Chukyo University Institute of Economics

Discussion Paper Series

March 2023

No. 2206

Architectural modernism and the housing question: the case of England in the 1930s

Tatsuya Tsubaki

Architectural modernism and the housing question: the case of England in the 1930s

Tatsuya Tsubaki*

School of Economics, Chukyo University, Nagoya, Japan

Abstract

During the 1930s, the question of popular housing provision became a matter of considerable public discussion. The decade also coincided with the slow introduction of architectural modernism into England. This article explores some of the ideas about a new form of housing development put forward by its advocates, particularly in relation to the idea of flats as homes, and looks at their achievements in the 1930s. These modern architects were firm in the view that improving people's housing conditions was an important task of the day which called for an application of their skills and expertise in the service of society. Their preferred solution of providing blocks of modern flats with a range of social facilities found favour with sections of the voluntary housing movement. The official slum clearance campaign seemingly gave added relevance to the ideas of modernists. But in terms of actual building, their achievements were limited to a few isolated examples.

Keywords: architectural modernism; housing; town planning; modern flats; England; London

*E-mail: ttsubaki@mecl.chukyo-u.ac.jp

Introduction

The 1930s represent an important period in the development of housing policy in Britain. During the decade the question of popular housing provision became a matter of considerable public discussion: how to provide the majority of working-class people with decent houses and better living conditions. One of the major themes in the housing debate was the issue of desirable dwelling types and there was a heated controversy over the relative merits of flats and houses. Thus 'The battle of flats versus cottages is now raging in housing quarters', wrote B.S. Townroe in 1936.[1] The Prince of Wales lent his voice to the slum clearance campaign. *The Times* reported the prince's keen interest in 'its solution by means of blocks of flats', being himself 'acquainted with schemes both at home and abroad where that method has been adopted'.[2] George Orwell was advocating flats as an answer to the problems of rehousing.[3]

The flat or apartment has been a comparative rarity in the history of English housing. The general consensus was that flats were alien to the English (if not British) way of life. Yet there were a number of factors which helped them come to the fore in the 1930s. A shift in government housing policy towards slum clearance and central redevelopment questioned the wisdom of providing cottages with gardens on suburban housing estates. This type of housing development – houses built to a low density, in informal and picturesque layout, surrounded by greenery – was identified with the garden city principles and represented mainstream thinking on housing and town planning of the day, both in public schemes and houses built by private enterprise.[4] More importantly, however, the 1930s coincided with the slow introduction into England of modern architecture. An active minority, mainly of architects, took up its cause and made their views in public in writing, through exhibitions and by their buildings. They contributed to the housing debate by criticising the existing form of residential development and called for solutions on modern lines.

Based mainly on contemporary sources from the period under review, this article will explore some of the ideas about a new form of housing development put forward by its advocates, particularly in relation to the idea of modern flats as homes, and look at their achievements in the 1930s. Most of these proponents of modern flats identified themselves with modern architecture as it developed in the interwar years in several other European countries. Accordingly, the first section of the article will give a brief account of important developments which took place in modernist thinking on housing on the continent in the 1920s.

Architectural modernism and housing in Europe

In the 1920s, Germany was one of the countries where the new ideas of modern architects were most widely applied in public housing. In common with several other European countries, Germany was suffering from a severe shortage of dwellings due to the cessation of building during the First World War. The increases in marriages and the influx of refugees from eastern Europe exacerbated the situation. The country also had a legacy of high-density tenement blocks from the nineteenth century to overcome. The housing programme, therefore, aimed at producing the maximum amount of additional accommodation by developing new estates within reasonable distance of city centres at rents affordable by the working-class people. And this had to be done under stringent budgets. Research into economy and efficiency in building was carried out, and in several cities, notably Berlin and Frankfurt, standardisation and prefabrication were utilised to good effect to produce one of the first large-scale modern housing estates under the direction of modern architects.

Modern architects' contribution to the solution of the housing problem was based on two claims. As Sigfried Giedion, a Swiss historian of modern architecture and a fellow traveller, put it in 1927, these were 'the change from handicraft methods of construction to industrialization, and the premonition of a new way of life'.[5] Walter Gropius (1883-1969), calling for 'an architecture adapted to our world of machines, radios and fast motor cars', assumed that modern technology and new materials could be usefully applied to housing, combining 'the greatest possible standardization with the greatest possible variation of form…to fulfill varying requirements of those to be housed'.[6] Moreover, the machine would act as a liberating force in the lives of ordinary people. Again, Gropius argued:

> Modern man, who wears modern not historical dress, also requires a modern dwelling which is in harmony with himself and with the times in which he lives, and is equipped with all the modern objects in daily use…The machine, which creates standard types, is an effective means of liberating the individual from the physical labour through mechanical aids – steam and electricity – and giving him mass produced products cheaper and better than those made by hands.[7]

Thus, with modern technology harnessed to social purpose, architecture sought to create a new way of life appropriate to the machine age.

Bruno Taut (1880-1938) was an architect involved in several of the housing estates built in Berlin. In his book published in 1924, he discussed the new types of interior planning, using ergonomically efficient plans and labour-saving equipment which would free the housewife from household

drudgery.[8] Research into dwelling plans pointed the way to a clear separation of two groups of rooms, one for living and eating and the other for sleeping. An open and spacious living-dining room was to be the hub of a family's activity, to which was adjoined a small kitchen, replacing the traditional kitchen-living room.[9] Social housing in Frankfurt was a model of efficiency and economy in design. Under a radical City Architect, Ernst May (1888-1970), the city developed standardised dwelling plans with built-in furniture, folding beds and the famous 'Frankfurter Küche', a functional kitchen unit with modern equipment so fitted to facilitate activities taking place inside the kitchen. The latter was designed by Margarete Schütte-Lihotzky (1897-2000), an Austrian architect, who was a member of May's team at Frankfurt. Of course, consideration of economy was a major factor in these design innovations and dwellings had to be kept minimum in size. Nonetheless, with these compact and efficient dwellings in planned residential communities containing churches, schools, shops and other communal facilities and provided with transport into the city centre, May positively sought to create a new way of living for his residents.[10]

In matters of layout of blocks, there was also a significant advance. The old tenement tradition was denounced. Securing fresh air, sunlight and greenery became the pre-requisite. Dwellings were to be no more than two rooms deep, running the width of the block with all the rooms having windows. Likewise, research and experimentation into the layout of blocks saw the gradual evolution towards more open and spacious planning. The traditional planning followed the peripheral model, in which each block enclosing a courtyard continuously lined the main street. These peripheral blocks could be opened up at the corners or along the sides, letting in a greater amount of air and sun and avoiding some dark corner rooms. This eventually led to the opening up of both ends of blocks. Instead of having buildings on four sides of a block, a series of straight rows now ran along the streets or in preferred directions. The favoured orientation of these blocks was to be north-south giving maximum exposure to sunlight. Moreover, to protect the dwellings from noise and traffic of the streets and to give them greater privacy, a radically new layout emerged. A parallel row of blocks, identical in length, was arranged at a standard distance and planned at right angles to the street. It was first introduced by Otto Haesler (1880-1962) in 1924 for one of his housing schemes and became widely adopted in the schemes built by radical architects.[11] A historian of German architecture of this period has written:

> Despite its novel and often bizarre appearance, the new architecture thus gained acceptance in public housing and other municipal architecture in Germany with extraordinary ease…it was increasingly sponsored by public officials of nearly every persuasion who approved of

> radical architects' economical building methods and high standards of comfort and convenience.[12]

