Incremental Urbanism

Inspirations, Concepts, and the Changing Role of Architects

Tobias Baitsch, LASUR


BANCO NAL. HIPOTECARIO

UNIDAD HABITACIONAL NONOALCO TLATELOLCO

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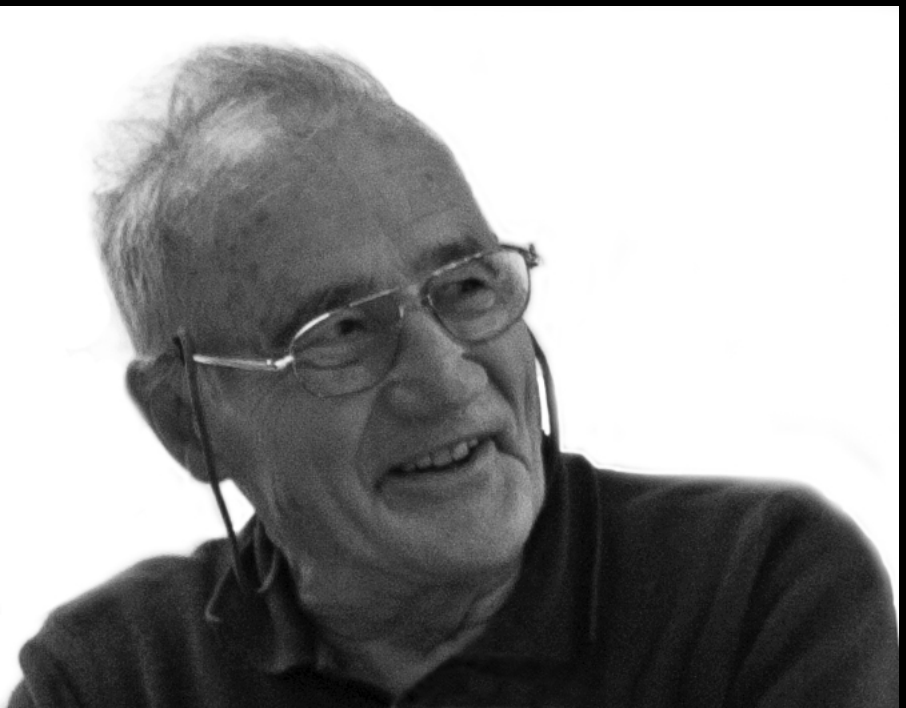
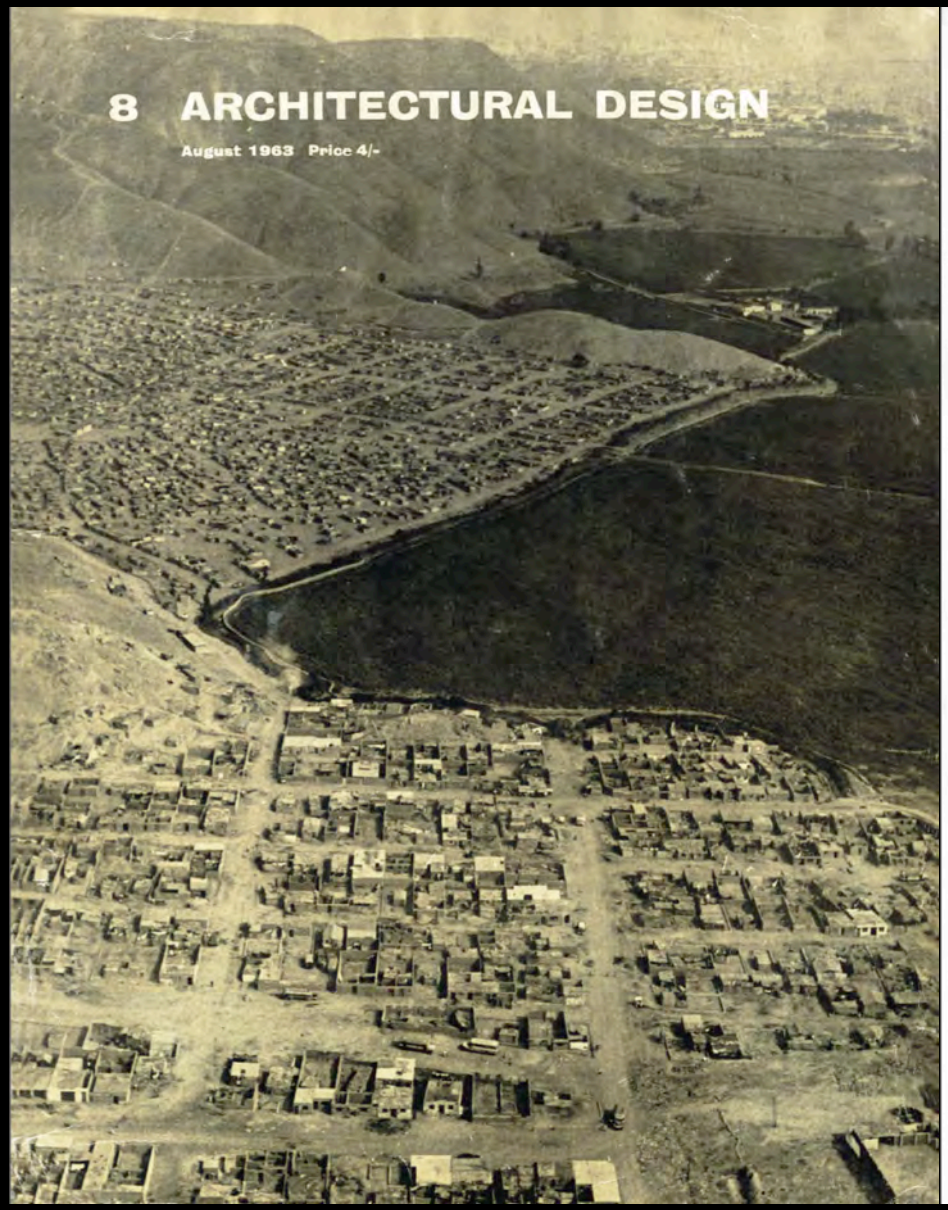
John FC Turner





This number of *Architectural Design* describes the problems that face South American countries in the field of housing: problems made daily more acute by population increases and movements causing an 'urban explosion' whose only precedent is that suffered by Europe in the second half of the nineteenth century.

John Charlewood Turner, who has prepared the number, is an English architect who has worked in this field in Peru for the past six years, employed by various government agencies. Throughout the number he puts forward the vital need for housing agencies to come to terms with popular resources and efforts if significant improvements in housing conditions are to come about. He illustrates this theme with work from Venezuela, Chile and Colombia as well as Peru, and in the concluding section makes what is probably the first formulation of an architect's approach to this problem in political, social and personal relations.

In addition to the individuals and organizations that have contributed material to the number, acknowledgement should be made to the following persons for their help in its preparation:

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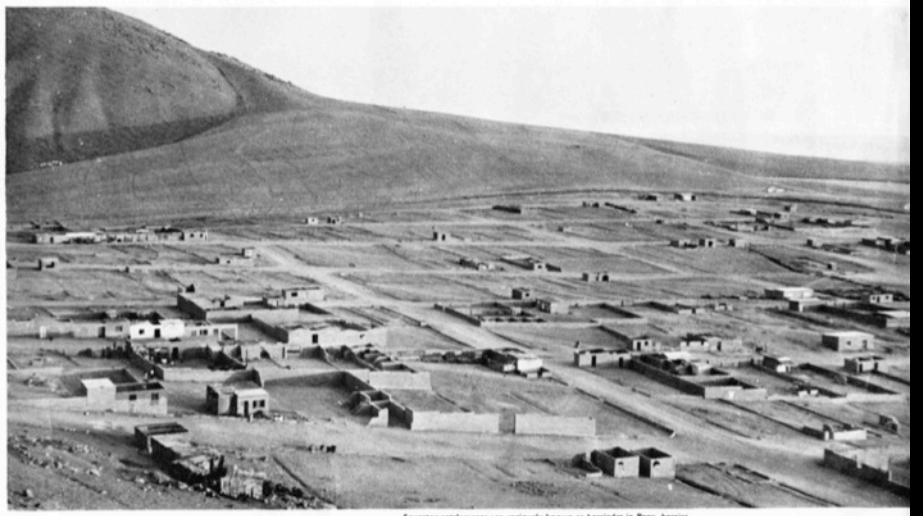
Except where otherwise stated, all the text has been written by John Turner.

All values are given in US dollars.

DWELLING RESOURCES IN SOUTH AMERICA

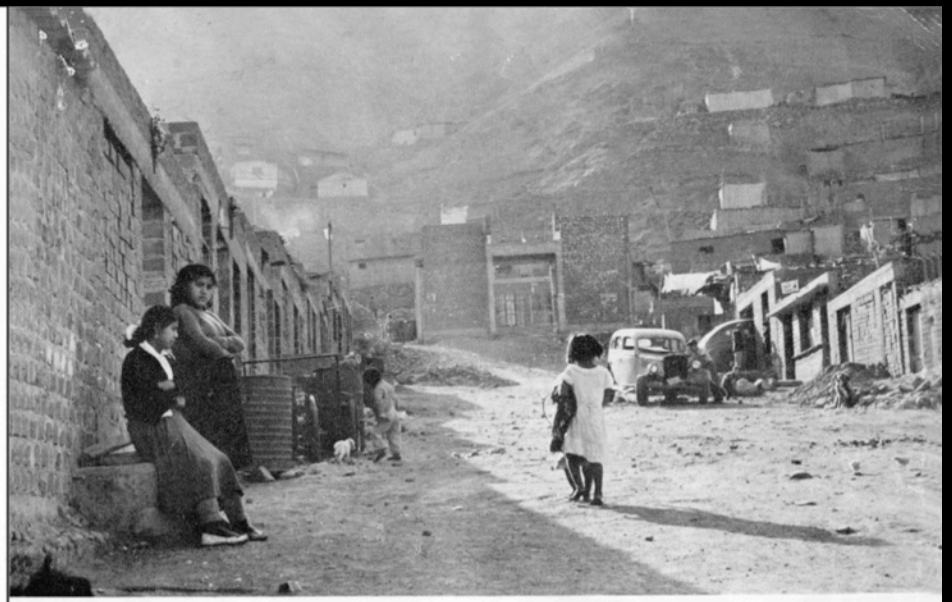
Barriada 'La Tablada,' Lima, Peru
Photo John Turner



Squatter settlements are variously known as *barriadas* in Peru, *barrios* in Colombia, *callampas* in Chile, *ranchos* in Venezuela, *villas miserias* in Argentina, and *favelas* in Brazil.

