

Natural Disasters and Urban Struggle for Housing

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Summary

In March 1983, the city of Popayán (Colombia) was partly destroyed by an earthquake. Popayán had known a strong urban expansion; after being a centre for the exploitation of mainly agricultural resources, with 7600 dwellings in 1964, it had grown to about 20'000 dwellings in 1982. *Asentamientos* - shanty-towns - started being established in great numbers after the earthquake. By 1985, the number of dwellings in Popayán had increased by 57% as compared to the 1982 figures. The article discusses the financing of housing programmes, as well as autoconstruction, in relation to the explosive growth of the city. The role of governmental and non-governmental organizations, as well as that of technicians and of the dwellers themselves, is evaluated. Participatory planning is evoked as an alternative in a situation where market economy rules have only engendered increasing disparities.

Résumé

En mars 1983, la ville de Popayán (Colombie) fut en partie détruite par un tremblement de terre. Popayán, qui avait été un centre pour l'exploitation de ressources essentiellement agricoles et qui comptait 7600 unités d'habitation en 1964, s'était beaucoup élargie sur le plan urbain et comptait 20'000 bâtiments en 1982. Des *asentamientos* - bidonvilles - s'établirent en grand nombre après le tremblement de terre. En 1985, le nombre d'unités d'habitation avait augmenté de 57% par rapport aux chiffres de 1982. L'article discute le financement de programmes de logement, ainsi que le phénomène de l'autoconstruction, par rapport à la croissance explosive de la ville. Le rôle joué par des organisations gouvernementales et non-gouvernementales, ainsi que la contribution des techniciens du logement et des habitants eux-mêmes, sont évalués. Une planification de type participant est évoquée en tant qu'alternative dans une situation au sein de laquelle les règles de l'économie du marché n'ont fait que créer des disparités croissantes.

Introduction

Risks may relate to factors that escape the control of human agents (earthquakes, cyclones, etc.), but disasters arise directly from a lack of prevention. It is a fact that state policies often leave out the poor as far as prevention is concerned. This is almost a constant occurrence in Third World countries. As a consequence, those who are most

harshly touched by natural disasters are the so-called popular sectors.¹ What is more, reconstruction operates as a mechanism of social segregation. The poor soon find themselves forced to wage a great battle, so as their existence is recognized and they are granted a role in the reconstruction process. However, this is far from easy. Whenever they lose this political battle, they are left abandoned to ostracism, while official resources are concentrated in powerful spheres.

Yet, the popular sectors initiate innovative reconstruction processes, each with its own characteristics. I intend to examine such a case in this paper.

On the 31st March 1983, the city of Popayán was partly destroyed by an earthquake. Subsequently, a new chapter of urban history began, which has not come to an end yet: the reconstruction of the city. I intend to discuss the various strategies of reconstruction applied in Popayán between 1983 and 1986. The analysis will focus on the antecedents of the human problem, the impact of the 1983 earthquake, the urban policies of the State, the strategies adopted by the population and the work of various non-government organizations.

1. The General Evolution of the City

Historically, Popayán is a centre for the exploitation of abundant agricultural and (in previous centuries) mineral resources. As such, the atmosphere has been one of concentrated landowner power. Nonetheless, in view of the slow technical transformations taking place, it is hardly adequate to talk about an economical development of the city. The land-owning class did not become an important factor in the marketing of goods and services; rather, its permanent lack of capital was well-known. In fact, it was forced to incur debts with various creditors. Yet, land-ownership continued to be a symbol of prestige and social pre-eminence. On the other hand, until the fifties the city was a commercial and political centre, with slow rates of urban expansion and an urban structure dominated by the attribution of construction to contractors. At the same time, a handicraft and service sector developed, that was concentrated in the traditional 'popular' neighbourhoods such as "Alfonso López", "Cadillal", etc. This reinforced a form of social segregation with respect to the occupation of urban ground.

1.1. Urban Modifications

According to the data of the Corporation for the Reconstruction of Cauca (CRC), Popayán has undergone the following population growth:

<i>Year</i>	1938	1951	1964	1973	1985
<i>Inhabitants</i>	30'038	44'808	76'568	95'828	156'300

The data shows that between 1951 and 1985 the population quadrupled. There has thus recently been an increasing demand for housing and important urban transformations have taken place. This tendency has been accentuated by the arrival of migrants from the south and the centre of the Department of Cauca, the growth of a middle class and a certain concentration of wealth in the hands of the landowners.

¹ The term 'popular' is used, in the absence of a more specific term in English, to refer to the lower-income sectors of the population, their organizations, housing, etc.