Similar developments were taking place in other European countries. In Holland, J.J.P. Oud (1890-1963), in his work on low-cost housing, designed two-storey terrace houses which were geometric in shape and white-washed with a horizontal band of windows.[13] Le Corbusier (1887-1965), in his Citrohan (a pun on the mass-produced Citroën car) projects, established his design concept for a standardised, mass-produced dwelling. In its essence, it consisted of a rectangular box with a completely glazed front wall, containing a double-height living room in the front half of the box and the remaining accommodation stacked on two levels at the back.[14] He followed this up with a scheme of 'Freehold Maisonettes' which were blocks of double-height flats rising up to eleven storeys. Of these maisonettes, Le Corbusier wrote:

> A communal service provides for all necessities and provides the solution to the servant question (which is only just beginning and is an inevitable social fact). Modern architecture, applied to so important an enterprise, replaces human labour by the machines and by good organization; constant hot water, central-heating, refrigerators, vacuum cleaners, pure water, etc…Each maisonette has its own gymnasium and sports room, but on the roof there is a communal hall for sports and a 300 yard track…There is the great covered court, on the roof of the underground garage, for tenants. Trees and flowers all around the court, and all along the street in the gardens; in each hanging garden flowers and creepers.[15]

Having devised his ideal dwelling type, Le Corbusier went on to work out his town planning scheme 'Contemporary City of Three Million Inhabitants'. Two types of residential block were contemplated: a continuous block with set-backs of six double storeys, advancing and receding amid the lush surroundings of a park; and a rectangular block of five double storeys, enclosing a vast open space. In both cases, his prototypical maisonettes, double-height and each with its own garden terrace, became the unit dwelling. On the ground floor of these housing blocks were to be placed shops, restaurants and laundry.[16]

A noteworthy early realisation of these new design concepts could be seen in a small experimental housing development constructed in Stuttgart between 1925 and 1927. Weissenhofsiedlung was sponsored by the Deutscher Werkbund, a German organisation of architects, craftsmen and industrialists founded in 1907 to improve industrial design and promote standardisation in building. Overseen by Mies van der Rohe (1886-1969), who was also one of the pioneers of modern

architecture, leading modernists of the day, among them Gropius, Taut, Oud and Le Corbusier, contributed their designs to the project. An exhibition took place of the resulting development in 1927 in an effort to disseminate the idea of modern housing to the public. Though the majority of the buildings at Weissenhofsiedlung were single family houses and terrace houses, Mies' own design for a block of flats, geometric in form with rational interior planning and displaying horizontal bands of windows, offered the most striking image of the new architecture that could be applied to mass housing.[17]

Thus, the proponents of the new architecture brought to bear its new principles and new methods upon the solution of popular housing provision and achieved some success, most notably in Germany. Outside the few isolated examples of high flats, the preferred type of dwelling in the 1920s was a straight row blocks of flats, three to five storeys high, containing units of minimum size but with efficient up-to-date amenities.

The foundation of Congrès Internationaux d'Architecture Moderne

On the strength of these developments, an international organisation of modern architecture (Congrès Internationaux d'Architecture Moderne – CIAM) was founded in 1928 to disseminate the principles of modern architecture.[18] Several of Europe's leading modern architects took part. The declaration from its first meeting in La Sarraz, Switzerland, called for architecture to be put 'back in its true sphere which is economic, sociological and altogether at the service of humanity'. It also touched upon town planning, albeit in very general terms:

> Town planning is the design of different settings for the development of material, emotional and spiritual life in all its manifestations, individual and collective, and it includes both town and country.[19]

The CIAM resolved henceforth to work towards solving the town planning problem of modern society through the medium of architecture.

The housing question dominated the early meetings. The second congress in Frankfurt (1929) discussed the problems of small, efficient dwellings for low-income families. May argued convincingly for the mass provision of small dwellings to be let at affordable rents as the way out of the housing shortage. Some advanced the filtering-up theory of providing larger units for the well-off sections so that the dwellings they vacated could be turned over to the poor. They pointed out the increasing cost per unit of small dwellings and the possibility of negative psychological effects of overly small units on the tenants. For Gropius, it was a fundamental responsibility of the

society to provide dwellings for its members. He referred to the contemporary tendency towards smaller household sizes and defended the provision of smaller dwellings as answering a genuine need.[20] The next congress in Brussels (1930) took up the subject of rational housing development. The discussion turned on the relative merits of using low, medium and high blocks of flats. It was Gropius who presented his study of the relationship between plot ratios and building heights. On a given plot developed with parallel rows of flats, allowing for the equal angle of sunlight, he demonstrated that the habitable space increased with the number of storeys. Since high blocks would be placed at a distance to allow for the same amount of daylight to penetrate the lower floors, they were seen as having space-liberating potential. Thus, Gropius argued that by building high flats,

> Instead of the ground floor window looking on to blank walls, or into cramped and sunless courtyards, they command a clear view of the sky over the broad expanses of grass and trees which separate the blocks and serve as playgrounds for the children.[21]

The fourth congress in 1933 discussed the problems of the modern city and produced a set of propositions on modern town planning called the Athens Charter. The charter decried the suburb (describing it as 'the symbol for waste', 'a kind of scum churning against the walls of the city' and 'an urbanistic folly') and set its face against garden cities which were seen as 'an illusory paradise, an irrational solution'. The principle of functional zoning was upheld and the four principal functions of town planning were spelt out: housing, work, recreation and traffic. On housing, high flats were the favoured solution and the charter went on to describe its requirements:

> If it is to be filled with fresh air and sunshine inside, it must also extend outside by various community facilities. So that dwellings can be more easily supplied with common services dealing conveniently with the supply of food, education, medical attention, and the enjoyment of leisure, it will be necessary to group them in "habitation units" of adequate size.[22]

Through these early CIAM meetings, the idea of high flats placed in a park-like setting, equipped with communal facilities in place, came to be endorsed by leading modern architects of the day as a desirable form of housing development. The significance of modernist thinking on housing, as outlined above, lay in the fact that it influenced the emerging core of modern architects in England and set the tone of the debate on housing types in the 1930s. The first collective statement for modern architecture would come from those who rallied around a group representing the British wing of the CIAM.

The Modern Architectural Research Group and the early English modernists

The Modern Architectural Research Group (MARS)[23] was set up in early 1933, at the invitation of Sigfried Giedion, the international secretary of the CIAM, to act as 'the nucleus of a British group of architects, engineers and town planners, whose work will be officially associated with the research programmes of the International Congresses'.[24] The character and aims of the MARS were described by the *Architects' Journal* in 1934:

> The Group is made up of modern architects and allied technicians who have been willing to profit by those experiments in form and function which were worked out almost simultaneously in many countries during the last quarter of a century and which have produced a modern style both rational in character and international in distribution, and assume some of the architect's social responsibilities. The Group has been formed primarily for research, which, within the terms of the task the members have set themselves, includes not only technical investigations into purely architectural matters such as planning and structure, but also includes rather deep probings into the whole structure of society.[25]

Because of its vague commitment to an architecture in the service of society, its obsession with research and personal differences, the MARS was not too successful in functioning as a collective and as a group could not put across a coherent message on housing, but as its membership (it numbered 71 in 1938) shows, the group included most of the figures who represented a force calling for a change in the existing form of housing development.[26] In their capacity as MARS members or as individuals they put forward images of modern housing. Wells Coates acted as chairman, with Maxwell Fry as vice-chairman and F.R.S. Yorke as secretary. Its membership numbered those in architectural professions as well as writers, critics and other lay members who were sympathetic to the cause of the new architecture. These included the Connell, Ward and Lucas partnership, Frederick Gibberd, Berthold Lubetkin, Joseph Emberton, John Gloag (all architects), Ove Arup (a structural engineer), Thomas Sharp (a town planner), P. Morton Shand (an architectural critic), H de Cronin Hastings (editor of the *Architectural Review*), John Summerson (an architectural historian), Geoffrey Boumphrey (an engineer and writer) and Charles de Peyer (a wealthy client of Connell and Ward).[27]