A hillside 'barriada', Lima
Photo Rojas, by courtesy of the Junta Nacional de la Vivienda (JNV)

A modern slum in Lima
Photo John Turner



Above: main street in a Lima 'barriada'
Below: peasant houses at Vicos, Sierra of Ancash, central highlands
Photos William Mangin

Urbanisation case history in Peru

William Mangin

There have been big cities in Peru for at least five hundred years and they have grown largely through migration from the hinterland. The tremendous population growth in Peru, together with the centralization of social, political, economic and cultural rewards in Lima, the capital city, has led to recent intensified migration from the provinces to Lima. It is safe to say that at least a million of Lima's two million people were born outside the city. The increase in the numbers of migrants to the city and the subsequent dramatic resettlement of many of them in 'unaided self-help' squatter settlements, 'barriadas' on the banks of the Rimac River and on hillsides surrounding the city, have drawn considerable attention locally and abroad, and for the first time have made many Peruvians aware of the situation. The city has probably grown in the past in much the same way, but the magnitude and the visibility of the recent influx make it seem to be a new phenomenon. The migrants come from practically all regions and all social classes and ethnic groupings in the country.

The composite case-history presented overleaf illustrates some of the human problems encountered in migration to the city and locating and housing a family in a squatter settlement. The couple referred to as Blas and Carmen do exist and their story of moving to the barriada is true.

Some of the details of slum life and house construction in the barriada were drawn from the experiences of other migrants in Lima. None of the people referred to in the text appear in the photographs but the locales are those referred to in the article.

continued overleaf

Urbanisation case history in Peru

continued from previous page

Fortunato Quispe, a Quechua-speaking Indian from an hacienda in the mountains of Peru, contracted himself out to a coastal sugar plantation for a year's work in order to earn some cash for a religious festival.

After a year on the coast he took a wife and settled down on the plantation leaving his mountain home for good. He and his wife had seven children. When their oldest, Blas, was 18, he found himself with no job, no possibility of schooling, and under pressure from his father to leave and get a job. The small two-room adobe company house was hardly big enough for the parents and the seven children and the sugar company was mechanizing the plantation even as its resident population expanded rapidly. Blas, who had spoken mainly Quechua as a child, was, at 18, fully at home in Spanish. He had visited Lima, the capital city, twice, was an avid radio and movie fan and considered the life of the plantation town dull.

Six months after his eighteenth birthday he and his friend, Antonio, took a truck to the Lima valley and took a bus from the edge of the valley to the city. Having been there before, they knew how to get to the house of an uncle of Antonio's near the wholesale market district. The uncle had heard via the grapevine that they might come. He was renting a three-room house on a crowded alley for his own family of seven, and his maid and her child slept in the small kitchen. He was only able to put them up for one night. They moved into a cheap hotel and pension near the market, and through Antonio's uncle were recruited for a provincial club, Sons of Paucartambo, the native mountain district of Antonio's and Blas' father. Much of their social activity is still with members of the club, and their first orientation to life in Lima was from club members.

Antonio went to work for his uncle, and Blas, who had been robbed of all his clothing from the hotel, took a job as a waiter and clean-up man in a modest boarding house catering to medical and engineering students. He worked six-and-a-half days a week in the pension, taking Thursday nights and Sunday afternoons off. During his first year he saved a little money. He impregnated a maid from a neighbouring house, Carmen, and agreed to marry her sometime. Meanwhile, they rented a two-room, one-storey adobe house in a large lot not far from the boarding house. The lot was packed solidly with similar houses and the walks between them were about five feet wide. They had filthy, constantly clogged common baths and water taps for every ten houses and the

Above, top: Huaraz market, Sierra of Ancash in the central highlands
Photo William Mangin

Above: company housing on a coastal plantation
Photo John Turner

Left: migrant family in Lima market area

Below: street in Lima market area
Photos William Mangin

rent was high. They paid extra for electricity and for practically non-existent city services.

Through a relative of one of the students Blas got a better job as a waiter in a rather expensive restaurant. In spite of the distance and the extra money spent for transportation it paid to take the job. With the arrival of a second child plus a boost in their rent, they found themselves short of money even though Blas' job was quite a good one for a person of his background.

Carmen, Blas' common law wife, had come to Lima at the age of fourteen from the southern highland province of Ayacucho. She had been sent by her mother and step-father to work as a servant in the house of a Lima dentist, who was also a land-owner in Ayacucho, and Carmen was to receive no pay. The dentist promised to 'educate' her but, in fact, she was not only not allowed to go to school but was rarely allowed outside the house. During her third year with the dentist's family her mother, who had left her stepfather in Ayacucho, rescued her from the dentist's house after a terrible row. Her mother then found a maid's job for Carmen where she was paid. Carmen worked in several private houses

in the next few years and loaned a large part of her earnings to her mother. Blas was her first serious suitor. Previously she had had little experience with men and when Blas asked her to come and live with him after she became pregnant, she was surprised and pleased.

In her own crowded house with Blas and their son she was happier than she had been since her early childhood with her grandmother. Although her work was hard, it was nothing like the work she had done in the houses in Lima. They were poor but Blas had steady work and they ate better than she had in any of her previous homes. Her infrequent arguments with Blas were usually over money. He had once hit her when she had loaned some of the rent money to her mother, but, on the whole, she considered herself well-treated and relatively lucky in comparison with many of her neighbours.

She did not have too much to do with her neighbours, mostly longer-time residents of Lima than she, and she was afraid of the Negroes in the area, having been frightened as a child in the mountains by stories of Negro monsters who ate children. She found herself being drawn into arguments over petty complaints about children trespassing, dogs barking and messing the sidewalk, husband's relative success or failure, mountain Indian traits as opposed to coastal Mestizo traits, etc. She was mainly occupied with her son and her new baby daughter, and the constant arguing annoyed Blas more than it did Carmen. Blas had also been disturbed by the crowded conditions. There was no place for the children to play and the petty bickering over jurisdiction of the small sidewalk was a constant irritant. Thievery was rampant and he had even lost some of his clothes since they had to hang the washing outside above the alley. In Lima's damp climate, it often takes several days to dry clothes even partially.

He had been thinking of moving and, although Carmen was settled into a more or less satisfactory routine, she was interested as well. They carried on for another year and another child without taking any action. When their landlord told them that he was planning to clear the lot and build a cinema within six months, they decided to move. A colleague of Blas' in the restaurant had spoken to him about a group to which he belonged. The members were organizing an invasion of state land to build houses and they wanted fifty families. The group had been meeting irregularly for about a year and when Blas was invited they had forty of the fifty they sought.

The waiter's group came mainly from the same central highland region and their spokesman and leader was a bank employee who was also a functionary of the bank employees' union. The other major faction was a group of career army enlisted men, including several members of a band that plays at state functions, who were stationed near the proposed invasion site. About half of the group had been recruited as Blas was. Blas himself recruited a neighbour and another family from the Sons of Paucartambo, to which he still belonged.

They met a few times with never more than fifteen men present. They were encouraged by the fact that the government seemed to be tolerating squatter invasions. Several earlier invasion attempts had been blocked by the police and in many barriadas people had been beaten, some shot, and a few killed. The recent attitude, in 1954, seemed tolerant, but under a dictatorship, or under any government, the law is apt to be administered whimsically and their planned invasion was illegal. Another factor pointing to haste was the loss of seven of their families who had found housing some other way. Blas was one of those suggesting that they move fast because his eviction date was not far off.

Many barriada invasions had been arranged for the eve of a religious or national holiday. Their invasion site was near the area used once a year, in June, for a grand popular folk-music festival, so they decided to wait until that was over. The next holiday was the Independence Day vacation, July 28th, 29th, 30th; so they picked the night of the 27th. It would give them a holiday to provide a patriotic aura as well as three days off from work to consolidate their position. They thought of naming their settlement after the dictator's popular wife, but, after taking into account the vicissitudes of current politics, they decided to write to her about their pitiful plight, but to name the place after a former general-dictator, long dead, who freed the slaves.

A letter was drawn up for mailing to the dictator's wife and for presentation to the press. The letter stressed equally their respect for the government and their abandonment by the government. They had no hesitation about wringing the most out of the clichés concerning their status as humble, abandoned, lost, helpless and disillusioned but always patriotic servants of the fatherland.

During the last month word was passed from the active meeting-goers, still never more than 20 or 25, to the others and preparations were made. Each family bought its own straw mats and poles for the house, and small groups made arrangements for trucks and taxis. Each household was asked to get a Peruvian flag or make one of paper. No two remember the details of the invasion the same way, but about thirty of the expected forty-five families did invade during the night. A newspaper photographer was notified by the invaders and he arrived about the time the houses were being finished. The members had discussed previously what lots they would take, and how the streets were to be laid out and there was very little squabbling during the first day. By early morning when the police arrived there were at least thirty one-room straw houses flying Peruvian flags and the principal streets were outlined with stones.

continued overleaf

Above: access alley in a Lima slum

Below: organizing committee of a 'barriada'.
Photos John Turner

Above: sales yard for Lima 'barriada' house elements; mats and poles for the structure
Photo William Mangin

Below: 'barriada' El Ermitaño, Lima, at early stage

Bottom: interior of a straw shack at El Ermitaño
Photos E. Levitus

continued from previous page

The police told them they would have to leave. A picture and story appeared in two papers and by the 30th of July about twenty or thirty more families had come, including some of the old members. A few men, with the help of friends and relatives and, in at least one case, paid workers, had built brick walls around their lots. These families and a few other early arrivals, most of whom are still in the barriada in 1963, proudly refer to themselves as the original invaders and tend to exaggerate the opposition they faced. They were told to leave several times but no-one forced them. A resident, not one of the original invaders, was killed by the police in 1960 during an attempt to build a school on government land. The unfavourable publicity caused the government to desist and the residents cut a lot out of the hillside and built a school.

Blas and Carmen picked a lot about fifteen by thirty metres on the gradual slope of the hill on the principal street. The lot was somewhat larger than most subsequent lots, an advantage of being an original invader.

Blas and some friends quickly expanded the simple invasion one-room house to a three-room straw mat house and they outlined the lot with stones. He worked hard on Sundays and some nights, sometimes alone, sometimes with friends from the barriada or from outside. He soon managed to get a brick wall six-and-a-half feet high round his property.

Many of the residents of barriadas hurry to erect the walls around their lots and then take anywhere from one year to five or ten to finish the house. After about a year of working on the lot and making his 'plan', Blas decided to contract a 'specialist' to help him put up walls for four rooms. He paid for the materials brought by the 'specialist' and helped out on the job. When the walls were done he roofed the rooms with cane, bricked up the windows and put in cement floors. With his first pay cheque, after finishing paying for the walls, Blas made a down payment on a large, elaborate cedar door costing about $45. With the installation of the door and wooden windows they finally felt like home-owners. They even talked of getting formally married.

About two years later, after a particularly damp winter during which his children were frequently sick, he decided to hire another 'specialist' to help him put on a concrete roof. He hired a neighbour who had put on other roofs and he found out that the first 'specialist' had sold him faulty cement and had also erected the walls in such a way that it would be difficult to put on a roof. It took considerable money, time and energy to rectify the mistakes and put on the roof, but when it was done it was a good job and strong enough to support a second floor some day. Meanwhile a straw mat room has been erected on the roof and Blas helps out with the houses of friends and neighbours against the day he will ask them to help with his second floor.

Skilled bricklayers and concreters abound in barriadas and the bulk of the construction in these places is cheaper than on contracted houses. Much of it is done through informal mutual aid arrangements and when contractors are hired they are generally very closely supervised. There is considerable cheating by contractors on materials and many of the specialists hired for roofing and electrical and plumbing installations are not competent. Transport of materials is often expensive but the personal concern of the builder often results in lower prices at purchase. Some barriadas have electricity from the central power plant and public water; the one in this story does not. The front room shop combination they have in their house is not only fairly common in barriadas but throughout the provincial area of Peru.