It was in this context that the I.C.T. (Institute of Territorial Credit) carried out mutual-aid programmes, including the first 'popular' housing development plan (*Pandignando*), which broke with the urban structure of the city and represented a revolution in construction methods. In this, the I.C.T. followed the guidelines which have characterized all its subsequent work: half-finished housing, situated on the peripheries of the city and mass-produced.

From that time on, i.e., from the sixties, the city underwent a transformation at a pace hitherto unseen. The growth was impressive and particularly notable on the outskirts of Popayán. Four construction venues were particularly salient:

- a) Housing developments promoted by I.C.T., all with similar characteristics and aimed at the lower middle-class; here, private engineering firms are responsible for the construction work. This means that the private sector produces popular accommodation, using the financial resources of the State. As maximization of profits and economy in costs were given priority by building contractors, poor quality of housing resulted. This applies to size as well as to durability and consistency of structures.
- b) Construction of modern accommodation by contract: The high-income sectors of Popayán moved towards the north, contracted architects and engineers and built the modern part of the city. This is development by private contract. The prospective home-owner provides circulating capital, while the contractor sub-contracts paid labour for the production of housing.
- c) Self-building in the popular sectors: The lowest income groups draw an all imaginable resources. A lengthy process is taking place, during which the other part of the city is being built. Until 1983, this was the least dynamic sector. Examples of such urban developments are the districts of "María Oriente", "la Loma de la Virgen", etc.
- d) The private production of high-rise housing was undertaken by UPAC (Unidad de Poder Adquisitivo Constante - Body of Constant Acquisitive Power), with the intention of resolving the shortage problem in the middle-classes. However, its achievements were modest and its impact on the transformation of the urban profile of Popayán has thus been small.

Meanwhile, the historical central part of the city was the scene of intensive letting to sectors of the petite-bourgeoisie, while popular sectors were extremely overcrowded and included intensive sub-letting of accommodations. Thus, the State intervention did not reach the lowest-income sectors of the population that, simultaneously, reached significant growth rates. As far as the I.C.T. is concerned, a systematic response to these growth rates was elaborated. Yet, Roel Janssen describes the cover provided by I.C.T. on a national level thus:

"Two-thirds (66%) of the government efforts are for the benefit of the middle-class; 13.2% of its activities are aimed at the upper classes; and only one fifth (21.8%) benefits the classes of low income, while the participation in the lowest income bracket of all is extremely small: only 4%" (Janssen, 1985, 71).

The ostensible demand for housing provoked a general increase in urban land revenue and in real-estate revenue. This increase was expressed in high rent levels and in

a proliferation of *lotes de engorde* - unexploited land whose value increases passively due to urban development in terms of housing, thoroughfares, public service outlets, etc., in its surrounding area. Monopoly of land, high rent levels and the cost-minimization policy itself, induced the I.C.T. to purchase land in the most outlying areas of the city. This, however, led to an overpricing of public services and a deficiency in public transportation.

1.2. *Economy and Social Environment*

The process of urbanization without industrialization is reflected in the so-called "tertiarization" of the economy. According to C.R.C.'s evaluation of the participation of the various economic sectors in 1964-1982, the primary sector (agricultural, forestry, mineral) decreased from 66.3% to 50.3%, while the tertiary sector went from 19.5% to 30.2%. Between 1964 (19.5%) and 1982 (30.2%), the dynamic sector of the economy is clearly the tertiary sector; industrial production and manufacture follow far behind. A tendency towards a decrease in agricultural production is also seen in the Gross Internal Product of the Department. This economical set-up is closely correlated to the extremely unequal distribution of income in Popayán.

This information bears witness to a very precarious demand for goods and services, which acts to the detriment of any productive project. For instance, today the dairy company *Lacteos Puracé* sells more than 60% of its produce in the Departments of *El Valle del Cauca* and *Vieho Caldas*, while importing raw materials from distant regions of the country, e.g., the Atlantic Coast. The cost of transportation obviously affects the profit margins of the company.

In short, there does not exist a working class or an industrial bourgeoisie in this region as such. Some industrial establishments are found; they are characterized by great problems and a marked technological backwardness that makes them uncompetitive on the market, with the exception of the sulphur industry. As a result of the growth of the tertiary sector of the city, a large middle-class has arisen (composed in particular of professionals and civil servants). An underprivileged population performing a variety of occupations (domestic services, handicrafts, shops, garages, repair services, etc.) also grew alongside the middle-class.

Hence, a 'popular economy' operates in the service sector, responding to the demands of the middle-class and of the dominant elite. The economic circuit goes from the quantitative growth of the middle-class and its demands for services, to the productive activity of certain popular sectors attempting to satisfy that demand. This economy is not linked to any capital base. It should be considered, more accurately, a system of subsistence production with precarious accumulation margins. Moreover, the largest part of the economy described here rests on a family structure. Its logic is very similar to that of peasant economy (intensive in terms of labour, with a continual tendency towards an excessively long working day; based on family cohesion; with a zero accumulation rate, partially due to unfavourable price structures). It is, strictly speaking, a survival economy of the type euphemistically defined as "micro-enterprise".