Wells Coates

Wells Coates (1895-1958)[28] laid the theoretical basis for the need to have modern housing. He was a

Canadian, born in Japan, with a doctorate in engineering. He did some interior designing, planning and furnishing shops, showrooms and redecorating houses and flats, before coming to architecture. At the most general level, Wells Coates would argue for progressive architecture in the service of society, an idealist strain shared among MARS members:

> What is the essential intention of the art of architecture? Reduced to its simplest elements, architecture is the art of providing *ordered shelter* for a multitude of human activities. In this sense it has always been the most direct expression of the culture of an age, the least personal, the most objective, art…
>
> In the transitional society of today, there is no communal desire to achieve order and significance in the arrangement and aspect of life…Communal amenity is rarely considered. And there are always practitioners in architecture who will irresponsibly provide what men ignorantly and wrongly and anti-socially desire for their own personal ends…architecture has to serve the purposes of the people as well as the purposes of beauty. Thus will it 'serve life'…we are not so much concerned with the formal problems of 'style' as with an *architectural* solution of the social and economic problems of the today…As creative architects we are concerned with a Future which must be *planned* rather than a Past which must be *patched up*, at all costs.[29]

Wells Coates was particularly interested in the changing nature of architecture in relation to the modern society he saw emerging. For him a modern dwelling was a function of two factors: the invention of new materials and the demands of modern living. On the one hand, he used the technological argument, claiming that new materials and new building methods justified a new type of dwelling. The mechanical devices such as 'heating, lighting, ventilating, refrigerating and sanitary processes, and the machines for vertical circulation' were to be integral part of its construction as were 'furniture designed into the house as part of architecture'.[30] He took to designing radio sets, electric fires and a range of furniture which was simple and economical. Wells Coates also experimented with prefabrication and the standardisation of units which could be arranged in all manner of ways and allowed the maximum interchangeability. And he also stressed,

> The paramount importance of building in largeish units, as the building of small detached houses will very quickly be discarded, when it is shown how economical and comfortable and convenient other methods may be.[31]

The main justification for a modern dwelling came from the change in people's mode of living. 'Our society is above all determined to be free',[32] wrote Wells Coates. He thought the home in the

traditional sense of the word as a permanent place no longer applied. People moved after work, for holidays, even across frontiers, leaving the old home and family, all of which made for 'a new, exciting freedom'. This new freedom and the bustle of modern life outside the home made 'the real comfort, quiet and convenience required in our dwellings' an essential purpose of the design. He noted the trend towards smaller family units and an increase in households requiring separate dwellings. The shortage of adequate accommodation for hundreds and thousands of people and the servant problem of the upper classes were bringing the homes of the different classes more into the same category. All this pointed to smaller dwellings planned compactly and economically, with modern conveniences.[33] Wells Coates was particularly critical of the bric-à-brac and the general clutter characterising the conventional interior of a home, which he said, created 'a museum-type intimacy'. People were rarely aware that 'a room exists for the man, not man for the room'.[34] Since people were moving around more and dwellings becoming less permanent, he believed that built-in furniture should be provided wherever possible:

> Very soon it will be considered quite as fantastic to move accompanied by wardrobes, tables and beds, as it would seem today to remove the bath or the heating system, including all pipes.[35]

The form of housing development that he envisaged pointed to blocks of flats containing modern efficient dwellings coupled with a range of communal and recreational facilities. As Wells Coates expanded on it:

> Every dwelling has got to have the best lighting, heating and cooking devices, and some form of heating for the general warmth…the day of the detached house, with obvious exceptions, is rapidly drawing to a close…the next step in the design of dwelling units must be the block or group of dwellings with every centralised service which the sharing of costs makes economically possible: the provision of large open spaces for social, athletic and other community interests within a stone`s throw of one's dwelling – swimming baths, nursery schools, children's playgrounds, parks and walks – all as an essential element in the main design of the community life… The main community blocks would be four or five stories high, and so placed as to give the principal living and sleeping rooms the best aspect – light, sun and air…[36]

The application of these ideas in actual building found partial and somewhat extreme expression in the Lawn Road Flats (1934) in Hampstead, London, built for the Isokon Company.[37] The building was four storeys high, built in reinforced concrete and consisted mainly of 'minimum'

service flats approached by access galleries cantilevered out of the building. Each unit was provided with built-in furniture and a well-equipped kitchenette. Such services as heating, hot water, cleaning, bed making and collection of refuse were included. There was a communal kitchen on the ground floor from which meals could be ordered (later replaced by a residents' club-cum-restaurant).[38] As J.M. Richards, a prominent architectural critic, later remarked, Wells Coates planned the building for the new type of man who wanted to 'live light', unencumbered by possessions. And the building was a success in practice, and became a meeting ground for the architects and other refugees fleeing Nazi Germany.[39]

F.R.S. Yorke

In the same year as the Lawn Road Flats were completed, F.R.S. Yorke (1906-1962), a founder member of the MARS, brought out a book called *The Modern House*. It consisted of an essay on the origin and development of new domestic architecture, followed by illustrations of modern house (commonly featuring flat roofs, whitewashed surfaces with expansive glazing) from all over the world. In line with the thinking of the MARS, the new style was explained in terms of the needs and means of the modern society:

> Twentieth century architecture is dictated by new methods of construction and new materials, and by unprecedented practical requirements, a new outlook on life, a new sense of space and time.[40]

He was aware of the fact 'the individual architect-designed house' was a luxury or might be undesirable in 'an age of big population' and maintained that the small house had become a mass-production problem.[41] The importance for the modern architect of designing a villa, he argued, lay in the fact that it afforded an opportunity for experimenting in new materials and new methods and examining what modern architecture could do to help solve the problems of housing.[42] In fact, a notable feature of the book was that it was prefaced by an introductory plea for flats. A reformed type of flats and controlled land development was the solution to the housing problem. He was careful to distinguish modern flats from the traditional high density tenements lacking light, air and open space:

> Modern construction permits higher building, and higher building means economy in land. When a building rises to ten or twelve stories the saving is considerable, and the land that is freed becomes park-land between the building units.[43]

And dwellings grouped in modern flat blocks would make arrangements such as heating, laundry,

hot water supply common to all residents and thus lead to economy in planning. The way this development of flats would look was implied by the illustrations which was a scheme of ten-storey flats by Gropius ('planned in narrow blocks, single flat thickness, spaced apart so that daylight may penetrate to every room'), a diagram showing the evolution of layout resulting in the Zeilenbau plan ('rational orientation and economical layout and structure') and a project for a residential quarter ('planned as a self-contained group with communal dining room, kindergarten, school, club, central kitchen and sports stadium').[44]

In 1937, Yorke produced the book *The Modern Flat*, in collaboration with a fellow MARS member, Frederick Gibberd (1908-1984). The book was primarily one of plans and pictures. Some 50 examples of modern flats from Europe including England and America were illustrated. The accompanying text went over the same argument for flats as in the previous book. Only this time the authors were more intent on exposing the ills of existing towns as grey, dull and dirty places, with haphazard developments producing a jumble of industrial, commercial and residential buildings. In turn, the shortcomings of resulting suburban developments were pointed out, with multiplication of small houses along the roads and eating into the countryside, the disfiguring of the landscape, and the long journey incurred to and from work, with its great waste of land and increased outlay on services. They claimed:

> We are making this book because we believe that we shall want to live in a tall building in a park, with common amenities, air and view; and that the problem of housing cannot be solved by the provision of millions of little cottages scattered over the face of the country, whether in the garden city manner, or as speculatively built stragglers.[45]