Their principal room fronts on the street and doubles as a shop which Carmen and the oldest children tend. Blas is still a waiter and they now have five children. The saving on rent and the income from the shop make them considerably more prosperous than before, but, in spite of their spectacular view of the bright lights of the centre of Lima some twenty minutes away, Carmen has never seen the Plaza San Martín and has passed through the central business district on the bus only a few times. She has never been inside the restaurant where Blas works. She gets along with most of her neighbours and has the company and assistance of a fifteen-year-old half-sister deposited with her by her mother.

Blas and Carmen have a television set which runs on electricity bought from a private motor owner and they are helping to pay for it by charging their neighbours a small amount to watch. It also brings some business to the store.

Carmen and Blas bemoan the lack of sewage disposal, running water and regular electricity in the barriada and they complain about the dust from the unpaved streets.

They are also critical of the ramshackle auxiliary bus which serves them, but, on the whole, they are not dissatisfied with their situation. They own a house which is adequate, Blas has steady work, their oldest children are in school, and Blas has been on the elected committee that runs barriada affairs and feels that he has some say in local government. Since local elections are unknown in Peru the barriadas' unofficial elections are unique. The committee passes judgement on requests from new applicants to settle in the barriada and cut new lots out of the hillside. They also decide on requests to sell or rent. Renting is against the rules of the association. Another important function is presenting petitions and requests to various government ministries for assistance. Until 1960 barriada residents had no legal basis for their ownership of lots. Any recognition by the government in the form of assistance or even taxation was an assuring sign. In 1960 the congress passed a law saying, in effect, that what could not be changed might as well be made legal, and residents of barriadas are to be given their lots. As of 1963 a few land titles had been given out by the government, but the people have been buying and selling for years with home-made titles.

The committees are also concerned with internal order. Barriadas are ordinarily quiet places composed mainly of hard-working family groups, but the public image is one of violence, immorality, sloth, crime and revolutionary left-wing politics. Barriada residents are quite sensitive about this and the committees try to screen out potential trouble makers and control those present. They also try to get as much publicity as possible for the productive work done by barriada people.

The experience of this couple is probably happier than that of the average family but is certainly well within the 'typical' range. They feel, in comparison to people like themselves and in terms of their own aspirations, that they have done well. When asked what they would do if they acquired a large sum of money, they both answer in terms of improving their present property and educating their children. There is some resentment of the children, and Blas beats the oldest boy for not doing well in school, and all five children are bedwetters, but they give the impression of a happy family and, although Carmen cried during several interviews, they smile frequently and seem to be getting along. Carmen speaks some Quechua with her neighbours and her half-sister, and has actually improved her Quechua since coming to the barriada. Spanish is the principal language, however, and neither she nor Blas have any strong interest in their children learning Quechua.

The children themselves learn some Quechua but they speak Spanish with their peers, and in a group of children it is difficult to distinguish those of recently arrived near-Indian migrants from those of the most *Criollo* coastal families. There is a certain amount of antagonism among the adult barriada dwellers over race, cultural difference, politics, and place of origin. The children, however, are strikingly similar in attitude and have very little of the mountain Indian about them.

House of a founder member of a 'barriada', Lima
Photo William Mangin

The situation of Blas and Carmen is similar to that of many others. They have some friends, some relatives and some income, but they could be ruined by a loss of job or any chronic illness of Blas, and they are aware of it. If there is a potentially disruptive factor in their lives it is that the high aspirations they have for their children are vastly unrealistic. They are sacrificing and plan to sacrifice more for the education of the children, but they overrate the probable results. They say they want the children to be professionals, doctors, teachers, people with comfortable lives, and in this they are similar to most interviewed barriada families. But it is highly unlikely that they will be, unless there are monumental and rapid changes in Peru.

When the children come to this realization they may fulfil the presently paranoid prophecy of many middle and upper class Peruvians who see the barriada population as rebellious and revolutionary.

Aerial view of a 'barriada'
Photo A. Rojas, by courtesy of the JNV

Pampa de Comas barriada, Lima, in 1962
Photo Alberto Rojas. Courtesy JNV

Lima barriadas today

The unaided self-help solution: a demonstration of the common people's initiative and the potential of their resources

Pampa de Comas, the built-up area in the photograph above, is a squatter settlement with a present population of about 30,000. It is part of the Caraballo group of barriadas which has a total population of about 100,000. Comas was the first to be established in this area; the initial invasion was carried out in 1957 by a group of families evicted from a slum in the centre of Lima in order to make room for an office and apartment block which, as a matter of fact, is still largely unlet.

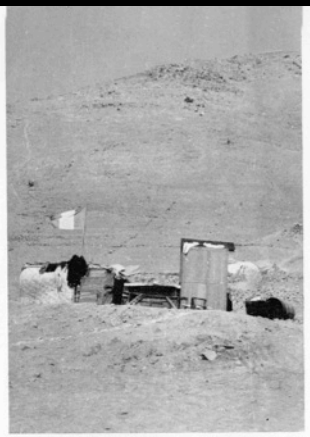
No positive government intervention was made until 1961 (this is described on page 377) and the entire development was organized and carried out by spontaneously formed associations of lower-income blue- and white-collar workers along with their families in much the same way as that described by Mangin on page 366. The majority of the dwellings in Comas are in the second and third stages of development. There are no public utilities (though these are now being installed) but there are a few schools and other basic community facilities.

The un-built-up area in the lower part of the photograph is a legal, commercially financed, speculative development complete with all public utilities and with made-up roads.

Pampa de Comas is typical of the Peruvian squatter settlements in which 8–9 thousand people live at the time of writing. Other types are illustrated in the photographs opposite. On page 365 we show the type which has grown on the hillsides near the centre of Lima in much the same way as the 'ranchos', 'callampas' and 'favelas' have grown up around

Stages of settlement: invaders—squatters—city dwellers

Below : air views of first stage of settlement of barriada land after invasion by squatters. The huts (left), of cane matting and poles, are a first declaration of land occupation
Photos John Turner



Left : pictures showing four stages in the building of a house. Reading from top to bottom—Stage one : cane matting tent and the family's belongings form a temporary home; photograph taken one month after the invasion of Pampa el Ermitaño. Plots have already been marked out, probably 'unofficially' and prematurely
Photo John Turner

Stage two : once the definitive plot has been allocated, its possession and the family's privacy is secured by the construction of the enclosing wall in which it—or a caretaker—may live for several years before building a permanent house
Photo John Turner

Third stage : the ground floor is fully finished, as a general rule, before the first floor is started. As yet, there are no public utilities—water is delivered by lorry and deposited in the drums. Electricity from local generators is sold at about $1.40 monthly for one 60-watt bulb and one radio six hours daily. Water costs about $0.15 per 50-gallon drum
Photo E. Levitus

Fourth stage : house completed, with first floor and full public utilities. This house was recently finished and has taken about 20 years to build
Photo John Turner

Barriada integration & development

A government programme in San Martín, Lima

Comas is an example of the unaided self-help solution which, it can be fairly alleged, is a result of a *laissez-faire* urban development policy. All that the governments of the time did was to make, perhaps deliberately ineffective, attempts to resist the invasions when they took place. But if, as in the Peruvian case, the major part of urban development is, in fact, carried out by these unaided or help-yourself methods, then something has to be done about it if there is not to be a total collapse of organized city development.

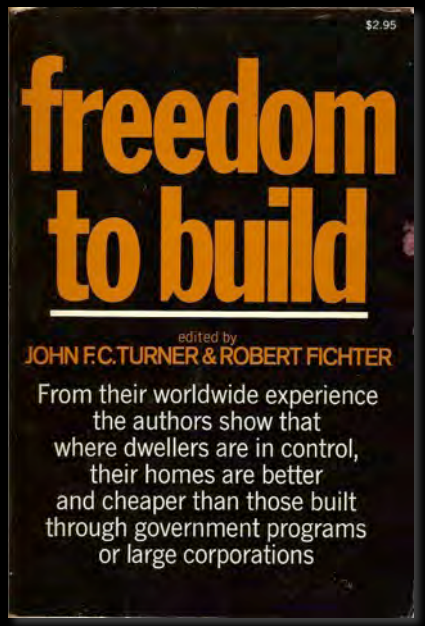
Today this is generally admitted, and more and more attention is being paid to the integration and completion of the *barriadas* and to the development of projects that anticipate and canalize the forces that build them. These pages illustrate the first sequel to the recognition of the facts of urban development: the integration of the squatter settlements.

Uneasiness over now old-fashioned paternalistic assumptions and interpretations of the housing problem and the government's role, came to a head through the publication of a white paper on housing in Peru by an all-party commission of national experts in 1958. This presented the public, as well as administrators, with a dramatically gloomy picture of the situation and it succeeded in shocking legislators into effective, if not immediate, action. Early in 1961 a historic law was passed for the 'Remodelling, Sanitation and Legalization of the Marginal Developments' and, by the end of the same year, a considerable amount of money had been obtained from the treasury and from the Inter-American Development Bank to carry out works in fulfilment of the law. In the meantime the herculean task of surveying and investigating the social and physical status of well over 100,000 already established *de facto* properties was got under way.

At the time of writing, mid-1963, water and drainage installations serving 123,000 have been started and are due for completion by 1964, public water supply (for areas where drainage is not yet a practical or economic proposition) has been installed to serve a further 142,000, and electric light and power serving 265,000 in five cities will have been completed by 1964. Several of the major areas have been made into urban districts with appointed councils (no local elections have been held, officially, in Peru since 1922).

In addition to these works a large programme is now being developed to enable the owners to finish uncompleted houses. It is still too soon to say how long the average barriada dweller takes to build his house. His own estimate is about ten years for a properly finished one—with no credit or technical assistance. With credit and a minimum or no technical assistance he can build a house in six months, and finish the typical half-completed structure in two or three months.

In order not to inhibit traditional efforts and investments, to cut the losses of idle investments (in incomplete and therefore unused structures), and to maintain the principle of helping him who helps himself(most), the value of the loans made in this programme is kept to the minimum calculated necessary to finish the average incompleted house—about $500. Enough, that is, to roof the walls built by the owner and to put in the doors, windows and installations. Initially the loans were made in kind, but the problems of obtaining, distributing and, above all, accounting for materials in small quantities proved too much for an economic administration; loans are now made on the supervised credit principle, in small successive quotas of cash on the completion of each preceding stage. This system gives full rein to the initiative and organizing capacity of the participants and these resources have shown themselves to be of even more value than their own personal labour.

