is deliberate, Tecton themselves would probably be the first to admit; it clearly has little to do with necessary differences in planning and structure".

From Lubetkin's point of view Highpoint I was certainly more like a butterfly that hadn't opened its wings yet, and the differences between the two projects clearly arose, to some extent from reasons of function. Anthony Cox's criticism seems almost to be righteous anger at Tecton's deviationism.

"The intellectual approach which has produced what we know as modern architecture is fundamentally a functionalist approach. My contention is that the recent work of Tecton shows a deviation from this approach. It is prepared to set certain formal values above use values, and marks the re-emergence of the idea as the motive force".

But it is obvious that the functional solution is in itself a reconception. In fact there was not a unique functional solution but, as the members of MARS found out, as many solutions as architects, with nothing to unify them except the idea, 'form follows function'. For this was all that modern architects thought they needed or had accepted in this country. They were to some extent innocent of the continental roots of the International Style, of the manifestos of de Stijl, of Constructivism and Cubism and Futurism and Suprematism, but all had an idea of what a functional building looked like and for some it certainly didn't look like the questionably articulated and almost decorative forms that Tecton produced. Anthony Cox's criterion was almost the Volkswagon idea.

"Has a point been reached at which external material conditions affecting architecture, and a popular acceptance of certain standards as good and adequate, have made such a change

necessary and appropriate? If this point has been reached and I cannot see that it has, the change in aims must be due to personal reasons, to a turning inwards towards private formal meanings which have no generally recognisable social basis". (Focus 2)

Of formalism in Russia, Lubetkin has said that it was "the gulf that separated the subjective researches of the schools from the imperative demands of the moment" and of the misapplied constructivist approach, "the fetishism of 'real objects' and 'useful things' soon broke down, and the movement quickly degenerated into a kind of formal decoration based on a sentimental mechanistic aesthetic". ('Architectural Review' May 1932). But Lubetkin's roots were in Russian constructivism. Inate in this was a need for formalism, an axis finding propensity. Even the penguin pool has axes. The houses of 1934, 1935 by Harding and Tecton, Crescent Wood Road, Dulwich and Farnham Common, and Chitty and Tecton's house at Bognor 1935 have characteristically axial plans. The main axial blocks have been bitten into by more informal asymetrical shapes. In fact in Lubetkin's work form and function were worked out in parallel and Lubetkin demanded the form to be regarded as much as the function.

This was true of all Tecton's work - from the Gorilla house, to Finsbury Health Centre (1939 i 7) and the postwar estates. The result of this attitude was to create a distinct style which already by the late thirties was not confined to Tecton, for example Patrick Gwynne's house at Esher, Surrey which he designed with Wells Coates (1939 ii 103). As a style it was further developed in Tecton's immediate postwar Finsbury housing estates and gave whatever unity there was to the Festival of Britain.

It is impossible to consider other buildings in the same way as the domestic modern architecture of the pre-war period. Some of these 'other buildings' broke new ground, both in form and programme. The pioneering, of, for example, educational buildings was the springing point for the post-war school programme while others, like the de la Ware pavillion have arisen from programmes that have never been repeated, or again they may have been the single modern example of a common building programme, for example the department store, Peter Jones.

In the de la Ware pavillion the first all-welded steel frame was hidden behind concrete walls. Serge Chermayeff and Erich Mendelsohn won first prize in the competition in 1934 for which Tait had been accessor. This building represented the modern architecture of leisure. In fact it contains all the things, theatres, restaurants and sun decks one would expect to find on a pier. The large walls of the auditorium do give it a slightly stranded air. Christopher Nicholson's Gliding Club at Dunstable (1936 i 253) was a clear and simple solution for a recreational building on a very tight budget. It includes a large hanger as well as clubrooms. Gliding had become very popular, particularly as a result of German initiative, brought about by the restriction on power plane ownership imposed by the Treaty of Versailles. Perhaps one can contrast Nicholson's building with the rather inept streamlining of Playdell Bouverie's Ramsgate Airport (1937 ii 3).