Aesthetic judgement sometimes got the upper hand. It was invariably the interminable row of little houses that caused squalor in towns, as factory buildings in most cases had 'its peculiar aesthetic quality and scale'. In place of this squalor,

> A few tall buildings rising up to the light and air, spaced well apart, properly served with communications, would keep the dwellings away from through traffic roads, and their noise and danger, and would house all the people whose individual villa-homes now make congested areas that stretch for miles. Open spaces for walking and recreation, with cafés and places of entertainment between the blocks would bring the open country right into the town.[46]

Striking aerial photographs accompanied the text that showed a maze of roads and a jumble of buildings in town, untidy rows of semi-detached houses in a suburb, small houses straggling along a

trunk road into the country and an example of speculative development encroaching on the countryside. To these were juxtaposed an artist's impression of a project by Walter Gropius and E. Maxwell Fry[47] at St Leonard's Hill, Windsor, showing free-standing flats in a park-like setting. The project was for 110 flats with restaurant, lounge and ballroom. Only one acre out of the 33-acre site would be built upon and the remaining 32 acres of parkland would remain untouched, its view available to everybody. The actual examples of modern flats illustrated in the book, the authors argued, were to be units in a large-scale urban development, 'designed not as a means of crowding more and more people into a given area, but as a means of releasing more ground space for parks, roads and gardens'. This would only be possible 'when public authorities take over and clear large areas in existing towns, or develop new areas'.[48]

E. Maxwell Fry

E. Maxwell Fry (1899-1987), another founder member of the MARS, reviewing Yorke's *The Modern House* reiterated the point about the need to have collective dwellings to serve the people:

> The small house, fulfilling a deep want that certain happily placed section of the community have money to gratify, provides the architect with the means of putting into practice ideas which have their final application in the service of the wider community – when the community is prepared to receive them.[49]

His sustained interest in the social aspects of architecture is clear from the statement he made later in his own book, *Fine Building*, as the nation prepared itself to take on the task of post-war reconstruction following the Second World War:

> The housing of those sections of the public which we as architects are unable to cater for as individuals is unquestionably the biggest job before us.[50]

Prior to the war, he was writing of architects' vital contribution to the solution of the slums. He saw the problem as three-headed: rent, construction and land. Since rents had to be kept within the means of the tenant, the solution needed to be found in terms of construction and land. On construction he complained about the practice of dressing up flats 'in the blind faith that only decency is Georgian', and proposed instead 'the standardisation of units, a standardisation from within outwards', as the way to economy. The design of the flats, containing as they do small units of nearly similar size, was particularly susceptible to a process of fine standardisation and functional planning. This would result in 'minimum' bathrooms and 'minimum' kitchens, the layout of which should be studied from the housewife's point of view. The labour cost of construction would be cut

by factory production of components.[51] Moreover, in his eyes, existing flats in England had been 'built like little houses disconnected from the ground' which left a lot to be desired in their planning. Maxwell Fry admitted that in terms of size of rooms these flats provided a generous minimum, but he also pointed out their shortcomings, such as the lack of balconies for babies and children, common use of gallery access to flats, the lack of hot water provision to sinks, generally vertical and small windows, insufficient utilisation of ground floor space and the irregular disposition of the blocks.[52] Individual rights in property clearly stood in the way of land acquisition for the purpose of housing, forcing the existing slum clearance schemes to be piecemeal and wasteful. Maxwell Fry's answer was to 'plan over areas sufficiently wide to offer the services of a planned community' as 'a constructive step in the building up of a new, better and more economically managed urban community', presumably with the help of wider town planning powers.[53]

Berthold Lubetkin

Berthold Lubetkin (1901-1990) was another important figure in the MARS group. He was a Russian émigré and had spent several years in Paris before settling down in England in 1930. He was influenced by architectural developments in Paris during the 1920s, especially the work of Le Corbusier. He also kept in touch with the architectural debates taking place within the Soviet Union and was imbued with a strong sense of social responsibility and political commitment in bringing architecture to serve the people. When he wrote, in a survey of Soviet architectural thinking, of Soviet architects' ambition as being 'not simply to build architecturally, but to build socialistically',[54] it no doubt reflected his own sentiments. Lubetkin formed the firm Tecton with a number of Architectural Association (the oldest independent school of architecture in England founded in 1847 as an alternative to the traditional training of architects by apprenticeship) graduates and together they designed, among other things, the High point Flats in Highgate, London.[55] Though their rentals put them in the middle-class housing category, these flats, particularly High Point I (completed in 1935), with its interesting plan and some formal qualities, were a valuable contribution to modern architecture and 'certainly the finest block of flats built in the country' in the 1930s.[56]

In 1935, unhappy with 'the apolitical nature of the MARS and the failure of that group to clarify its purpose and determine its actions',[57] Lubetkin and a minority broke off to form the Architects' and Technicians' Organisation (ATO).[58] Some members of the building industry also took part in the new body. One of the aims of the ATO was to work for the adoption of a rational progressive policy

on housing and town planning, to secure the rehousing of the millions of families under the best modern conditions. The ATO also allied itself with the Association of Architects, Surveyors and Technical Assistants (AASTA), a white-collar union for salaried architects, and concentrated on the defence of official architects (architects in the employ of local authorities and public bodies) against the Royal Institute of British Architects (RIBA) which catered in the main for qualified architects in private practice, the status to which many of the MARS members belonged.[59]

In 1936, the ATO Housing Committee organized an exhibition on working-class housing. The accompanying pamphlet[60] was an indictment of the housing policy of the Conservative-dominated National Government. Drawing on contemporary social surveys and medical research, it was demonstrated that even the rents of subsidised council housing was often beyond the means of the tenants and that bad housing conditions induced chronic ill health, malnutrition and high mortality. The committee calculated that the official slum clearance lagged far behind the actual need for new dwellings. The ATO called strongly for positive intervention by the government in the provision of housing, making it a national service. The remedies suggested included higher taxation and controlled rents. In the actual provision of new dwellings, the ATO insisted that central areas be built according to modern standards of health, comfort and convenience, and gave an idea of the kind of housing development it envisaged:

> Large balconies can and should be provided for all blocks of flats, where young children can sleep and play in plenty of sun and fresh air. Planted roof terraces should be provided over the whole area of the building.
>
> The various blocks in any housing scheme should be so laid out that every flat receive direct sunlight for several hours every day and that all rooms receive enough air for efficient ventilation. Too often blocks of flats are built with narrow internal courts where these principles are ignored.
>
> In refuse disposal, a system has been evolved in which refuse is evacuated through the bowl in the sink, and is destroyed in an incinerator in the basement…
>
> There seems no reason now why every block of flats should not have an efficient central heating system, whereby each room can be efficiently heated at considerable saving in cost over the system of individual heating units.
>
> Centralised laundries, crèches, nursery schools, playgrounds, etc., should all be provided in large housing schemes, as they were in Vienna, and as they are now provided in all new housing estates in Soviet Russia.[61]

At around the time of the setting up of the ATO, articles and reports featuring flats started to appear in the organ of the AASTA, *Keystone*,[62] reflecting the close relationship of the two organisations. The general tone was objective rather than partisan, but with an emphasis on making out a fair case for flats. An article on housing standards, in effect, argued the advantages of flats planned in social units with shared services and amenities.[63] In another issue, the planning of private, old-type mansion flats for the middle classes was juxtaposed to a review of *The Modern Flats* by Yorke and Gibberd.[64] Inspired by examples of modern housing projects carried out on the continent and by the work of public institutions like the Miners' Welfare Committee which designed and built pithead baths and other social facilities,[65] the AASTA also championed the cause of those salaried architects who sought to apply their skills in remedying the social ills of bad housing and poor living conditions. It saw government involvement in popular housing provision as an important step in the direction of extending the social services which would offer greater scope for 'official architecture' (a term used to describe the architectural work of local authorities and other public bodies) in providing schools, hospitals, health centres as well as housing.[66] One AASTA member called for architectural departments of local authorities to be expanded so that 'full advantage could be taken of large-scale methods of production, of prefabrication, mass production and standardisation, of modern systems of heating, refuse disposal, etc.'.[67]