Finally, there is a tendency towards underemployment and unemployment:

"The unemployment figure in 1982 was reckoned at 19%; that is, 12'000 heads of family were without employment. The highest unemployment figure is among the females (65.6%)" (Velasco Asociados, 1983).

This combination of factors increased the need for housing but, simultaneously, because of the precarious income levels, there was only a restricted demand. The I.C.T. could obviously not undertake a housing policy for the lowest-income sectors, since it had set the value of an urban square metre in relation to that of the highest contemporary commercial prices (Velasco Asociados, 1983); it had further decreed that the selling value of the dwelling should be decided upon by "comparison with similar plans executed in other cities by private enterprises or by the I.C.T. itself" (Manual de Liquidaciones Técnicas, 1985, 6). It directed itself instead towards housing projects for the middle-class, such as *Bloques Pubenza*, and cancelled, five years before the earthquake, its project of popular housing in the *La María* neighbourhood.²

According to the I.C.T., the housing shortage in 1983 was of 7000 units concentrated, illogically enough, among the families with a monthly income lower than 1'500'000 pesos (US \$ 31.25) in 1982 (C.R.C., Corporation for the Reconstruction of Cauca, 1984).

1.3. The Historical Sector

In the last thirty years, the 'historical centre' of Popayán has undergone a rapid transformation, i.e., a fragmentation of properties:

"Until some fifty years ago, the property divisions of a typical block comprised twelve parts: four corner houses and two in between. The corner houses were on each side of the block. The first patio of each house was adjacent to the entrance hall, with corridors flanked by arches or square pilasters or wooden pillars. Around the first patio there were the master bedrooms; the section which divided the second patio from the first almost always contained the dining-room; the kitchen and some three-sided rooms, which communicated on their fourth side with the interior garden, enclosed the second patio in which were found fruit-trees, fountain, water-tank and the accommodation of the domestic animals. The interior gardens of the block, separated only by fences, were expansive green areas. In the blocks nearest the city centre, the majority of the houses were two-storeyed; on the ground floor of the street-facing side were small business premises. Some blocks had part of their area occupied by churches, convents or public buildings.

From the nineteen-fifties an ever-accelerating process of fragmentation of the original properties began. Nowadays the situation of the typical block described above is as follows: the big houses have been split into 2, 3, or 4 smaller houses. The exterior premises on their street-facing sides have been sold as horizontal properties, even before the existence of any laws to this effect.

The patios are divided and subdivided and covered with new buildings. The original uniformity of the four façades of each block was altered, with variations in the textures, in window shape, in colour. What was originally a block of big houses with their façades distinguishable but each complete,

² It was precisely the poor quality of the first project mentioned that produced greatest disaster at the time of the earthquake. It induced the Archbishop of Popayán, Monsignor Samuel Silverio Buitrago, to proclaim in a letter to the Director of the I.C.T.: "What became of the cheap housing of the poor of Pubenza?" and he answered himself: "That of the Bloques Pubenza, madam, examined carefully, is something which cries out to heaven (...) for the great structural and construction flaws in these blocks of flats. The same could be said of the La María neighbourhood (...). It is understandable that buildings show flaws when two or three centuries old, but construction flaws four or five years after building are due to something other than the passage of time or telluric movements; here, what shows flaws is the ethic at all levels." (El Tiempo, 18th August 1983).

has been converted into a chaotic conglomeration of 40 or 50 dwellings, sections of horizontal property with no system whatsoever; façades with or without alterations to their uniformity; patios divided and roofs tiled with concrete; plastic skylights and porches; corridors closed by aluminium walls and windows; patios stripped of their rustic vegetation and meticulously cemented: Of the great number of big houses of the old centre, there remain not more than ten with their original integrity unharmed." (Acuerdo, 1983)

The historical centre, power symbol of the elite of Popayán, reflects, in urbanistic terms, the sharp deterioration of the city in the areas most visible and most symbolic of the dominant powers.

1.4. *The Social Movement*

The earthquake of 1983 produced not only physical destruction but also instantaneous chaos in the State's social and political control of the population. This allowed political and social conditions that had been long repressed to emerge to the forefront. They reflected in the phenomenon of what was generically termed *asentamientos* - shanty-towns.

Literally, from the night of 31st March 1983, the first cases of "invasions" performed by earthquake victims were seen in Popayán. Initially, no one regarded these occupations as "invasions", precisely because all the open spaces, including parks and streets, were occupied by the citizens, in case further tremors should occur. It was believed at the time that this was a temporary phenomenon. But when such incidents were repeated with surprising swiftness and more than thirty shanty-town neighbourhood sprang up in little more than a fortnight, there was a general realization that these were permanent; they brought about a complex and extensive polemic.