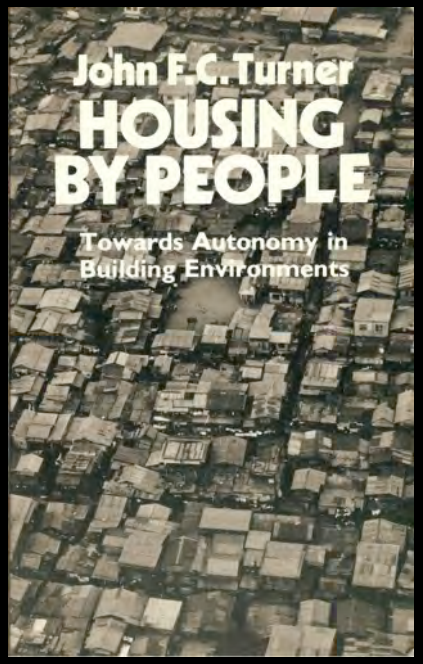


Freedom to Build

Dweller Control of the Housing Process

Turner, John F. C., and Robert Fichter, eds. New York: Macmillan, 1972.

Chapter: Housing as a Verb, p.: 148 – 175



Housing by People

Towards Autonomy in Building Environments

Turner, John F. C. New York: Pantheon Books, 1977.

Criticizing Slum Clearance

“It is a black jock if we destroy houses of slum dwellers in order to house them”

Reason of failure:

- there is no will and commitment
- often not enough resources
- not enough flexibility to provide the right kind of shelter
- do not recognize the social cost of mass housing projects
- projects do not overlap with priorities of dwellers resulting in too expensive units for the intended beneficiaries.

Part of the Condevilla Señor project April 1963, six months after occupation. The back-to-back provisional dwellings, built and sold to the occupants by the agency, are bamboo and cane mat structures plastered with mud and built in the U of the permanent enclosing wall at the bottom of the plot. Provisional drinking-water standpipes are provided at intervals (bottom right hand corner)

Minimal government-aided settlements

Valdivieso and Condevilla Señor barriadas, Lima, Peru

The 1961 law designed to integrate the barriadas into the framework of society and the city, mentioned in the preceding section, had one serious defect. It was designed to deal with existing barriadas, but it did not make any provisions for their future growth or control. Legally, barriadas established after September 1960 could not benefit from this law; for it had been assumed that, from the date that the law was passed, the authorities would be able to prevent the creation of new barriadas. In this sense the law was a dead letter before it was even signed, as one major barriada, Pampa de Cuevas, was founded in December 1960 and is now about as highly developed as its neighbour, Comas. And, all over Peru, barriadas have continued to spring up as before, if not even more rapidly than ever.

A secondary problem contemplated by the original law has pointed the way which is now being followed up: a number of barriadas are, as mentioned above, slums which cannot be improved. These have to be eradicated and their inhabitants moved elsewhere; the agency was empowered to acquire land near the city to resettle the families affected. As might be expected, the inhabitants of 'slum' type barriadas are poorer than most and the payment for this new land, whose cost had to be recovered by the agency, and for services and a minimum dwelling, was impossible for many within the period the government could afford to offer. The original solution, therefore, was to provide an absolute minimum within the means of almost all the families—that is, a plot of land 1600 sq. ft. in area, a provisional dwelling within the U of the permanent walls (built by the agency) at the bottom of the plot, and drinking water standpipes near each site; but no drainage, roads, pavements nor electricity. This 'planned squatter settlement' turned out to be a success with the people themselves (except for the form of the provisional house). The system coincides with the traditional and economically logical process of the barriadas themselves—but with very important improvements: the lay-out is far better, the plots more regular, there is a minimum supply of drinking water at the start, so that it doesn't have to be brought from dubious sources by tankers which sell it by the 50 gallon drum for anything between a shilling and half-a-crown (15 to 35 cents US), and the development will be completed, eventually, and at a lower cost, thanks to proper initial planning. Also, those who can start to build their permanent house are given plans and technical assistance from the start. Thus the future owner obtains three important advantages: his financial obligations are kept within his means as he can limit his expenditure to the essentials in order of priority, his investments are kept within economic limits through technical assistance, and their ultimate value is guaranteed by the planning and controls exercised by the agency.

This system was taken a step further when the government agency managed to control the invasion of the area now known as Tahuantinsuyo (see map on p. 364), a development as yet without services of any kind (though these are now financed) for 4000 plots. The invasion was, in fact, recognized, but the invaders were persuaded to adjust to the new plan and to accept the fact that the agency would control further allocation of plots and all future development. The final step, of course, is for the government to adopt this system as a general policy, acquiring land on the necessary scale and allowing its occupancy with an absolute minimum of utilities and then following up with the full set once the occupiers are well enough established—that is, when the majority have built at least a minimum house (for which they might need credit) and are sufficiently well off economically to pay the extra cost of domestic water supply and water borne sewage disposal.

If, as is suggested in the conclusions on p. 389, the government's real job, in the housing field, is to direct and co-ordinate existing forces and resources (and not to abandon them to create havoc or attempt to replace them), then government agencies must work along with those forces accepting existing values and priorities wherever these coincide with the logic and demands of the situation.

NOTE: In the case of the barriadas Valdivieso and Condevilla Señor, public utilities are now being installed—before most of the inhabitants have started their permanent dwellings. This is partly due to pressure from international financing agencies which share the commonly held notion that public utilities must, at all costs, be installed before building begins.

Right: part of San Martin barriada in foreground (note design of dwellings with reference to remarks in the conclusions and on the preceding page) with Valdivieso project in background

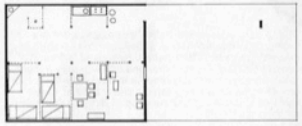
Right, below: a house under construction in the Valdivieso project: the 'front' wall is, in reality, the back wall of the future house—the family has completed the enclosure as a first step, thereby giving themselves (barring helicopters) a greater degree of privacy, security and comfort (freedom from dust and breezes)

Photos John Turner

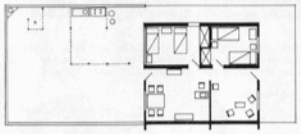
Below: plans showing the stages of growth of a house

The sequence illustrated is an interpretation of the system suggested by the projects illustrated on this page and which would avoid the major drawbacks of the form employed. Many of the provisional houses provided by the agency in the Valdivieso and Condevilla Señor projects have been converted into permanent structures by the replacement of the front bamboo wall with a brick one; the owners are loath to part with what is, to many of them, a better structure than they have ever lived in before and for which they have paid, for them, a large sum of money. Consequently permanent back-to-backs have been created, though inadvertently.

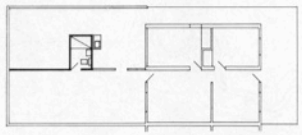
Stage 1
At first a permanent masonry enclosing wall is built by the financing agency, together with public drinking-water standpipes and, if possible, electric light (for security and night-time building work as well as to satisfy the demand for this service which is stronger, very often, than for a laid-on water supply). Within the enclosure the family can erect, at very little cost and in a few hours, a minimum shelter from cane mats and bamboo poles.



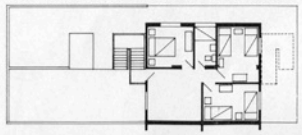
Stage 2
Once installed in its provisional dwelling the family can proceed to build the first stage of its permanent house; being on-site the able-bodied members can lend a hand in any spare time they may have and the family can supervise any hired labour constantly. In this way the family is free to make a maximum contribution in the building of the simplest parts of the construction itself—an advantage lost with the 'shell' house solution.



Stage 3
Once the basic minimum house is built, and the extra financial strain has eased, the family can afford, and will anyway demand, the installation of laid-on water and drainage. The cost of the second stage of the development—secondary water mains and connections, sewers, pavements and roads—is a considerable part of the total cost, especially if the house is built by aided self-help methods. For a majority of families in many areas it would be financially impossible for them to bear the cost of full public utilities and the construction of a minimum house at the same time.



Stage 4
Finally, a first floor can be added, if required, with internal private access or with direct access from the street should the owners wish to rent the second floor—a very common and socially desirable form of investment which is widely practised and which should be encouraged.



Key concepts of site and services policies and projects

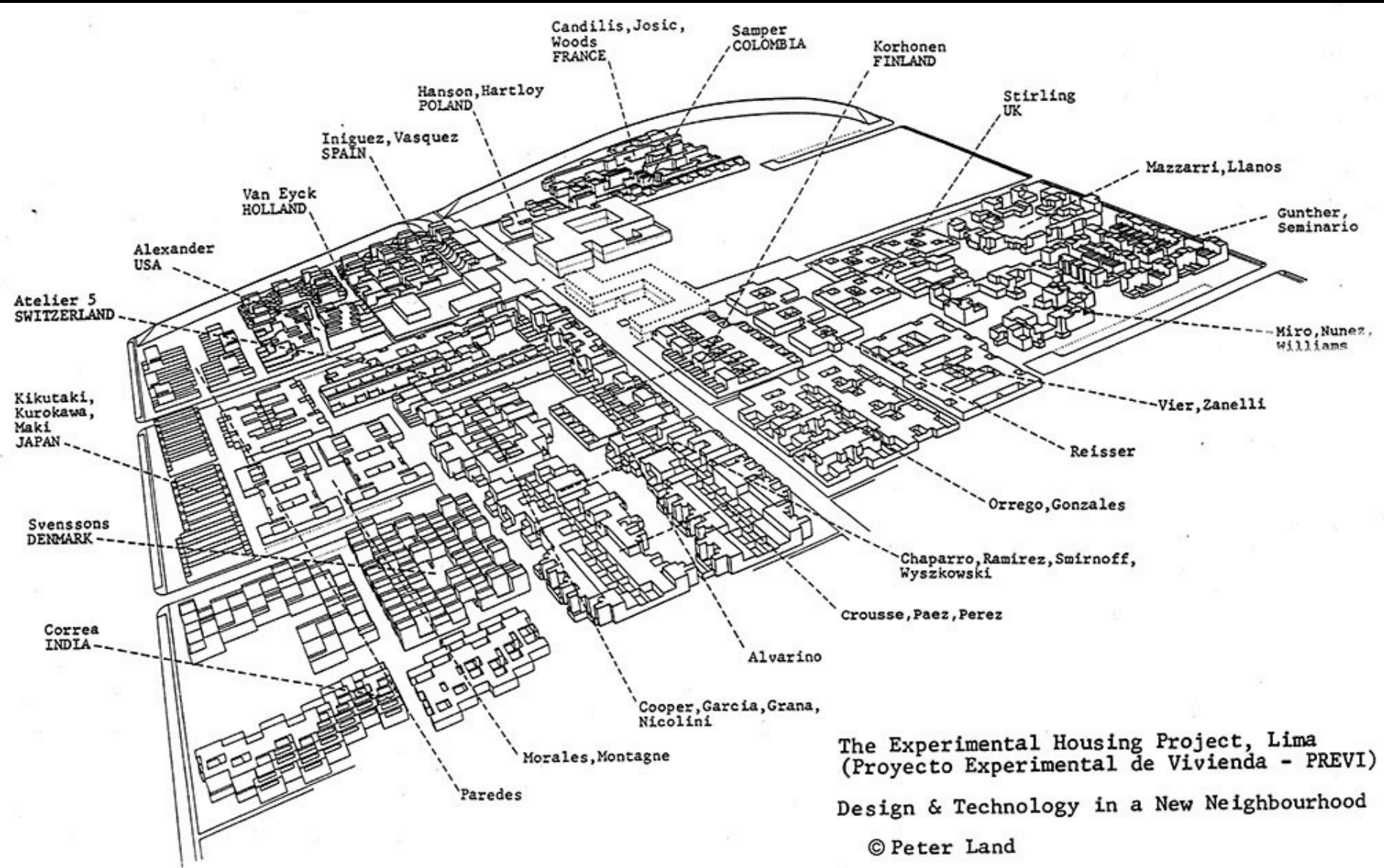
- Site:
  Provision of Plots of land (ownership, lease tenure)
- Service:
  Minimum of essential infrastructure (water, sewage, electricity, roads)
- Formalization of urban development: Taking out the “squatting” of slums

