



# Approaches to government-sponsored housing

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We cannot begin to think realistically about housing in any context unless we have some idea of both the nature and the scale of what I call popular housing — to distinguish it from large-scale private commercial housing and from centrally administered housing projects. Of course, these are only general categories and there are many overlaps and mixes. The most extreme form of noncommercial popular housing, built entirely by the users themselves, shades off into small-scale housing built by artisans and local contractors. Large commercial enterprises building for shareholders' profits often carry out works for public authorities, and public housing may also be built by publicly owned building and management organizations. Public agencies also frequently cooperate with local builders by providing infrastructure and ensuring the supply of materials, tools, and skills through increased manufacture, training, and technical assistance, as well as the provision of credit.

It is usually difficult to assess the production of housing generated by the three sectors, as statistics

do not recognize the crucial difference between the use-motivated popular sector, and the profit-motivated commercial sector. The greater part of popular sector housing is generally ignored and very often, large built-up areas do not even appear on city maps. According to Dr Georges Vernez, who did a great deal of work on the construction industry and housing in Colombia, "nearly one-half of all families reside in the (popular sector) type of housing (in Bogotá). About two-fifths reside in commercial housing, and only one-tenth in public housing." This is especially significant as Colombia has had one of the biggest public housing programs in Latin America, heavily subsidized through US soft loans during the 1960s. It is also well known that different forms of uncontrolled settlement generally account for between one-quarter and two-thirds of the populations and the areas of cities in the rapidly urbanizing countries.

The question which must be asked in every country in the world is: Who, or what sectors in a society, are best able to organize, build, and maintain people's homes and dwelling environments? The private sector? The public sector? The popular sector? Or some combination of these?

I will give you my assessments of the relative capabilities of the two most critical sectors —

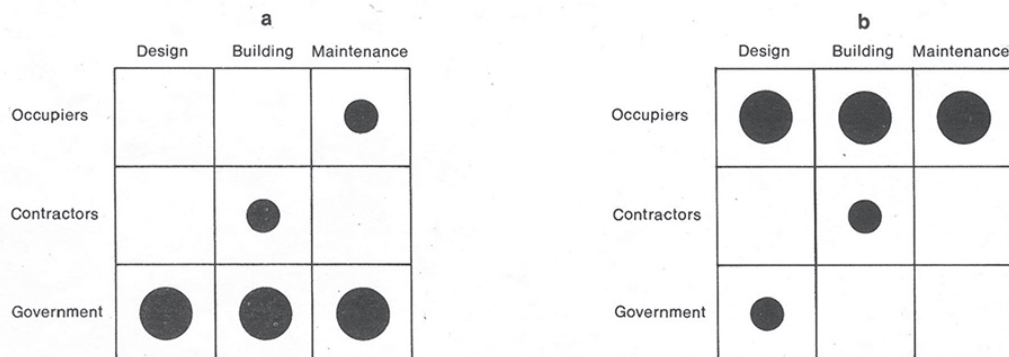


Fig. 1: The essential difference between centrally administered housing projects and user-controlled housing is the structure of authority or control: who decides what.

Diagram (a) shows the pattern of authority in a centrally administered project and diagram (b) in self-built housing.



the public and the popular. Although obviously important, I will leave out the private commercial sector as it does not invest in low-income housing and there is far greater promise in a cooperative relationship between the people and the government. While commercial entrepreneurs may have a vital role to play, it is as suppliers of the people and of government agencies.

The essential difference between centrally administered housing projects and user-controlled housing is the structure of authority or control: who decides what. If one knows which sector is controlling which operations in a given place and time, one knows pretty well what is going to be built, for whom, and how it will be used. Figures 1a and b show the mirror-image patterns of a typical housing project, in which virtually all design, location, financing, building, and management decisions were made by a central agency; and some typical, and traditional, local housing in which all those same decisions were made by the users — generally the owners — in conjunction with local builders.

In the case of the project, it is possible that the commercial sector may contract for the building and, therefore, have some influence on construction decisions, and the occupiers may acquire some responsibilities for maintenance. On the other hand, government may have some control over planning popular sector housing and again, the private commercial sector may supply equipment and materials, install utilities, or carry out other public works.

Geographically, centrally administered housing projects (or projects as I will call them for short) tend to be located on the periphery of the built-up area of large towns and cities. Projects are rare in villages and small towns. Both these characteristics are

mainly due to the size of the organization administering them, and the consequent need for projects to be large in order for them to be administratively economic. Large tracts of land, and land of low or relatively low cost, can of course only be found on the peripheries. On the other hand, user-controlled housing occurs in any and all parts of cities, towns, and villages. As most districts are composed of a number of groups or clusters of different types of dwellings, community facilities and structures with other uses (all sponsored, built and managed by different people and organizations) it is impossible to generalize about their relative size. As often as not, the size of a neighborhood is a function of the observer's or the resident's view and use of it.