They were more than 4000 families mobilized, occupying private properties, constructing huts, opening streets with a keen sense of urban planning and a clear idea of territorial appropriation. This was demonstrated not only in the taking-over of the individual plots, but in the whole shanty-town. To give an example, the communities set up "popular checkpoints" at the entrances of the shanty-town neighbourhoods, as a form of social and territorial control. The slogan which united the whole battle was, "The reconstruction of Popayán is the work of the organized populace".

2. **The Magnitude and Social Impact of the Disaster**

After the earthquake of 1983, the quantitative inventory of the housing problems made by C.R.C. (Corporation of the Reconstruction of Cauca) read as follows:

"If we take each dwelling to be one home, i.e., with an average of 6 people, then the minimum figure of homeless victims is almost 82'000 within Popayán alone. After the earthquake, the housing shortages of the city may be considered fourfold. In the first place, there is a shortage due to overcrowding before the earthquake, which amounts to 2'270 dwellings. Secondly, there are dwellings damaged by the earthquake, totaling 13'650. Thirdly, there are the dwellings needed by immigrants who arrived to inhabit mainly the shanty-town areas; these total 1'000. Lastly dwellings are required as a consequence of the demographic growth rate between 1982 and 1983; these would be around 1'040." (C.R.C., 1984)

In July 1983, the CGA³ reported that 27 shanty-town neighbourhoods had appeared, in which 2'800 dwellings had been erected, albeit under very precarious conditions. The number of homes was calculated at 3'800, with a total of 21'000 inhabitants. The shanty-towns, as has been said, were the outcome of numerous invasions of private and municipal land, some of it located outside the urban perimeter. These occupied a total area of 690'000 square metres, acquired by the C.R.C. at a price of 226'000'000 pesos (US \$ 4'708), with an average value of 327 pesos (US \$ 0.68) per square metre. Additional land was also purchased, the deal amounting to 232'000'000 pesos (US \$ 4'833) (CGA, 1983-86).

In 1985, Popayán underwent an increase in housing of 16.2%. This indicates the highest rate of urban expansion in the city in the whole of this century. While in 1982 Popayán possessed 19'936 dwellings, this figure grew to 31'307 by 1985; that is an increase of 57% in three years. Overall we can say that between 1964 and 1985 the city registered a distinct tendency towards urban growth, as the following table shows:

Increase in the Number of Dwellings in Popayán

YEAR	NO. OF DWELLINGS	GROWTH PER PERIOD (%)	OVERALL GROWTH (%)
1964	7'631	-	-
1973	11'112	45.6%	46%
1982	19'926	79.4%	159%
1985	31'307	57%	311%
1986	31'938	2.0%	318%

Source: DANE (National Administrative Statistics Department), Census of Population and Accommodation, 1985

Building activity during this period (1964-1985) concentrated mainly on constructions of one or two storeys.

As a response to the difficult conditions generated by the earthquake, the national government ordered the Monetary Committee to adopt measures of assistance, which were defined in the Resolution 32/83, assigning a special quota for housing in Popayán. Its handling was made the responsibility of the *Banco Central Hipotecario* (Central Mortgage Bank) - the sum of 3'500'000'000 pesos (US \$ 7'291'667) was allocated for urban dwellings - and of the *Caja de Crédito Agrario* (Farming Credit Bank) - the sum of 1'000'000'000 pesos (US \$ 2'083'333) being allocated to rural dwellings.

Four years later, the C.R.C. investigated the use to which these resources had been assigned. It reported that:

"22'943 solutions to housing problems were carried out for a sum of 14'066'205'000 pesos. These solutions conceded loans from the repair of

³ CGA = General Coordinator of Shanty-Towns - The organization formed by the inhabitants of the shanty-towns in 1983.

anything from superficial damages to complete reconstruction of the dwelling; less than one-seventh (i.e., less than 14%) concerned the shanty-town areas."

Between 1982 and 1985, the I.C.T. provided a total of 1'984 solutions in terms of pre-fabs, autoconstruction programmes and contracts at a total cost of 1'884'000'000 pesos (US \$ 3'925'000). Of all the programmes undertaken, the *Ciudadela de la Paz* was the most costly, and aimed at the lower middle-class. Of course, the construction activity was carried out in areas other than the popular shanty-towns; it consisted typically of housing for employees and the sectors with incomes higher than two minimum salaries.