Advantages and challenges of site and services

\+
- People driven
- Enabler instead provider
- Partner

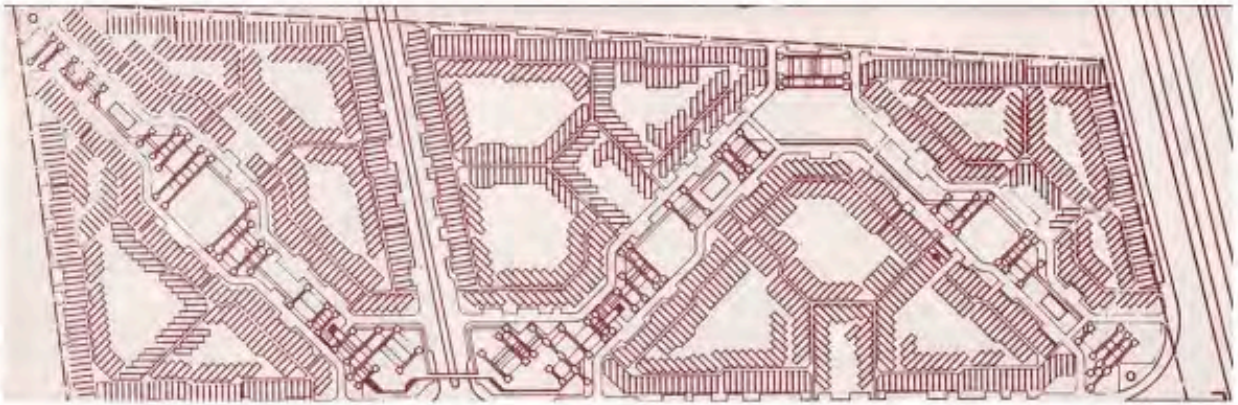
—
- Location
- Bureaucratic
- Delay
- Standards
- Cost Recovery

Proyecto Experimental de Vivienda

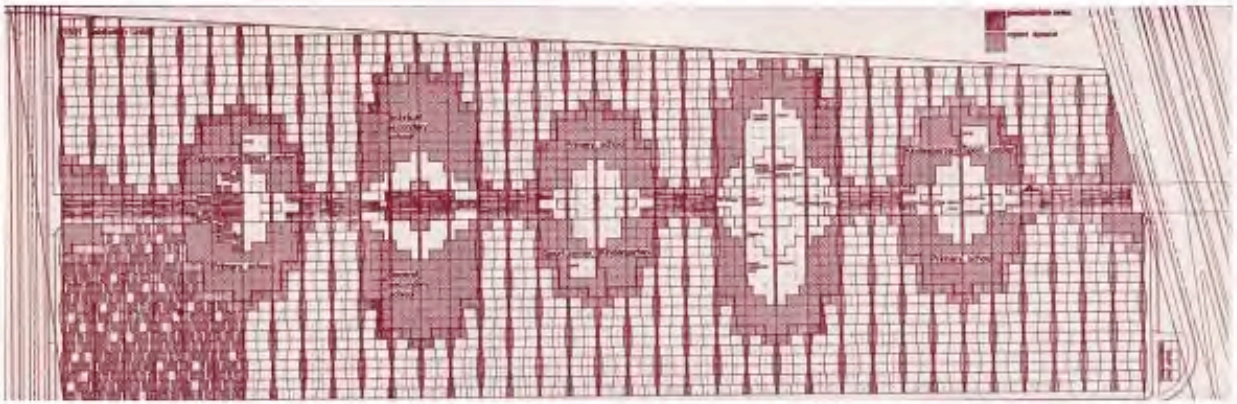


The Experimental Housing Project, Lima
(Proyecto Experimental de Vivienda - PREVI)

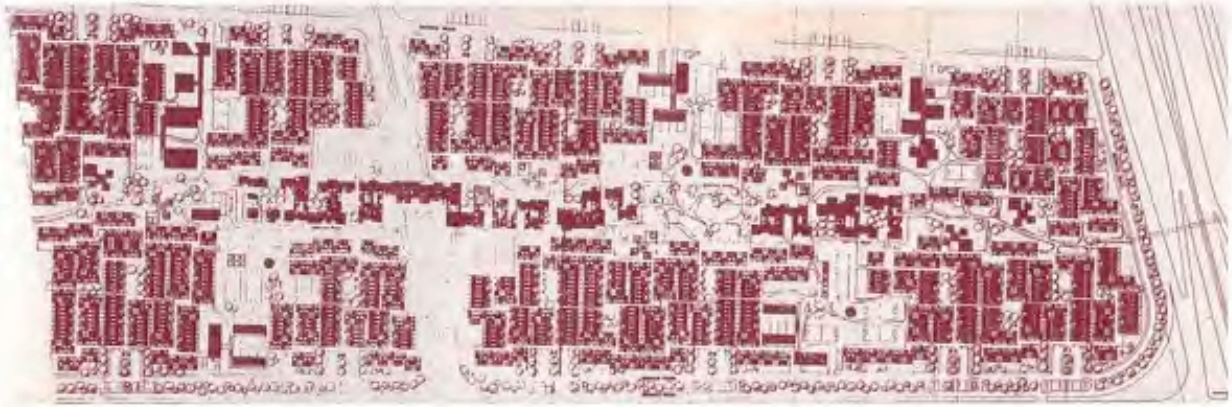
Design & Technology in a New Neighbourhood



Maki-Kurokawa-Kikutake



Herbert Ohl



Atelier 5

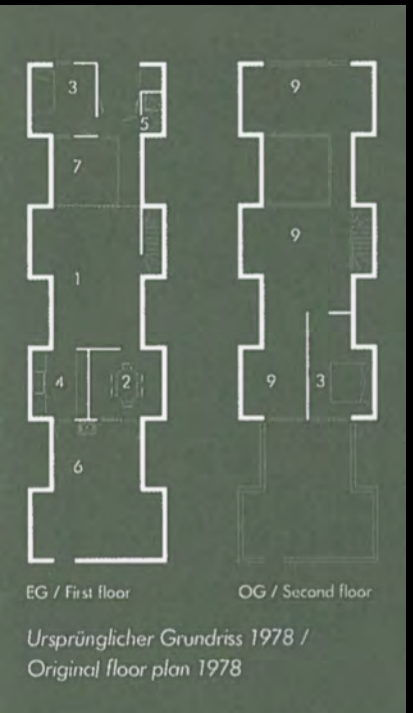
Source: Architectural Design 4/ 1970, London


© Peter Land

Source: ARCH+ Issue 211/212

Projekt von / Project by Charles Correa, Zustand / condition in 1978

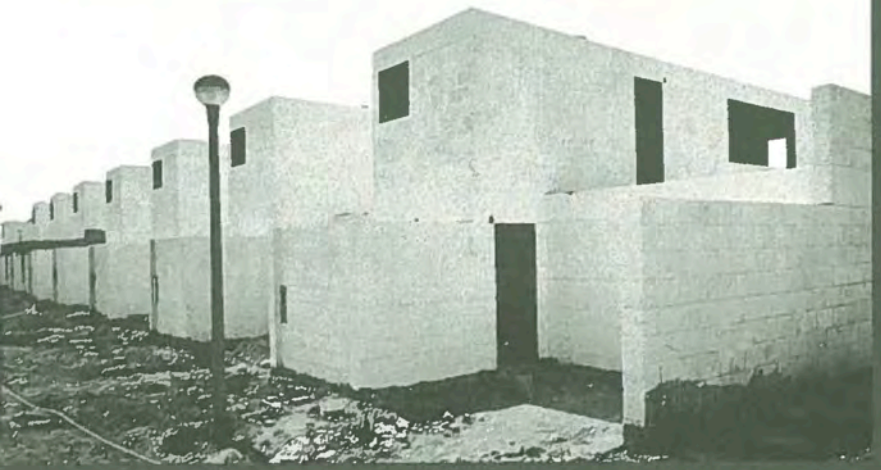
Zustand / Condition in 2003



Ursprünglicher Grundriss 1978 /
Original floor plan 1978

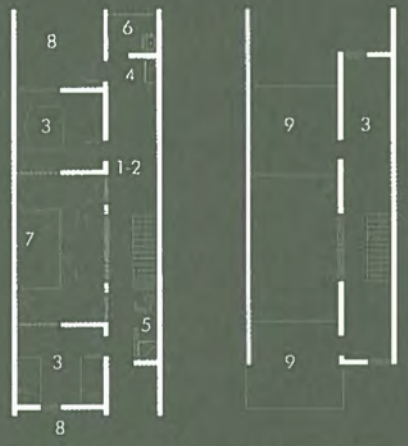
Source: ARCH+
Issue 211/212

Wohnen / Housing



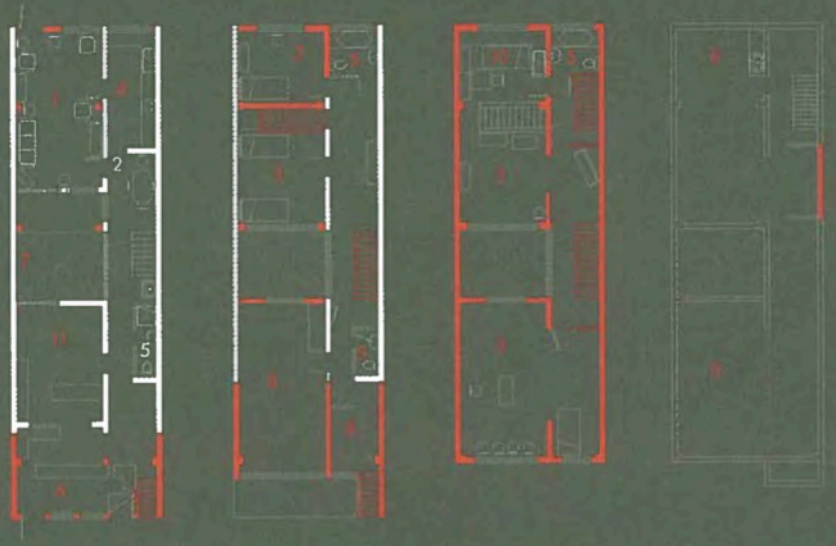
Projekt von / Project by Kikutake, Kurokawa, Maki, Zustand / condition in 1978