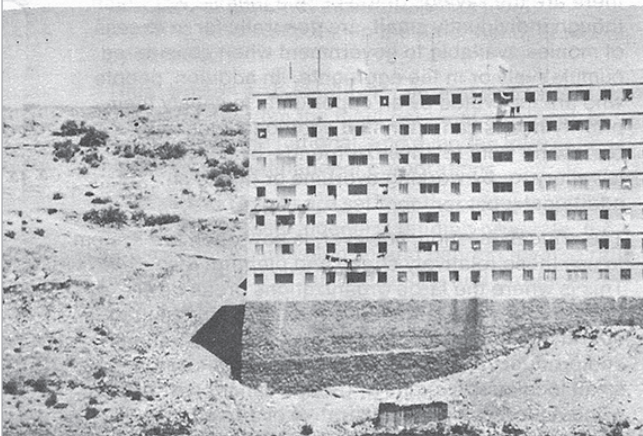
Not all public housing projects are built in the form of blocks of flats, of course, but this is the tendency and general rule. Even though tall buildings provide higher densities only on small sites and in extreme cases, it is generally easier for a big firm to build big buildings, and anyway more profitable, as labor-saving machines, like big cranes, can be used to best advantage. Big buildings, however, adapt poorly to awkward sites (fig. 2a).

Self-governing areas, on the other hand, generate very different forms, as figure 2b demonstrates — especially when one knows that it is next to the block in figure 2a! The contrast also shows how high rise is not necessarily the same as high density. The abominable building in figure 2a actually provides fewer dwellings per hectare than the clusters of owner-built houses in figure 2b which are delightful to the eye and spirit. Typically, the blocks are replacing the houses.

These two pictures — which are from Las Palmas in the Canary Islands, by the way — emphasize yet

**Fig. 2:** These two adjacent blocks in Las Palmas contrast the outcome of centrally administered housing projects versus user-controlled housing. In the project shown on the left virtually all design, location, financing, building,

and management decisions were made by a central agency; while the dwellings shown on the right were made by the users (and generally the owners).





another major difference between projects and popular housing. Project dwellings are inevitably highly standardized, for administrative and technological reasons. The number of dwelling types designed and built by an agency for the sectors it intends to supply must be reduced to a minimum or the administration becomes impossibly complex and construction costs become impossibly high. This is not a function of the scale and rate of housing production, but of the ways in which it is carried out. Typical popular housing, sponsored, built, and managed by local people and their small organizations, not only creates the needed variety of housing to match the variety of household needs, but in the aggregate it can be built very much faster.

Projects provide standardized units in one, or very few alternative locations, and with one form of tenure. Every household has its own priorities regarding the form of the dwelling unit, the mix of local facilities, the location, and the form of tenure desired, and its priority for each of these independently variable aspects of housing may change as the situation of the household changes. Where local, user-controlled building systems are hampered, projects can provide a larger number of dwelling units in the short run — but categorical programs of standardized housing for average people cannot begin to provide the desired variety of locations, forms of tenure, and variety of dwelling types.

For example, in Villa Salvador, a new settlement to the south of Lima, Peru, 16,000 families, organized by their own associations, established what was virtually a new satellite town, practically overnight. Of course they were living in shacks to begin with, but a few months later, the great majority were already building brick and concrete houses and now, four years later, over 120,000 people are living there in a great variety of dwelling types with different forms of tenure, and almost all of them are living in better conditions than when they were crowded into the city slums and tenements. I challenge anyone to tell of a case where as much was achieved by centrally administered housing with so few resources and in such a short time.

It seems to me that the only true and real way of assessing the economy of housing is: How well do the procedures and products match the priorities of the users, in proportion to the resources invested? If we take a family lifetime — from the marriage of a couple to their death — say 50 years — and consider the total cost and the total returns on a project flat and a typical popular house over that period, we find that the differences are vast for the following reasons: first costs, or construction costs for a centrally controlled project dwelling are generally twice the cost of a similar unit built by a private contractor and developer, and often more than twice the cost of one built by a small builder working directly for an owner-occupier. When the owner-occupier is also the builder, the difference can be as much as 400 percent. These differences must then be multiplied by the interest and duration

of the loans needed — the bigger the sum, the longer the amortization period, of course.

In addition to the first costs, one must also consider running costs. These are notoriously high in publicly owned and administered projects and, unless kept up, the buildings deteriorate often very rapidly indeed.

In 1972, a public housing project in St Louis, Missouri, was blown up by the US Army. This project won an architectural award for good design when it was built, just 20 years earlier, but it had to be destroyed because management and maintenance had become so uneconomic! This is not an isolated incident. Several major projects are now being torn down in England, although they are less than 40 years old. The biggest of these, Park Hill in Leeds, was a widely praised, model project, finished just before the Second World War.