In 1985, while seven building operations were financed with a budget of 22'751'650 pesos (US \$ 47'399) in a total area of 47'296 square metres, 294 buildings were financed with 54'517'450 pesos (US \$ 113'578) in a total area of 1'647'760 metres by means of credits varying from 1'000'000 to 2'000'000 pesos (US \$ 2083 to US \$ 4167). This clearly shows that the greater part of the financial resources available was not allocated to the financing of popular housing.

Since the earthquake, the I.C.T. has granted 7'988 credits for popular housing, in which at present 65% of the debtors are up-to-date and 35% are in arrears. Of these 35%, a substantial number are inhabitants of the shanty-town areas. This situation appears much worse when we consider the recipients of the credits granted by the *Banco Central Hipotecario*. Between 1983 and October 1986, 5'416 credits were granted by this body, equivalent to 12'092'000'000 pesos (US \$ 25'191'667). Only 45.29% are currently up-to-date; 43.54% are in arrears and 11.17% are in the category of "doubtful repayment" (according to Gustavo Wilches, oral communication, 1988). One may thus conclude that, of the credit clients, over 80% are on the point of having their property seized by credit entities. This does not even reflect the full dimension of the crisis suffered by the city today.

3. Responses to the Crisis

Let us attempt an analysis of the means through which the popular sectors take on the solving of the problem of housing in Popayán in the period of 1983-86, and of the major drawbacks encountered. Here we will only seek to evaluate what seems most crucial to us.

3.1. *The Struggle for Urban Land*

First of all, it is obvious that the poor do not have much chance of legal access to urban land. The crucial factor is the existence of urban landowners who monopolize the use and exploitation of land. These landowners are in a position to extract a natural advantage from the forces of the market and, thanks to social demand and the gradual improvements which are carried out in the city (roads, services, etc.), they also benefit from automatic increases in their profits. This extra income weighs heavily on the price of housing, making it inaccessible as far as the poorer people are concerned. In practice, the monopoly of urban land and the extraordinary profits which it generates result in a federal rise in housing prices which renders impossible the access of popular sectors to land ownership. With this state of affairs, the extent of housing shortage grows and finally the poor find themselves obliged to invade properties as the only

way of winning their right to the city. In the case of Popayán, these "occupations" occurred as a consequence of the earthquake.

However, the poor generally occupy the worst areas (those lacking in public services, transport facilities, etc.), the peripheral sites in which the land rent tariffs are low. By virtue of this phenomenon, many property owners in Popayán stimulated and supported the occupations, as a mechanism which would increase the value of their property. These properties were later sold at exorbitant prices to the State.

The drawback of these occupations of peripheral areas was that they augmented the problems of "urban disorder" and accentuated the extensive spreading of the city. However, they also stimulated an extension of the major public services networks in a very short time, an event unprecedented in the history of Popayán.

Naturally, this brings with it other questions such as the appropriation of land by the poor and the creation (in Popayán at least) of a sociocultural urban focal point hitherto unknown. Today the great majority of the existing shanty-town areas are still in a state of illegality, which makes for great difficulties in any attempt to take advantage of the credits available. All these factors permeate the consciousness of the shanty-dweller and accentuate his uncertainty and insecurity, making him likely to give up his "improvement" work at any moment.

3.2. Public Services

Once the access to urban land is achieved - legally or illegally - the most salient problem for the shanty-dweller is that of public services. Broadly speaking, this unleashes intense social pressure on the State. In the case of Popayán, the course of this polemic reached truly dramatic extremes because the C.R.C. decided to allocate priority to the reconstruction of the historical centre and, in order to curb popular demand, criminal action increased in certain circles. In only three years, a total of ten "popular leaders" were assassinated; some of them were found to have been brutally tortured before their death.

The communities therefore turned to the so-called "smuggling" of electricity and water; that is, the setting-up of clandestine service networks which, of course, pay no charges whatsoever. Only when the companies concerned discovered that they were beginning to suffer enormous losses due to these illegal networks, was the formal introduction of service networks undertaken. In a sense, the introduction of these services was then regarded more as a punishment than anything else, as it meant that the recipients then had to start paying the charges which, incidentally, are quite high.

3.3. The Financing of Popular Housing

Having obtained their plot of land and access to public services, the shanty-dwellers then started thinking about the construction of a dwelling in solid materials. In effect, before that point, the shanty-dwellers lived in simple huts; that is, (badly put together) constructions of mud-and-wattle, waste materials and plastics. But once the first steps have been successfully undertaken, the main problem is that of converting these huts into residences worthy of the name. This is where the problem of finance comes in.

In the experience of Popayán, various plans for financing housing were implemented:

3.3.1. *The I.C.T.: Institute of Territorial Credit*

The I.C.T. put into action a programme of individually supervised credit at a value of 380'000 pesos (US \$ 791.70) for each dwelling. Of this sum, 80'000 pesos (US \$ 166.70) were allocated for the purchase of the plot, since this was the figure the C.R.C. and the I.C.T. itself had agreed on. The remainder was handed over in successive quotas, depending on how the work was advancing.