Zustand / Condition in 2003



EG / First floor OG / Second floor

Ursprünglicher Grundriss 1978 / Original floor plan 1978



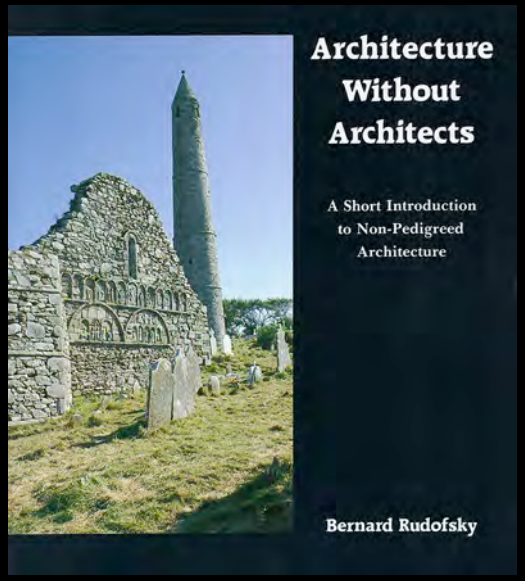
EG / First floor 1. OG / Second floor 2. OG / Third floor 3. OG / Fourth floor

Grundrisse nach Umbau 2003 / Floor plan after the conversion in 2003

Source: ARCH+ Issue 211/212

Source: domus.it

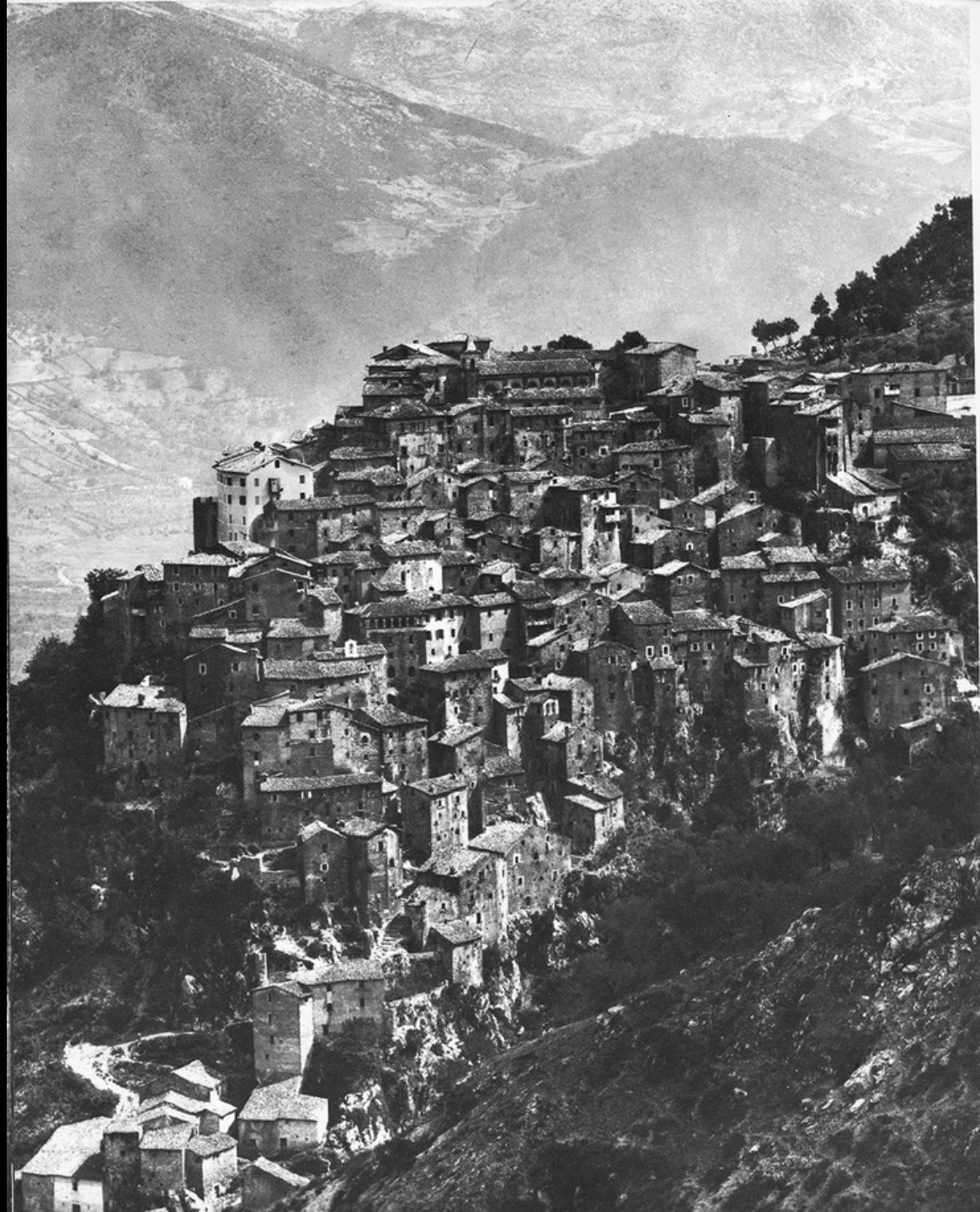

Colgate

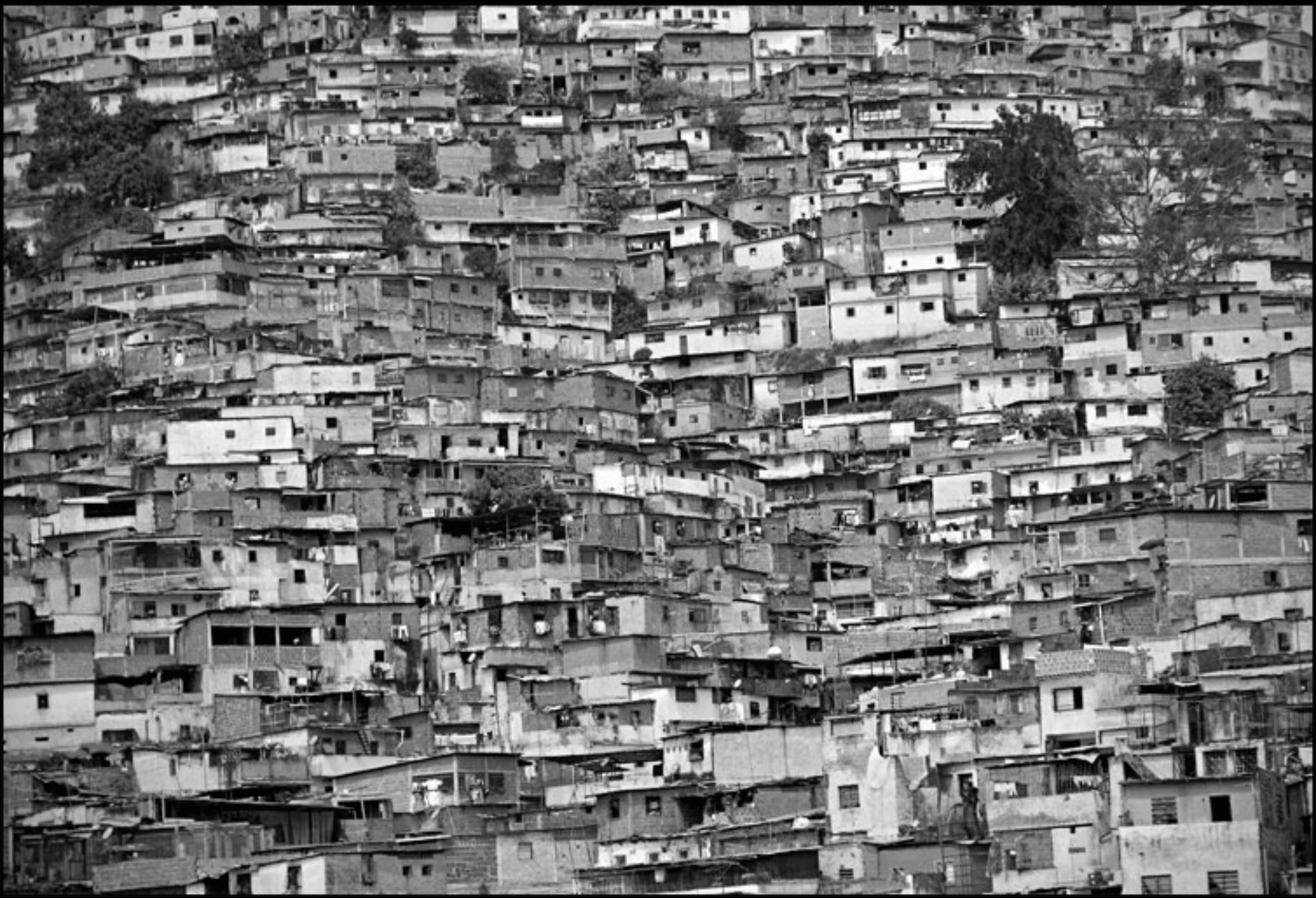


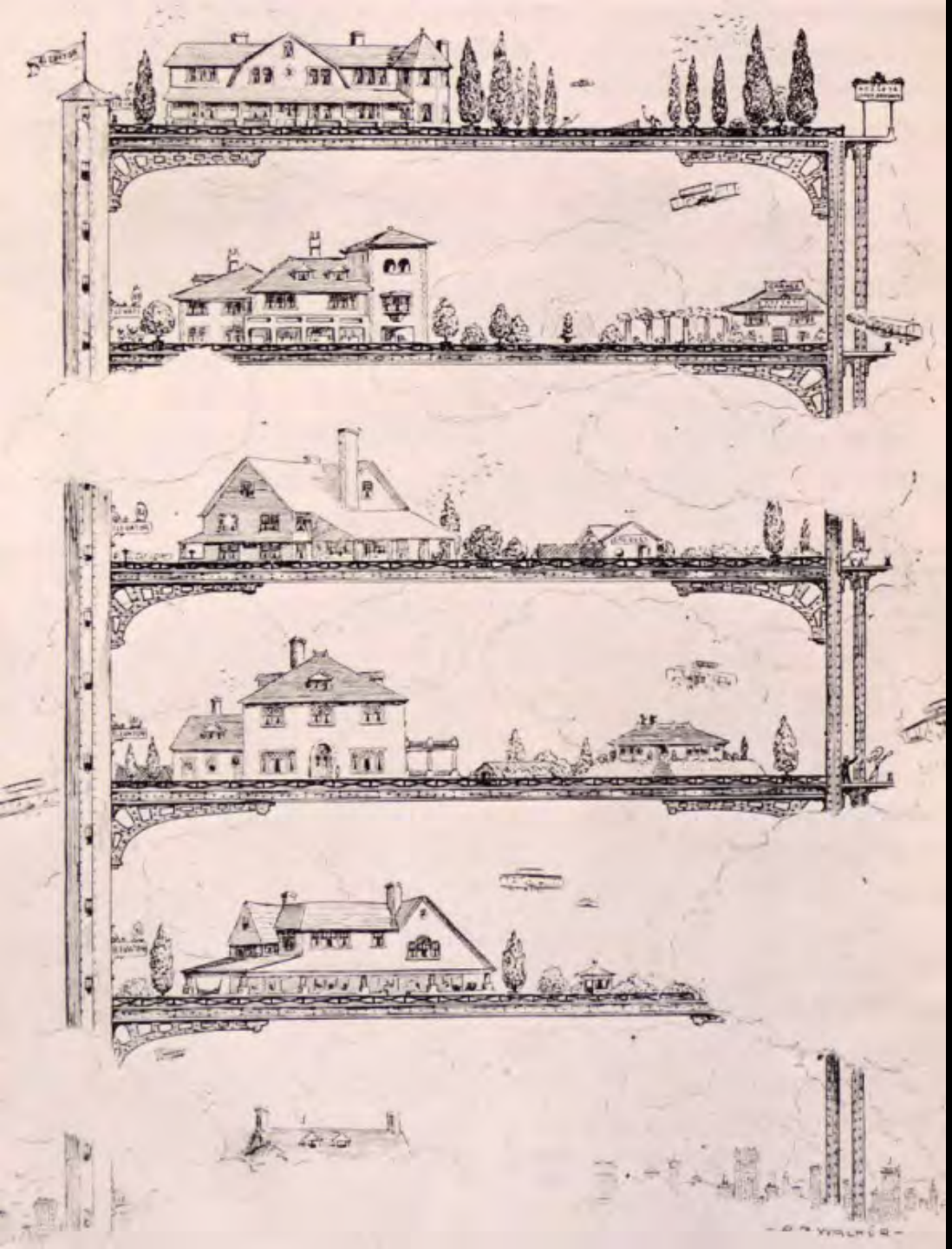
Architecture Without Architects

A Short Introduction to Non-pedigreed Architecture

Rudofsky, Bernard, 1964.