Many architects had found jobs in the comparatively ephemeral field of shop design. An early job of Wells Coates had been the styling of Cresta shops (1931 i 43). Chermayeff had done some corset showrooms (1939 i 41), more noticeable were Maxwell Fry's Electricity Showrooms in Regent Street echoing the architecture of the 1930 Stockholm Exhibition. But Peter Jones, if

only by virtue of its size, was far more important. It was designed by William Crabtree in Association with Slater, Moberly and Reilly (1939 i 291). Whereas in a Berlin-period Mendelsohn building one would have expected a strong horizontal treatment of the curved glass facade, here the closeness of the tubular steel mullions counteracted any such tendency. The roofscape is untidy because unfinished, but it is considerably better without the projected cornice.

Impington (1939 ii 227) was the fourth Village College in Cambridgeshire. The first had been at Sawston a 'symetrical eighteenth century pastiche' though its spread out arrangement perhaps anticipated Gropius and Fry's freely planned solution. Perhaps this arrangement was inherent in the village college programme as originated by Henry Morris. The colleges served as regional social and cultural centres, the school combined with buildings for adult education and recreation. One thousand two hundred pounds were raised privately to ensure that Gropius and Fry would design Impington; Henry Morris and Gropius had been introduced by J. C. Pritchard. In the scheme, the single-depth classroom block, similar to those projected by Gropius at Hagen, is separated from the slightly curved adult wing and the assembly hall and stage by the staff and cloak rooms.

Dennis Clarke-Hall had won the News Chronicle School Competition in 1937 and later incorporated the results of his research in the design for a school at Richmond, Yorkshire (1940 i 15) for 160 girls. The classrooms are all on the ground floor and the individual classrooms expressed though not as loosely associated as at Impington. These two buildings, Impington and Richmond, pioneered the course that the post-war school programme in this country was to follow.

1927 - 1939 The origins of the International Style in England.

PART IV

In the late thirties there were two exhibitions which both demonstrated the ethos of the Modern Movement and made a qualitative assessment of the work of the period.

In the catalogue of the exhibition 'Modern Architecture in England' held at the Museum of Modern Art, New York in 1937, H. R. Hitchcock said, "Today it is not an exageration to say that England leads the world in modern architectural activity". In his essay Hitchcock took stock of the current architectural situation and attempted to forecast the direction which modern architecture would take. It was "misleading to make a distinction between the current work of foreign-born architects and Connell Ward and Lucas or Wells Coates. The English school of modern architecture was a coherent entity". However there was a stylistic gulf separating the different age groups which Hitchcock thought would disappear leaving a united national style, "a more localised variant of the International Style". The older established firms were "taking advantage of the current mode, this substitution for the previously popular Swedish and Dutch half-modern was significant". The older established firms were Sir John Burnet, Tait and Lorne, Adams Holden and Pearson and Sir E. Owen Williams; to these one would add Joseph Emberton and Howard Robertson. The younger men were Breuer and Yorke, Harding and Samuel, Chitty and Pilichowski. It was however those with "Continental experience" who were the better planners. "Conciseness and ingenuity (of planning) were sometimes absent, sometimes exagerated". Of formal sense Hitchcock mentioned expecially the use of curves: Peter Jones, the work of Lubetkin and Tecton and Oliver Hill, as well as Mendelsohn, who in his earlier, more heavily expressionistic work had "abused curves". This was one of the characteristics of a developing national style.

The other characteristics were the return, in part, to the use of national materials, the extension of the use of colour (other colours than the prevailing cream, pale blue and earthy red) and new types of group construction.

In 1937 in fact architectural prospects were high. The cream of European architects were in this country and the Lawn Road flats had become a refugee camp for moderns. An indication of what was to happen, however, came with the news of Walter Gropius' appointment at Harvard, released at the same time as the exhibition. Breuer's rough stone used in his design for a pavilion at the Royal Show Bristol in 1936 crossed the Atlantic with its author and became a characteristic of New England houses.