According to the data of the I.C.T., a total of 7'988 credits were granted for popular housing, having a total value of 1'715'514 million pesos (US \$ 3'573'988). In the shanty-town area itself, in 1987, a total of 448 housing solutions were provided with a total value of less than 400 million pesos (US \$ 833'333). If we compare the number of dwellings financed (constructed or reconstructed) by the I.C.T. to the number and cost of those financed in the shanty-towns, we see that of a total housing budget of 1'715'514 million pesos, approximately 75% was assigned to the traditional middle- and upper-class neighbourhoods, while only an approximate 25% was allocated to the plan of individually supervised credit for the shanty-towns.

Generally, the families who receive credit have to contract the services of a construction mason, which raises the cost of production of their dwelling by 40%. Naturally, this also means a reduction in the cash available for buying materials, which in turn leads to a reduction in the surface of the building. The average surface is barely 36 square metres. The main characteristics of these dwellings can be summarized as follows:

- One bedroom (or two at the most), kitchen, living-room and bathroom, in the better-equipped dwellings.
- One bedroom, no living-room, no dining-room, shared bathroom, inadequate kitchen and washing facilities, in the less-well-equipped dwellings.

It is hardly necessary to state that the architectural design of these dwellings is, to be frank, inadequate, and that the quality of the residence is poor.

3.3.2. *Family Autoconstruction Without Credit*

This is the most common method in Colombia for the construction of popular housing. It is a long process during which a family dwelling is constructed step-by-step, making intensive use of the manual labour of men, women and children and of scanty savings if any are available.

In Popayán, this has been the predominant method since the earthquake: almost 50% of the shanty-town dwellings are based on these norms, in spite of the fact that their construction violates all anti-seismic precautions vital in this city.

The population sector which uses this method tends to group into housing associations that play an important role during the construction. Generally, the architectural and technical conditions of these dwellings are unsatisfactory. They are a mixture of the most extravagant architectural styles and make an untechnical use of diverse materials.

The process of autoconstruction and autourbanization that is typical of the Latin American city represents a singular form of urban production. We should not look at it just to defend or, at the other extreme, to criticize this procedure. What can be said is that it is a demonstration of the tremendous capacity of the popular sectors for mak-

ing a city, and in many instances for effecting substantial innovations in academic and capitalistic urban production forms. It is also true that this procedure occurs in an atmosphere of extreme social erosion and with inadequate results.⁴

In this sense, it must be acknowledged that the construction of progressive housing is intrinsically connected to the evolution of the family: if the family size increases, more rooms are built. Hence the result is growing technical difficulties and chaos in design. There is a high incidence of bad use of space, and disregard for satisfactory illumination and ventilation. Furthermore, families evolve at an irregular pace, for reasons of income and demographic factors. This reflects in the characteristics of the urban patchwork, presenting us with an image of autourbanization which is usually incoherent. But undeniably, there is a clear contrast between the decisive and abundant "participation" of the poor and, on the other hand, the absence of the state.

3.3.3. *Autoconstruction in associations and with credit*

In fact, the most significant activity in the area of housing is within the programmes of autoconstruction of the Catholic Archdiocese of Popayán, headed by the Archbishop Samuel Silverio Buitrago, and the programmes of FUNCOP (Foundation for Popular Communication).

Let us look at the basic characteristics of these two projects, of which that of the Archdiocese is on a much larger scale and far exceeds the programmes of FUNCOP in relevant experience and in the magnitude of its practical achievements. Nevertheless, the projects do have some features in common:

- The financing is conceived more as a stimulus than as an end in itself. Consequentially, the aim is not to provide the *total* finance required for each dwelling, but part of it. The vital point is to stimulate individual and collective saving among the shanty-dwellers. The credits are provided interest-free or, if subject to interest, this is only high enough to cover a small portion of the devaluation incurred. This is what is known as 'progressive housing'.
- The programmes are designed in such a manner that the dwellers are not only stimulated to effect personal and social savings (which, in any case, are modest), but also to contribute the human labour force in the building process. This is what the term 'autoconstruction' refers to. The woman's role in this productive process is usually extensive, not only in terms of the high number of female heads of household, but because the men, on leaving the home or on undertaking employment commitments, delegate the women to fulfil the compulsory labour quota which the programmes demand. Of equal or similar importance is the labour contribution of young people and teenagers, who take advantage of their experience with