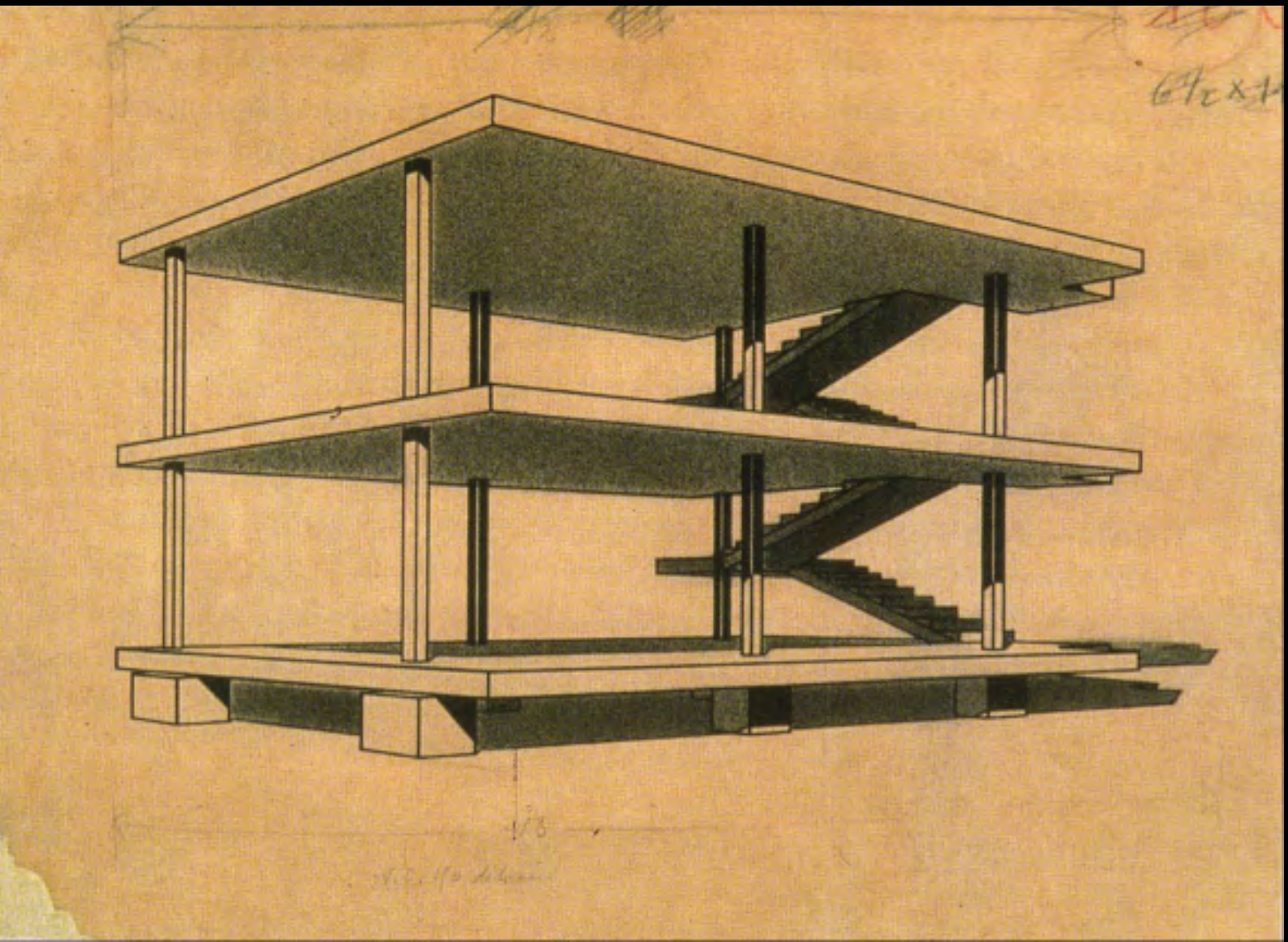






Life Magazine, Real Estate, 1909,
in Koolhaas, Rem, Delirious New York, 1978

Architect: Le Corbusier
Project: Domino House, 1914



Architect: Erik Frieberger
Project: Däckshus,
Göteborg-Kallebäck, 1960

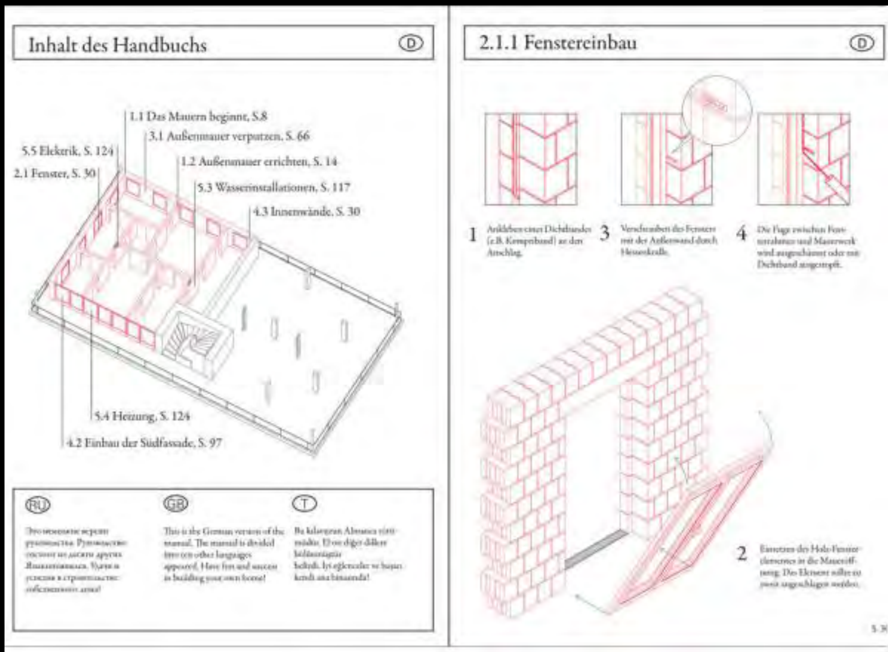
Source:
google streetview

Architect: SITE, James Wines
Project: Highrise of Homes,
Travelling exhibition, 1981 - 2005

Source:
siteenvirodesign.com,
ARCH+ issue 211/212

Architect: BeL Sozietät für Architektur
Project: Structure and settlers – DIY Multifamily Housing, IBA Hamburg, 2013