At the time there was more prospect of an exciting future than evidence of a fertile present. For good modern architecture was really very thin upon the ground. The only opportunities for building had occurred between the end of the slump and the Munich crisis. A movement which was committed to taking a universal view, to create a new universe had only succeeded in getting 'one off' jobs. Architects were resentful. In England, acceptance of the International Style, which had its roots in the many spontaneous movements of just before the First World War, was belated. Here the genesis was occurring while everyone else was in the middle period. There was never the wholehearted acceptance of modern architecture as had happened, for example, in the Middle European states which had been given a new, if short lived, constitutional impetus by the Treaty of Versailles. Here everyone was content to progress, but when this progress manifested itself in architecture, the most public of arts, then everyone had his own forthright opinion. And it was often unfavourable. However for those actively conscious of the progress of society in the thirties, modern design, 'salvation through design' as Rayner Banham has called it, was an integral necessity.

The protagonists of modern architecture, in effect the MARS group, held a propaganda exhibition, the second exhibition mentioned, at the New Burlington Galleries in January 1938. Its public success may well have been contributed to by the great succès de scandale of the Surrealist Exhibition held at the same gallery in the previous year. The catalogue identified the 'traditionalist' as being "the perpetual victim of the preconceived idea," while for the modern architect "the passage of the idea from its first adumbration to the final design becomes a creative process, not one of mere intellectual compromise". The exhibition was based on Sir Henry Wooton's paraphrase of the Vitruvian virtues, it was Godfrey Samuel's idea, "Well building hath three conditions Commoditie, Firmenes and Delight". Commoditie represented the problem stated, the human needs for housing, work and plan; Firmenes, the technical equipment and Delight, the resulting architecture. Much of that shown has been put up in England in the previous three or four years. Sir John Summerson has called the exhibition "a terribly belated and derivative affair".

The broad ethos was functionalism. None of the dogmas of the movements (except perhaps le Corbusier) that had contributed to the International Style had survived to cross the Channel. But it was clear that the Style had been assimilated. From the bare angular forms of raw concrete there had come a change around 1936-37. Brick and wood, and curves were being used. Modern architecture had been tamed to suit the gentler, less extreme English temperament. Form had become, especially in the work of Tecton, more mannered. Tecton was the only group whose stylistic development spanned the war, seemingly unhindered by it. This unscathed passage gave the Tecton style a prestige which flowered in the 1951 exhibition, and continues in the work of Peter Moro, Leslie Martin and Denys Lasdun.

So we have progressed from the first cliches, the cyma shapes, the spiral staircases, the directness of a new style, the 'change of heart'. Hitchcock said, "One can end a consideration of English architecture in the winter of 1937 not merely with the conclusion that its present achievement is almost unique and could hardly have been foretold even five years ago". The events that contributed to this achievement also brought it temporarily to a halt. The war makes Hitchcock's final forecast less true than it might have been but it is perhaps too soon to judge.

"One can also prognosticate that this achievement very probably represents the opening stage in an architectural development of prime creative significance, such as was initiated in the seventeenth century by the Restoration architects, and again along a very different line by the engineers and their bridges."

One can however assert that the mechanistic elements of the early International Style in this country were discarded as the technical developments which should have given them substance failed to materialise. It was, among other things, cheaper to ignore the great symbol of the thirties Highpoint I.

It can be seen that this failure further reduced the impetus of the stylistic development of the modern movement in this country. To some it became a purely negative thing, to others it meant the more pictorial qualities of Tecton's style. An ambivalent attitude towards matters of design, even by those who favoured modern architecture was common. Frederick Etchells, speaking at the Architectural Association prize giving in 1930 qualified the universal applicability of modern architecture when it came to "keeping in keeping". The Style lacking anything to rejuvinate it after its arrival a mature fifteen years old, became less important as the technical and

social aspects of the programme became more complex. That a movement should become astyler is in conflict with the architects present raison d'etre. Design and 'style' will persist even at the expense of a retreat from industrialised building, or the survival of a few degenerate cliches. This, despite Hitchcock's prognosis, sometimes seems near to reality.

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