⁴ "If we consider that the construction of the house swallows up all of the family's savings and most of its free time, it cannot be claimed that the constructed dwelling is an expression of the hidden wealth of popular sectors. This affirmation, never written but often implied, only reveals a determination not to recognize the enormous efforts made in the acquisition of one single objective, a home, to the impairment of the satisfaction of other necessities such as nourishment (...). The monetary cost of such a dwelling is presumably higher than that of similar dwellings built by other systems. The social cost of this dwelling is superlatively high: its production required the neglecting of other urgent necessities. Living in a slum area means health problems and reduces access to appropriate education for one's children." (Riotrio & Driant, 1987, 137-138)

the programme to obtain some kind of training in house construction. In this way, many of them equip themselves for entry into the labour market. In view of an understandable lack of experience and insufficient labour skills, a general characteristic of these projects is the difficulties encountered at the outset, especially as far as the organization of production and the coordination of work rhythms go.

- While the programmes do insist on the repayment of credits by the borrowers, the recuperation of funds is orientated towards the establishment of 'rotational neighbourhood improvement funds'. Thus these sums are returned to the community for the financing of new works. Unfortunately, the experience in this field is not very extensive and several difficulties must be dealt with, amongst others:
 - a) The rhythm of recuperation of funds is quite slow; this means that high inflation rates literally devour a substantial proportion of the resources, so that when a new project is undertaken there is very little capital available for it.
 - b) The dwellers tend to have expectations concentrated exclusively on the production of their dwelling. This makes for difficulties when, during the actual production, there are attempts to implement parallel activities aimed at an investigation of projects towards which the recuperated funds can be channelled. It must be remembered that the auto-construction process demands a work period of 3 to 4 hours in addition to the working day of the shanty-dwellers. In other words, these must then work for 12 to 14 hours. The physical efforts of such a long day have severely limiting effects on the shanty-dwellers' interest in new activities. Given these circumstances, when the dwelling is finally completed the community organization lacks new horizons and thus the possibility of sustained action is thwarted.
 - c) Finally, an additional factor which hampers a long-term projection is directly related to the precarious nature of the organizations faced with the responsibility of directing new projects. What emerges is a systematic lack of experience in the associational management of projects, together with great shortcomings in the area of technical knowledge; both fields of expertise would be vitally needed for the successful undertaking of the projects. This problem can by no means be solved rapidly or easily.

The programmes usually emphasize the fact that the essential factor is not the construction of housing, but the building up of the community. Therefore the process of education and advancement of the community is of great importance. In the Archdiocese's programme there is much insistence on the socio-religious (Christian) ethic, whereas the non-government organizations' programmes focus on components of a more political and organizational nature. These entities orientate the population intensively towards socio-political participation (local administrative committees, election of mayors, etc.) and demand the organized coordination of the shanty-dwellers into stable syndicate bodies which permit them to carry out vindicative activities and to work in coordination with the State.

This task is often not easy, partly because the autoconstruction groups tend to spring up in isolation from other community groups, and partly because of their

inherent organic weakness. A psychological factor which contributes to this is the dwellers' perception of their dwelling as the *single satisfaction* of their needs, devoid of broader social implications. A dwelling is a refuge, an element of protection and security *for the dweller's family*, no more. Inducing the dwellers to confront other aspects is thus a complex task.

It must be noted that the organizations of popular housing are characterized by a fundamental ambivalence, which places them mid-way between functional and territorial organizations. Another influence is due to the existence of a predominantly adaptive tendency in the popular sectors of the urban survival culture. Daily astuteness takes precedence over political logics. This factor reinforces the tendency towards incohesion among social activists, and towards an increase in the levels of collective 'schizophrenia', that is, the loss of common horizons and the disintegration of the social ethos. Autoconstruction groups thus tend to *disappear* once the programme is completed, although the territorial dimension should be an incentive in taking vindictive action as a response to the problems of neighbourhood improvement, urban policies, etc. However, the organizational structures are really relatively unstable; they tend to disappear in the long run, either completely, or through transformation into different organizations.

The non-government organizations visualize technical assistance within completely new parameters. In this respect the experience of FUNCOP is particularly interesting. FUNCOP's work is directed towards a search for new paradigms, inspired by the utopian ideal of the 'democratic city'. It suggests forms of design and usage of urban space that are entirely innovative. In particular, it proposes a new type of relationship between technicians and community. This concept was implemented by the architect Olga Lucia Arango, an employee of FUNCOP and a specialist in Participatory Design.

4. Technicians and Community in Participatory Design

The formation of a new relationship between technician and client is a fundamental factor and an essential peculiarity of the participatory method of design implemented in 'Precision consultancies'. In this case, the client is the organized community. The importance attributed to this new relationship is the outcome of criticisms of the technician/client relationship as present at the conventional professional level when working with an architect's office of a State organism, both of which are based on capitalist division of labour.