Source:
bel.cx, ARCH+ issue 211/212


Inhalt des Handbuchs
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1.1 Das Mauern beginnt, S.8
3.1 Außenmauer verputzen, S. 66
5.5 Elektrik, S. 124
2.1 Fenster, S. 30
1.2 Außenmauer errichten, S. 14
5.3 Wasserinstallationen, S. 117
4.3 Innenwände, S. 30
5.4 Heizung, S. 124
4.2 Einbau der Südfassade, S. 97
RU
GB
T
This is the German version of the manual. The manual is divided into ten other languages appeared. Have fun and success in building your own home!
2.1.1 Fenstereinbau
D
1
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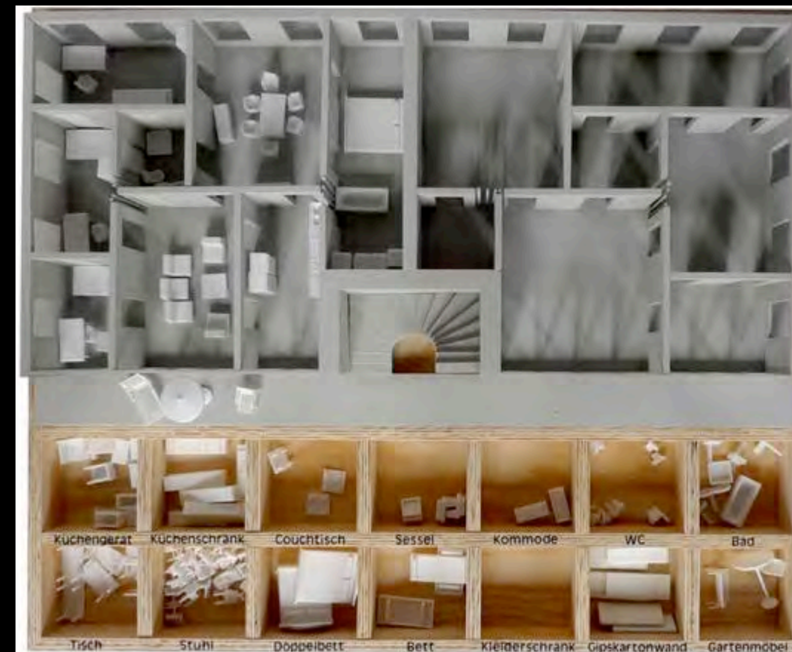
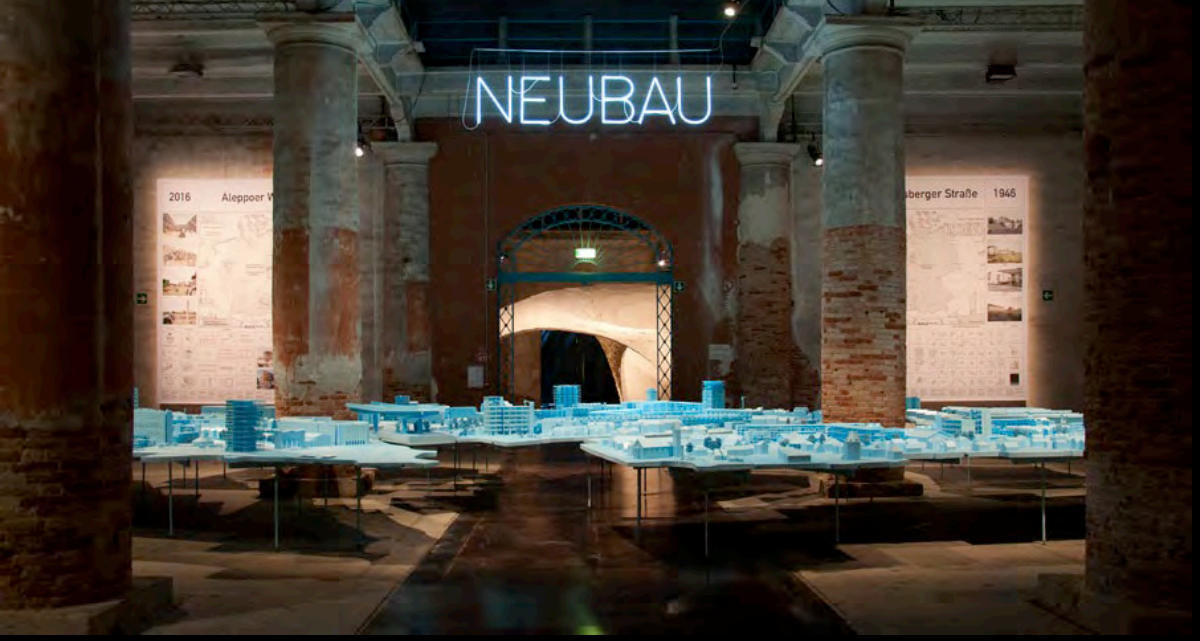
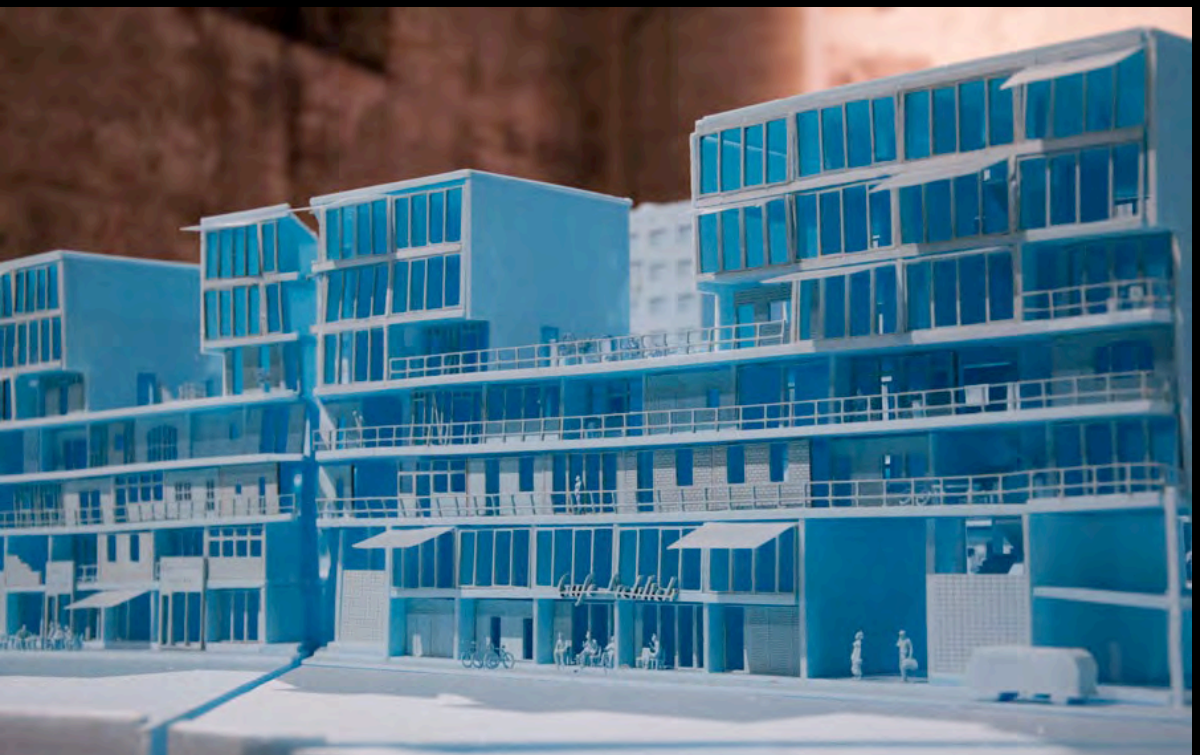
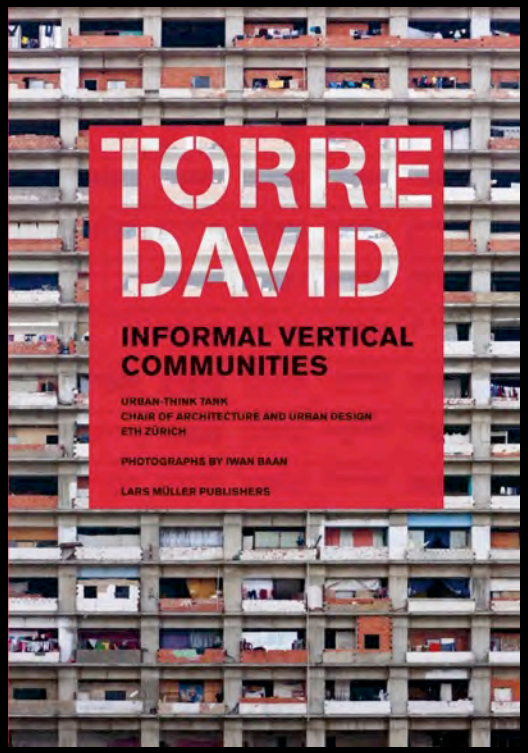

Küchengerät
Küchenschrank
Couchtisch
Sessel
Kommode
WC
Bad
Tisch
Stuhl
Doppelbett
Bett
Kleiderschrank
Gipskartonwand
Gartenmöbel



Source: bel.cx, Project Neubau, Arch. Bienale 2016, Venice

When the modern city does not adapt to the people



Torre David

Informal vertical communities

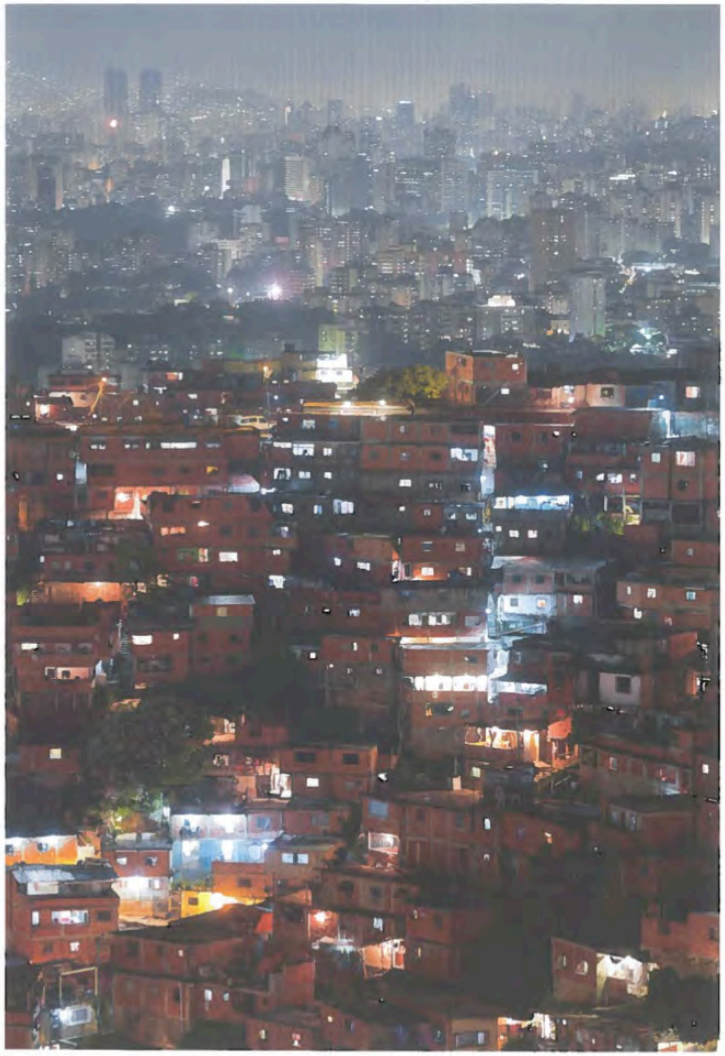
Urban-Think-Tank

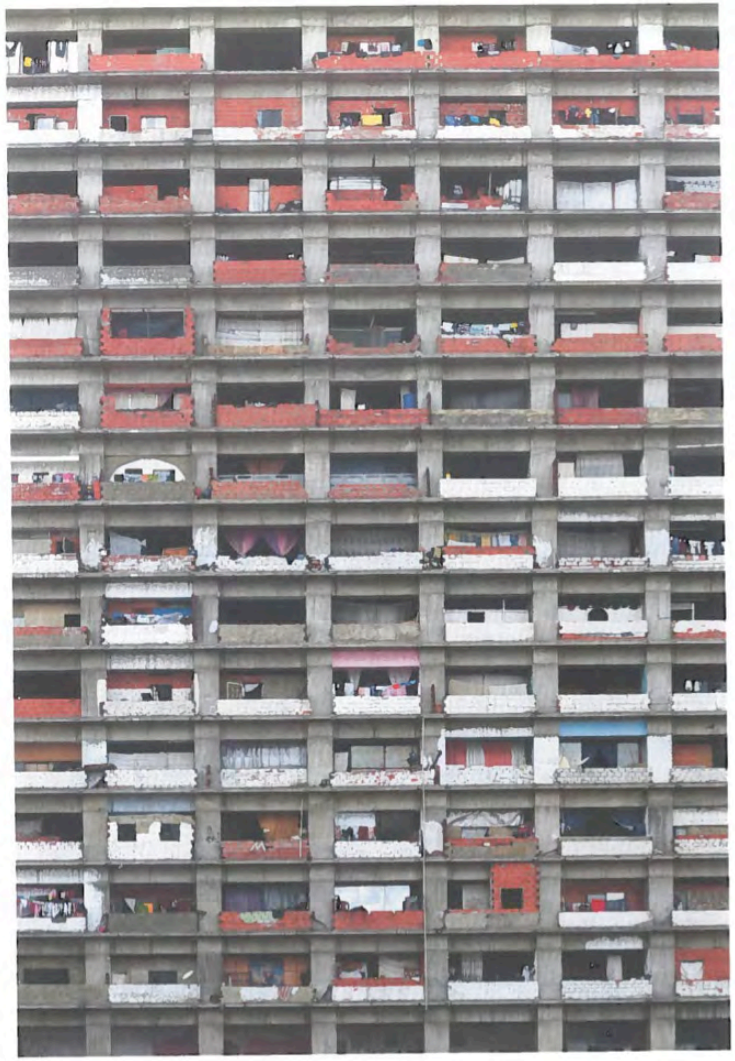

BBVA Provincial
Mercantil

An original model of the Centro Financiero Confinanzas, 1992.

Photo: Inmuebles Magazine/Pinada y Lorenzo

Torre David, 2011.





Section perspective: Torre David as it stands today.

Torre David with potential retrofits.

Architect: Elemental, Alejandro Aravena
Project: Quinta Monroy,
Iquique, Chile, 2003

Source:
elementalchile.cl

Incremental Urbanism

Inspirations, Concepts, and the Changing Role of Architects