Thomas Sharp

Thomas Sharp (1901-1978),[68] a town planner by profession, was also drawn into the circle of the MARS,[69] by his sustained criticism of low-density housing development, characteristic of garden cities and suburbs, and by his espousal of the beauty and order of compactly-built towns. His polemic was set out in two books, *Town and Countryside* (1932) and *English Panorama* (1936). Part of the latter, describing the historical development of the English town and forming the basis of the book, had, in fact, appeared earlier as a series of articles in the *Architectural Review* (which became a major mouthpiece for modern architecture in the 1930s). Sharp's main thesis was that the distinct qualities of the town and the countryside had to be re-established:

> only through the preservation of towns as towns can the countryside be saved; and only through the limitation of rurality to the country can the town be preserved.[70]

Increasingly through the interwar years, the destruction of the countryside by uncontrolled development became a matter of concern.[71] Sharp saw it as a creation of the 'semi-suburbia' or the 'universal suburbia' at the expense of both the town and the countryside:

> From dreary towns the broad, mechanical, noisy main roads run out between ribbons of tawdry houses, disorderly refreshment shacks and vile, untidy garages…Over great areas there is no longer any country bordering the main roads: there is only a negative semi-suburbia.[72]

Sharp recalled a fine tradition of English town building in the eighteenth century, which expressed itself in a series of related streets and domestic squares in harmonious association with the unity and conformity of Georgian buildings. He argued that their form and beauty reflected the cooperation and collective way of life. Moreover, this town building took an individual line within a democratic tradition without any autocratic control from above, growing out of the lives and customs of the people. This tradition of architectural unity and civic design, however, had been debased in the process of industrialisation, producing 'vast inescapable deserts of arid brick' in towns, while the first signs of suburbanisation became evident in the building of detached villas for the middle classes set in landscaped gardens. This 'open development', as Sharp described it, gained greater significance because of the Romantic Revival which emphasised the informal, natural and picturesque setting in the layout of towns. The straight road was taboo. Country villas and vernacular cottages facing onto wriggling and tortuous streets became the ideal. This was a complete antithesis of the traditional town, which had been built in close formation, with buildings fronting onto formal streets and squares. Of course, at first these picturesque suburbs were the privilege of the wealthy and the powerful, though model industrial villages at Bournville and Port Sunlight towards the end of the nineteenth century showed how the principles could be applied in favour of ordinary workmen. The sorry state of the existing town was fuelling people's desire to escape from it, and the general revulsion against it, he said, led to its ultimate destruction. Sharp saw Ebenezer Howard's Garden City as the culmination of the Romantic ideal of 'open development', obliterating the traditional concept of the town, and as such, vehemently reacted against it:

> [Howard] had no interest in the town as a thing of beauty, a work of art, an expression of man's dignity and civilization…The town reformer showed his true intention at the very beginning of his work: he was out to destroy it.[73]

Howard's idea of the third alternative, 'Town-Country', having the characteristics and advantages of both town and country, was unacceptable to Sharp, who called it a hermaphrodite. To Sharp, it was essentially back to the land, nature-worship romanticism:

> In Town-Country the country must prevail. In Garden City (which was, of course, the same thing) the emphasis must all be on the garden. So all the houses were country

> cottages set singly or in pairs along curving countrified roads diversified with hedges, trees and shrubs, herbaceous borders and green swards. Informality and romance was the key-note. In fact when all was said and done Town-Country arrived as but a popular edition of Bournemouth and the rest of the resorts of the Victorian upper-middle classes.[74]

Within a few years of the publication of Howard's ideas, the first garden city was set up, and the first Town Planning Act of 1909, instead of reviving 'Civic Design', as Sharp would have liked, consolidated the garden city principle, which was, in effect, that of 'open development' – semi-detached houses, or at most four houses in a block with gardens, built to a density of twelve per acre, and set well back from the street behind deep building lines. The damaging effect of this type of development on the town and consequently upon the countryside was clear to Sharp:

> Hundreds of thousands of houses have been built to this standard, and scores of thousands more to an enforced density that is still lower – ten, eight, six, four, or even two to the acre. The result is already obvious. The new suburbs and town extensions sprawl out in a sloppy diffuseness all over the countryside.[75]

His plea was for a return to the compact town:

> We must return to Architecture. Let us again have *streets* of houses grouped closely together, clear in their symbolism of social order, pure, strong and independent in their material beauty. Let us again build TOWNS.[76]

Thus, indiscriminate housing developments on garden city lines had to be checked. The way forward was in bringing back true urbanity and civic expression to the existing towns. Flats would play an important role in Sharp's idea of urban housing. He called the blocks of neo-Georgian flats erected by the London County Council 'noble essays in the true and native style of English urban architecture'.[77] Later, in *English Panorama*, he went on to say that a considerable part of the population of the future town would be housed in great new blocks of flats:

> The present 'blighted' districts of our great cities, those vast areas of mean cottage streets, will, indeed, be largely occupied by groups of flats and their open spaces and public gardens…[78]

The accompanying illustrations, including projects of modern flats, indicated Sharp's receptiveness to modernist ideas in housing, while his whole polemic against the garden city principles helped reinforce and articulate the arguments for modern flats.

Actual achievements in working-class housing

How these ideas and principles outlined above could be applied to working-class housing was demonstrated in a number of actual buildings and housing projects produced by the MARS members. Maxwell Fry designed two housing schemes, both in collaboration with Elizabeth Denby (1894-1965), a renowned housing reformer and sociologist, who also became a MARS member. The first of these, Sassoon House in Peckham, London, was completed in 1934 and was managed by a housing trust. It contained twenty flats in a block built in reinforced concrete, the external walls of which were painted in yellow, grey and cinnamon. Each flat had a cantilevered balcony, large enough to accommodate two small beds for sleeping out in summer, and a well-fitted kitchen providing cheap hot water to the sink and bath. Other provisions included pram sheds, clothes drying rails in the paved yard and refuse chutes. A considerable degree of standardisation went into the design and construction of these flats. The use of standard metal windows and standardised kitchen units resulted in speed of erection and reduced building costs.[79] Kent House, built in 1935 for a London housing association, was designed by the Connell, Ward and Lucas partnership. Two blocks of flats, of four and five storeys, were of reinforced concrete frame construction, and externally the colour schemes – wall in pink, blue for the back of the staircase, the balconies bright red – gave the buildings a cheerful appearance. A total of sixteen flats were arranged two flats per floor, thus eliminating the need for lengthy access galleries. Inside, the bathrooms and the kitchen were logically placed near the bedrooms and the living room. Again, cantilevered balconies were provided, which would take a table and chairs. Other amenities included pram sheds and clothes lines on the ground floor and a roof-top playground.[80]