I now come to the most important factor of all: the nature of the resources used. In general, one can classify the resources needed for a job into scarce and nonrenewable resources, and plentiful, renewable resources. Scarcities vary from place to place and from time to time, but, in practice, any operations, tools, or materials that consume large quantities of fossil fuels are scarce resources. Professional and managerial skills are also a scarce resource, especially in countries with low per capita incomes. Land is frequently a scarce resource, especially where towns encroach on agricultural land, or where excessive town growth leads to substantial increases in transportation and other infrastructure costs. Finally, money, particularly future money or credit, is a scarce resource, especially where it has to be borrowed from abroad, thus increasing national dependence on foreign investors.

On the other hand, there are relatively plentiful and renewable resources, such as those that people themselves possess or can obtain locally: for example, their own imagination, initiative, skills, energies, and their own time. In many localities, there are relatively many small plots of land, or spaces in or upon existing buildings that may be added to. There may also be plentiful supplies of certain materials, such as sand and gravel. Finally, there are the savings of the people themselves which, though individually small, are generally far in excess of monies available to government when considered cumulatively or in the aggregate. In addition, people who are motivated by an opportunity to satisfy their priority needs can often find additional money by borrowing from relatives or friends, by selling jewellery, or by working overtime or taking an additional job.

The critical question, however, is how open is a system to use these relatively cheap and plentiful resources? This is where the large organizations break down. Because they are large, they must standardize their operations and products. Because their operations and products are standardized, individuals and small local associations or groups cannot participate without increasing administrative overheads. In any case, their motivations for participating are



usually very low as the products seldom fit their highly varied needs and priorities. So, large organizations are progressively more dependent on scarce resources.

It is therefore hardly surprising that housing costs are spiralling out of sight and, even if subsidized, beyond the reach of all low-income people wherever centrally administered systems have inhibited locally self-governing systems. This is true for the United Kingdom, as well as for the United States: for Turkey as well as for Mexico and Brazil.

The moral of all this is very simple: the proper role of government is to ensure that those who are best able to build, either for themselves or for their neighbors, have access to the tools or basic resources to do the job. By "tools" I mean land, or titles to land and credit; technical assistance for the economic design of subdivisions and dwellings; and infrastructure in the form of essential utilities and community facilities that the people could not install themselves even with government credit and technical assistance.

Some simple sketches may illustrate the principles and guidelines which, I believe, must guide any effective housing and urban or rural development policies.

We can identify a range of actions, from the almost infinitely variable dwelling environments or local assemblies which are made up of a limited number of components — such as roads, water supply networks, electric power distribution systems — and are relatively standardized, wherever they are. All components, and therefore all local assemblies of them are, in turn, composed of a very limited number of elements or basic resources. These consist of a technology, that is, materials, tools and skills, of land, and of some kind of exchange system, usually savings and loans. These elements are highly standardized. They also require action on the largest scale. Manufacturing and distribution systems for building materials and equipment, land law and control systems, and finance are all national or even international matters. Infrastructure networks may be regional in scale, but are more commonly operated at a district or metropolitan level. Dwelling environments, on the other hand, are local by definition.

Thus, we can also identify a range of scales of organization: from the most personal and local, to the regional, the national, and even the international agencies or multinational corporations.

If these two ranges are set together to form a field (fig. 3), it suggests a general guiding principle: the scale of an organization should bear an inverse ratio to the variability of the operations and products. In fact, this is a corollary of what the cyberneticians call the principle of requisite variety: if stability is to

|            | Small | Medium | Large |
|------------|-------|--------|-------|
| Assemblies | Yes   | ?      | No    |
| Components | ?     | Yes    | ?     |
| Elements   | No    | ?      | Yes   |

**Fig. 3:** This diagram suggests a general guiding principle for the housing industry: the scale of organization should bear an inverse ratio to the variability of the operations and products. This means that government must reverse its conventional priorities and move large construction organizations away from house building and into the large-scale manufacture of building materials and components.

be attained, the variety of the controlling system must be at least as great as the variety of the system to be controlled.

All my observations coincide with these principles: the larger the organization, the less variety it can cope with, the larger the scale at which it must operate and therefore, the greater the dependence on scarce and nonrenewable resources. The field defined by the variability of actions and the scales of organization has safety areas and danger areas: do not attempt to use large organizations for complex and variable operations and products: nor attempt to use small organizations to control operations that must be standardized on regional or national scales.

In practice, the numbers of people served in proportion to public investments in centrally controlled housing projects are very low indeed; they are much higher for infrastructure investments; and they are the highest of all for effective government planning and controls over scarce or imported resources.

This means that if a government is to increase the supply of housing for the mass of the people, it must reverse its conventional priorities. Every effort must be made to move large construction organizations away from house building and into the middle range of infrastructure development and into the large-scale range of manufacture of building materials and components. Only in this way can there be a rapid increase of valid housing for lower-income people in the short run, and of valid dwelling environments for everyone in the longer run.