In the participatory methodology, emphasis is placed on the aspect of commitment on the technician's part. The absence of a committed approach makes it impossible to attain the understanding and especially the motivation that are necessary. This motivation is an intrinsic part of the vision of a democratic city; it is a pre-requisite for the establishment of an expropriation mechanism and it serves as a back-up for vindictive measures related to health, to the right to work, to culture and identity. These latter aspects are linked to the power hierarchy and the monopoly of resources and methods of production.

The concept of a new type of relationship acquires prominence in the context of the practical experience and professional training of the technicians, be they architects or engineers. In Colombia, the training is predominantly positivist and pragmatic; it is based on the precepts of the neutrality of knowledge and of the pure and objective

nature of learning. This orientation has made for ignorance in the area of social and cultural reality in both urban and rural settings. It has brought an enormous distance from this reality in the case of the architectural profession. The rupture thus produced between the country as it *officially* is, and the country as it *really* is, resulted in a total absence of architects and planning technicians in the reality of the Colombian planning process, inasfar as it is plain that the periphery has become the key component to transformation. Bearing witness to this is the fact that the S.C.A. (Society of Colombian Architects) itself, which as a form of unionization has been an instrument of support for technocratic professionalism, recently complained, overwhelmed by the growth of the 'informal city': "Everything would appear to indicate that the city has surpassed the architect's capacity for intervening in its processes; the profession has been left far behind the pace of events". This statement, like many others made by architects, testifies to a recognition of the professional crisis so obvious in the failure and impotence of technocratic and centralist models.

However, the only way out of this cultural impasse is via a thorough revision, a change of orientation and action which draws the technician into the commitment and the search for a democratic urban ideal. The formulation of a vital, anti-academic, anti-bureaucratic theory of learning is indispensable; its focus should be on 'Participatory Action-Investigation'. This is a national and Latin American movement that is currently performing a highly worthwhile assessment in the areas of social science and research, in an effort to overcome the tendency to apply to these countries schemes and methodologies derived from other geographical contexts.

But the most negative aspect of the positivist approach is not its self-exclusion from most of the human dimensions in the process of Colombian or Latin American urbanization. It is, in fact, its opposite: its intervention. Architectural and technical practices, often embellished with - paradoxically - philanthropic proclamations, have actually worked in favour of the intensification and reproduction of conditions of domination of a cultural and ideological level. The most conspicuous example of this is the diffusion of housing models propagated by the 'international style'. This serves as a basis for a minimal number of solutions to the housing shortage and it is totally removed from the reality of the average householder and from the history and consequences of the Latin American city. The technician works to reinforce the alienation and the loss of identity of human groups in the 'popular' habitat, by propagating these so-called 'housing solutions'. These solutions are far from approaching the social ideal with which they were conceived in the 'pioneer' era - the ideal of conferring dignity to the life of the worker, an urban inhabitant who, today, is a prisoner of necessity and who even lacks personal conscience, since his conscience has been dissolved by massification. They now constitute one more instrument of the phenomenon of autodevaluation, conformism and the loss of the ideal of the city.

Recently, a town planner commented very aptly on the role of the technician/architect/town planner:

"The crisis of architecture is made evident today by the position of the urban architect, who makes decisions on someone else's life about which he knows nothing whatsoever."

In our opinion, there exists an affinity in sympathies - and even in content - between the dispute over positivist systems in the social sciences and the dispute over functionalism in the fields of architecture and urbanism. This marks out a course of

action for the technician involved in participatory processes. The technician who collaborates in processes of Participatory Town Planning abstains from presenting of imposing a consumer product, which is what the technical outfits of the State and of private enterprise do. Instead, he or she makes an effort to stimulate the participation of the population in defining the way of life to which it aspires and the spatial reality that favours this aspiration and renders it possible. Here the technician's task consists in motivating discussion and recovery of the significance of functions within the dwelling; its changes with the passage of time; the value of public spaces; the combinations of collective areas and intimate areas; the harmony of these factors with the spatial arrangement. Above all, in his or her involvement with a community in the process of gaining autonomy, the technician seeks to impart knowledge and to encourage the assessment of the programme by the community itself.

One of the possibilities of participatory design is that it induces a complete revision of the method and style of work of the technician or architect. On breaking with the rigidly compartmented approach of specialized studies that atomize the object of the study, this movement gives rise to a constant dialogue (between architect, sociologist, engineer, social coordinator, doctor), a dialogue which is held with the population and which addresses it on a political level. This confrontation, together with the unravelling of the contradictions between technicians and community, reveals the real nature of the ideology of action and of the technical approach which are proclaimed neutral by the powers-that-be. It thus generates crucial levels of political consciousness and culture, hinting at the likelihood of future developments.

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