These two schemes illustrated the possibility of a fruitful alliance between housing reformers and modern architects, in their cause to improve and modernise working-class housing. Kent House, commissioned by the Northern Group of St Pancras House Improvement Society, in fact, grew out of the collaboration between the MARS and the New Homes for Old Group at the annual Building Trades Exhibition in 1934.[81] The New Home for Old Group was founded in 1931 by a committee of London voluntary housing societies. Its main aim was to draw public attention to the problems of slums and overcrowding and the urgent need for more and better low-rented housing. To this end, the Group periodically organised exhibitions in the 1930s, to disseminate the knowledge of methods to be utilised in rehousing and raising housing standards. The Group may have taken to advocating flats more from pragmatic considerations of the constraints of rehousing conditions in central London, but its displays of dwelling plans did show ideas and suggestions in common with the

thinking of modern architects. Thus, the full-size model of a three-bedroomed flat at the 1932 exhibition was designed 'to provide as large a living room as possible, containing a dining alcove', with the kitchen being planned 'on the American and Continental method to take up the minimum space in the flat, and to save all unnecessary steps for the housewife'.[82] In 1933, the *New Statesman and Nation,* a leading leftwing liberal journal, organised a number of housing study visits for its readers. The visits included housing schemes carried out by member societies of the New Homes for the Old Group and these elicited some favourable comments on the method of rehousing in flats from the participants.[83] The 1934 exhibition again displayed a plan of three-bedroomed flat, extolling the advantages of a well-designed balcony, as an extension of the living room, with adequate built-in flower boxes, where the family could sit out in the sun and possibly eat, or where the baby might sleep under the mother's eye, while she worked. The Group called for amenities such as allotments, club-rooms, meeting halls and playgrounds, and insisted that these facilities for 'a happy home life and a successful community life' be incorporated in new housing schemes. The Group stated:

> Vigorous agitation is still needed to ensure that the flats are to be built in urban areas and to become homes that the people can come to love.[84]

In 1936, the Cement Marketing Company held a project competition for a design of 200 working-men's flats in five-storey blocks, to be built on a 4-acre site in reinforced concrete. It offered an opportunity for modern architects to demonstrate their ideas in large-scale building projects. The winning scheme by Lubetkin and Tecton showed four rows of straight blocks running north-south, disposed at equal distance over the site (following the Zeilenbau layout made famous by Gropius), with a communal laundry placed in a separate building. Each pair of flats was to be approached by an internal staircase and had generous-sized balconies. Open space between the blocks was landscaped and provided with tennis courts, and it was indicated in the plan that the roofs of the blocks might be utilised as additional garden space.[85] The other entries by MARS members (Connell, Ward and Lucas partnership, Sergei Chermayeff) also displayed similar groupings of blocks, in contrast to some other entries employing forms of traditional courtyard layout, and provided a great measure of communal facilities.[86]

Kensal House, in Kensington, London, 'the latest and by far the most important contribution to the development of working-class housing in London',[87] was completed in 1937. The scheme was carried out by the Gas Light and Coke Company as a practical demonstration of how gas could be economically used as a fuel in slum clearance schemes under the Housing Acts. It was built to

Maxwell Fry's design, who participated as executant architect in a committee of architects in collaboration with Denby. The scheme consisted, in the main, of two parallel, five-storey blocks of different length on the north-south axis and was built on a former gas work site in reinforced concrete. The access to dwellings was by covered stair cases leading to a pair of flats on every floor. Each of the 68 flats had a semi-recessed balcony with a built-in flower box, a standardised, well-fitted kitchen equipped with a gas cooker and a gas heater supplying hot water to the sink, bath and washing copper. The gas-coke stove was provided in the living room mainly for heating purposes. This was an attempt to establish the living room and working kitchen plan (in the manner of the Frankfurter Küche) in modern flats, instead of the kitchen-living room commonly provided in more traditional working-class tenement flats. The scheme was planned as a social unit, catering for communal needs of the tenants. It provided adult and juvenile club-rooms, allotments and a nursery school ingeniously built around the curve of the circular pit of a demolished gas holder. The pit was filled up and made into a children's playground.[88] Denby called Kensal House 'the first "urban village" to be built in Britain'.[89] For Maxwell Fry, the scheme was an illustration of what he had been arguing for, namely, the synthesis of technical and social approaches to housing:

> Unless technical advance is made to contribute directly to increasing the total of human happiness, it is largely wasted.[90]

The orientation of the blocks ensured maximum sunlight to each flat. The internal staircase access was preferred to the outside galleries which '[were] un-private, draughty, barrack-like, and loved by nobody'. A type plan of the flats was devised and repeated throughout, taking advantage of standardisation and mass production of fittings. The bedrooms were made small, in order to maximise the area of the living room. Together with a 'longish' galley-like functional kitchen and a balcony, large enough to have a meal on, the architect provided a layout that would facilitate and encourage a new way of life among the tenants.[91] In its architectural language and social intent, Kensal House represented a significant achievement of modernist thinking on housing.

Concluding comments

This article has looked at some of the ideas put forward by the proponents of a new type of housing development in England during the 1930s. The ideas came mainly from architects who identified themselves with the development of modern architecture in the interwar period and were informed by modernist thinking on housing. There were differences in their approach. A somewhat vague social utopianism of Wells Coates contrasted with a strong reformist strain found in Maxwell Fry's

essentially functional and logical method or a more politically committed, collectivist solution espoused by Lubetkin and the ATO. Nevertheless, underlying their varied utterance was a firm belief that improvements in people's housing and hence the transformation of their living environment was an important social task of the day and that this gave architecture a pivotal role to play. Accordingly, these modern architects attempted to offer their skills and expertise in the service of society and, in particular, to the question of working-class housing provision. They came up with a set of fairly coherent ideas and design concepts: a self-contained residential development of modern flats, equipped with up-to-date amenities and set amid open spaces, complete with a range of communal facilities. The ideas found favour with certain sections of the voluntary housing movement. Then there were those who were critical of the sprawling suburbs and the ribbon development of houses along trunk roads. Some of them became modernists' allies, as in the case of Thomas Sharp, while his criticism of housing developments on garden city lines was taken up by modern architects and reinforced their arguments for flats. There were some other hopeful signs. By the middle of the 1930s, the students of schools of architecture, such as at Leeds, Liverpool and at the Architectural Association were starting to produce modern building designs.[92] The government's slum clearance campaign and the resulting redevelopment of central parts of towns seemingly gave added relevance to the views of modernists. In terms of actual building, however, their achievements were limited to a few isolated examples of purpose-built modern flats.

Notes and references

[1] B.S. Townroe, *Britain Rebuilding: The Slums and Overcrowding Campaigns* (London: Frederick Muller, 1936), 119. Townroe was a member of the Housing Committee of the London County Council (LCC) and a respected writer on housing.

[2] *The Times*, 7 July 1933. See also *The Times*, 18 May 1933.

[3] George Orwell, *The Road to Wigan Pier* (Harmondsworth: Penguin Books, 1962, originally published 1937),61.

[4] See, e.g. William Ashworth, *The Genesis of Modern British Town Planning: A Study in Economic and Social History of the Nineteenth and Twentieth Centuries* (London: Routledge & Kegan Paul, 1954); Anthony Sutcliffe (ed.), *Multi-Storey Living: The British Working Class Experience* (London: Croom Helm, 1974); Mark Swenarton, *Homes Fit for Heroes: The Politics and Architecture of Early State Housing in Britain* (London: Heinemann, 1981); M.J. Daunton, *House and Home in the Victorian City: Working-Class Housing 1850-1914* (London: Edward Arnold, 1983); John Burnett, *A Social History of Housing 1815-1985* (Second Edition, London: Methuen, London, 1986); Alison Ravetz (with Richard Turkington), *The Place of Home: English domestic environments, 1914-2000* (London: E & FN Spon, 1995); Mark Clapson, *Invincible green suburbs, brave new towns: Social change and urban dispersal in postwar England* (Manchester: Manchester University Press, 1998); Peter Shapely, *The politics of housing: Power, consumers and urban culture* (Manchester: Manchester University Press, 2007); Chris Allen, *Housing Market Renewal and Social Class* (London: Routledge, 2008); Stefan Muthesius and Miles Glendinning, *Towers for the Welfare State: An Architectural History of British Multi-storey Housing 1945-1970* (Edinburgh: Scottish Centre for Conservation Studies, 2017); Michael Tichelar, *The Failure of Land Reform in Twentieth-Century England: The Triumph of Private Property* (London: Routledge, 2019).

[5] Sigfried Giedion, *Space, Time and Architecture: The Growth of a New Tradition* (5th Edition Revised and Enlarged, Cambridge Massachusetts: Harvard University Press, 1976), 598.

[6] Walter Gropius, 'The Theory and Organization of Bauhaus' (originally published in German, Munich 1923), in Herbert Bayer, Walter Gropius, Ise Gropius (eds), *Bauhaus 1919-1928* (New York: Museum of Modern Art, 1938), 27-8.

[7] Walter Gropius, 'Dessau Bauhaus – principles of Bauhaus production' (originally published in German, Dessau 1926), in Frank Whitford, *Bauhaus* (London: Thames & Hudson, 1984), 206.

[8] Barbara Miller Lane, *Architecture and Politics in Germany, 1918-1945* (Cambridge Massachusetts: Harvard University Press, 1985), 65-6.

[9] Ronald Wiedenhoeft, *Berlin's Housing Revolution: German Reform in the 1920s* (Ann Arbor Michigan: UMI Research Press, 1985), chapter 4.

[10] Lane, *Architecture and Politics in Germany, 1918-1945*, 91-103. See also John Robert Mullin, 'City

Planning in Frankfurt, Germany, 1923-1932: A Study in Practical Utopianism', J*ournal of Urban History* 14, No.1 (November 1977), 3-28.

[11] Wiedenhoeft, *Berlin's Housing Revolution*, 119-20. See also Kenneth Frampton, 'The evolution of housing concepts 1870-1970', *Lotus (Milan)* 10 (1970-1), 24-33.

[12] Lane, *Architecture and Politics in Germany, 1918-1945*, 124.

[13] William J.R. Curtis, *Modern Architecture since 1900* (Second Edition, Oxford: Phaidon Press, 1987), 168-70. See also *J.J.P. Oud* (London: Architectural Association, n.d. but c. 1979).

[14] 'Citrohan 1 and 2', in *Le Corbusier: Architect of the Century* (London: Arts Council of Great Britain, 1987), 208-10.

[15] Le Corbusier, *Towards A New Architecture* (London: Butterworth Architecture, 1989, first published 1927, originally published in French, Paris 1923), 247-9.

[16] Le Corbusier, *The City of Tomorrow* (Third Edition, London: Architectural Press, 1971, first published 1929, originally published in French under the title *Urbanisme*, Paris 1924), chapters 11, 13.

[17] Lane, *Architecture and Politics in Germany, 1918-1945*, 119-22; Curtis, *Modern Architecture*, 131, 166, 175-7.

[18] On the history of CIAM, see Eric Mumford, *The CIAM Discourse on Urbanism, 1928-1960* (Cambridge Massachusetts: MIT Press, 2002).

[19] Quoted in, Curtis, *Modern Architecture*, 171.

[20] Wiedenhoeft, *Berlin's Housing Revolution*, 43-7.

[21] Walter Gropius, *The New Architecture and the Bauhaus* (Cambridge Massachusetts: MIT Press, 1965, first published, London 1935), 101-2.

[22] Le Corbusier, *The Athens Charter* (New York: Grossman Publishers, 1973, originally published in French, Paris 1943), 59-60, 65, 95-6, 102.

[23] On the MARS and the English modern architectural scene in the 1930s, see, e.g. E. Maxwell Fry, 'English Architecture from the Thirties', in Trevor Dannatt (ed.), *Architects' Yearbook: 8* (London: Elek Books, 1957), 53-6; John Summerson, 'Introduction', in Trevor Dannatt, *Modern Architecture in Britain* (London: Batsford, 1959), 11-8; Anthony Jackson, *The Politics of Architecture: A history of modern architecture in Britain* (London: Architectural Press, 1970), 22-77; Leslie Martin, 'notes on a developing architecture', *Architectural Review* 164, no.977 (July 1978), 12-6; J.M. Richards, 'Style was a dirty word: Rationalism and discipline' and Edward Carter, 'Politics and architecture: The observer looks back', *Architectural Review* 166, no.993 (November 1979), 301, 324-5; John R. Gold, *The Experience of Modernism: Modern architects and the future city, 1928-1953* (London: E & FN Spon, 1997), 78-156; Alexandra Harris, *Romantic Moderns: English Writers, Artists and the Imagination form Virginia Woolf to John Piper* (London: Thames & Hudson, 2010), 38-63,74-5,133-4.

[24] F.R.S. Yorke, 'Modern Architecture' (Letters to the Editor), *The Times*, 25 April 1933. See also 'The

MARS Group', *Architects' Journal*, 3 May 1933, 580.

[25] 'The New Homes for Old Exhibit: The MARS Contribution', *Architects' Journal*, 20 September 1934, 425.

[26] Louise Campbell, 'The MARS Group, 1933-1939', *Royal Institute of British Architects Transactions* 4, no.2 (1984-5), 69-79. For example, Campbell, after tracing MARS members' contributions in presenting the image of modern housing, notes that 'The architects…seem to have been ultimately unable to substitute a collective for an individual and competitive approach to work…Save for the Group working on the plan for London, MARS became principally a social and discussion group by the end of the decade' (ibid., 78). The *Architects' Journal*, reviewing the first MARS exhibit on housing, saw the absence of any design for buildings as 'the most notable and encouraging symptom of the right approach that characterizes this exhibition of architects' work' ('The New Homes for Old Exhibit: The MARS Contribution', 426). In fact, as a group the MARS seems inhibited from the straight-forward expression of its stylistic preferences. The 1938 exhibition catalogue, though aided by photographs and illustrations, could only call for 'an architecture founded upon actuality, upon the pattern of our daily life' in terms of housing (MARS Group, *New Architecture: An exhibition of the Elements of Modern Architecture* (London: MARS Group, 1938), 10). A critic visiting the exhibition complained: 'It was impossible to find a straight photograph of a building clearly displayed with some explanation of its function and planning' ('The MARS Exhibition', *Architectural Association Journal* 53, no.612 (February 1938), 388). For membership of the MARS, see list in MARS Group, *New Architecture*, 23.

[27] Campbell, 'The MARS Group, 1933-1939', 70.

[28] See, e.g. Sherban Cantacuzino, *Wells Coates; A Monograph* (London: Gordon Fraser, 1978); Obituary in *The Times*, 20 June 1958; J.M. Richards, 'Wells Coates 1895-1958', *Architectural Review* 124, no.743 (December 1958), 357-360.

[29] Wells Coates's statement, in Herbert Read (ed.), *Unit 1: The Modern Movement in Architecture, Painting and Sculpture* (London: Cassell, 1934), 108 [italics in original].

[30] Wells Coates, 'Material for Architecture', *Architects' Journal*, 4 November 1931, 588-9.

[31] Quoted in, Cantacuzino, *Wells Coates*, 52.

[32] Wells Coates, 'Furniture Today – Furniture Tomorrow: Leaves from a Meta-Technical Notebook', *Architectural Review* 79, no.428 (July 1932): 32.

[33] 'Modern Dwellings for Modern Needs. A Discussion between Geoffrey Boumphrey and Wells Coates', *The Listener*, 24 May 1933, 819-22.

[34] Wells Coates, 'Notes on Dwellings for Tomorrow', in Ascot Gas Water Heaters Ltd, *Flats: Municipal and Private Enterprise* (London: Ascot Gas Water Heaters Ltd, 1938), 52.

[35] Wells Coates, 'Furniture Today – Furniture Tomorrow', 34.

[36] 'Modern Dwellings for Modern Needs', 821.

[37] See Jack Pritchard, *View from a Long Chair: The memoirs of Jack Pritchard* (London: Routledge & Kegan Paul, 1984), 78-97; Obituary in *Independent*, 5 May 1992. Isokon was a company initially set up by Jack Pritchard, an 'entrepreneur', and his wife with Wells Coates, to finance the building of Lawn Road Flats. With his experience in furniture sales and interest in modernism, Pritchard believed in 'the application of modern functional design to houses, flats, furniture and fittings'. In the 1930s, Isokon commissioned furniture from renowned modern designers, among them Marcel Breuer. One of the first people to stay in the Lawn Road was Philip Sargant Florence, an acquaintance of Pritchard and an economist with wide interests including planning at the University of Birmingham, who tried to get a block of Isokon flats built in Birmingham in 1935. See Louise Campbell, 'The good new days', *Architectural Review* 162, no.967 (September 1977), 183.

[38] 'Flats in Hampstead Designed by Wells Coates', *Architects' Journal*, 20 September 1934, 409-412; Cantacuzino, *Wells Coates*, 62.

[39] Richards, 'Wells Coates', 359.

[40] E.R.S. Yorke, *The Modern Hous*e (London: Architectural Press, 1934), 28-9.

[41] Ibid., 26.

[42] Ibid., 5.

[43] Ibid., 3.

[44] Ibid., 1-3.

[45] F.R.S. Yorke and Frederick Gibberd, *The Modern Flat* (London: Architectural Press, 1937), 16.

[46] Ibid.

[47] Gropius after fleeing Nazi Germany settled briefly in England, where he went into a partnership with Maxwell Fry. See Jackson, *The Politics of Architecture*, 58-9.

[48] Yorke and Gibberd, *The Modern Flat*, 18.

[49] E. Maxwell Fry, 'The small house of today', *Architectural Review* 76 (July 1934), 20.

[50] E. Maxwell Fry, *Fine Buildings* (London: Faber and Faber, 1944), 7.

[51] E, Maxwell Fry, 'The Architect's Problem', *Architects' Journal*, 22 June 1933. 844-6.

[52] E. Maxwell Fry, 'London Housing: An Itinerant Survey of Typical Schemes', *Architects' Journal*, 17 May 1934. 713-5.

[53] Ibid.

[54] Berthold Lubetkin, 'Architectural Thought since the Revolution', *Architectural Review* 71 (May 1932), 201.

[55] Howard M. Robertson, '"High Point", Highgate Architects: Lubetkin & Tecton', *Architect and Building News*, 10 January 1936, 49-53.

[56] F.R.S. Yorke and Colin Penn, *A Key to Modern Architecture* (London and Glasgow: Blackie and Son, 1939), 48.

[57] Peter Coe and Malcolm Reading, *Lubetkin and Tecton: Architectural and Social Commitment* (London: Arts Council of Great Britain, 1981), 53.

[58] Ibid., chapter 'Lubetkin and the ATO – social commitment and political action', 44-67.

[59] Jackson, *Politics of Architecture*, 76.

[60] Architects' and Technicians' Organisation, *An Exhibition on Working Class Housing* (London: [Architects' and Technicians' Organisation], 1936).

[61] Ibid., 29.

[62] See, e.g. C. Bertram Parkes, 'Rehousing in Tenements or Cottages?' and 'Rehousing in Flats or Tenements Some Further Remarks', *Keystone* 11, no.5 (October 1935); 'Can Flats Solve the Housing Problem?', *Keystone* 11, no.6 (December 1935); H.E.F., '"Highpoint", Highgate', *Keystone* 12, no.4 (August 1936).

[63] 'Housing Standards Equipment, Room, Dwelling, Group of Blocks, Residential District Town, etc.', *Keystone*, New Series, 1, no.3 (June 1937), 11-4.

[64] W.E. Masters, 'Flats' and Colin Penn, 'The Modern Flats', *Keystone*, New Series, 2, no.3 (June 1938), 9-17.

[65] See Charlotte Benton, 'Miner improvements: The architects to the Miners' Welfare Committee', *Architectural Review* 166, no.993 (November 1979), 305-8.

[66] The outlook of the architectural profession was undergoing some change in the depression of the 1930s. The number of architectural commissions dwindled leading to fewer openings in private practice, while there was an increase in the employment of architects by local authorities and other public bodies which helped to raise the profile of their architectural work. See, e.g. John Summerson, 'Bread & Butter and Architecture', *Horizon* 6, no.34 (October 1942), 233-43.

[67] 'Architecture as a Social Service', *Keystone*, New Series, 1, no.2 (April 1937), 16.

[68] See Kathy Stanfield, 'Thomas Sharp 1901-1978', in Gordon E. Cherry (ed.) *Pioneer in British Planning* (London: Architectural Press, 1981), 150-76.

[69] He was not an initial member of the MARS, but his name appears on the list in 1938.

[70] Thomas Sharp, *Town and Countryside: Some Aspects of Urban and Rural Development* (London: Oxford University Press, 1932), 11.

[71] See, e.g. Clough Williams-Ellis (ed.), *Britain and the Beast* (London: J.M. Dent and Sons, 1938).

[72] Sharp, *Town and Countryside*, 4.

[73] Ibid., 140.

[74] Thomas Sharp, *English Panorama* (London: J.M. Dent and Sons, 1938), 80.

[75] Sharp, *Town and Countryside*, 149.

[76] Ibid., 164 [italics in original].

[77] Ibid.

[78] Sharp, *English Panorama*, 106.

[79] 'R.E. Sassoon House: Working Class Flats in St Mary's Road, Peckham, designed by Adams, Thompson and Fry in collaboration with Miss Denby', *Architects' Journal*, 29 November 1934, 824-5; *The Times*, 14 November 1934 and 17 November 1934.

[80] 'Kent House Ferdinand Street, St Pancras, NW. Designed by Connell, Ward and Lucas', *Architects Journal*, 19 December 1935, 909-13. See also Dennis Sharp and Sally Rendel, *Connell Ward and Lucas: Modern movement architects in England 1929-1939* (London: Frances Lincoln, 2008), 154-9.

[81] Campbell, 'The MARS Group 1933-1939', 72; Elizabeth Darling, *Re-forming Britain: Narratives of modernity before reconstruction* (London: Routledge, 2007), chapter 4.

[82] '"New Homes for Old" Exhibition', *Architects' Journal*, 14 September 1932, 328.

[83] See the issues of *New Statesman and Nation*, 18 March 1933, 25 March 1933, 1 April 1933 and 8 April 1933.

[84] 'New Homes for Old Catalogue of the Housing Exhibition', in *The Building Trades Exhibition 1934: Official Catalogue* (London: [Building Trades Exhibition], 1934), 401.

[85] 'Cement Marketing Company's Competition for Working-men's Flats', *Architects' Journal*, 21 March 1935, 437-51.

[86] 'Competition for Working-men's flats: The Commended Designs', *Architects' Journal*, 28 March 1935, 482-5; Sharp and Rendel, *Connell Ward and Lucas*, 160-1.

[87] 'Kensal House Ladbroke Grove', *Architect and Building News*, 26 March 1937, 381-4. See also Stirling Everard, *The History of The Gas light and Coke Company 1812-1949* (London: Ernest Benn, 1949), 352.

[88] 'Kensal House', *Journal of the Royal Institute of British Architects*, 3rd Series, 44, no.10, 20 March 1937, 500-5.

[89] Elizabeth Denby, 'Kensal House, An Urban Village', in Ascot Gas Light and Water Ltd, *Flats*, 61.

[90] E. Maxwell Fry, 'Kensal House', in Ascot Gas Light and Water Ltd, *Flats*, 56.

[91] Ibid., 56-60.

[92] Jackson, *Politics of Architecture*, 59.