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**RESTORATION AND REPOPULATION OF DETERIORATED  
CENTRAL AREAS OF CITIES: EXPERIENCE IN THE REGION**

This document was prepared by Mr. Carlos González Lobo. The opinions expressed in this paper, which has not been subject to editorial review, are the exclusive responsibility of the author and may not coincide with those of the Organization. This is not an official translation.

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## I. THE EARTHQUAKE OF SEPTEMBER, 1985, AND THE LOSS OF HOUSING IN THE CENTRE OF MEXICO CITY

In 1985, Mexico City went through a painful experience which, however, gave rise to a high degree of social creativity in the face of housing challenges in the historical central areas. An earthquake affected the Republic of Mexico at around 7:19 A.M., lasting two minutes and reaching 8.1 on the Richter Scale. A significant number of buildings collapsed or suffered serious damage. Together with the public and office buildings which collapsed, popular housing, mainly in the central area, was damaged beyond repair, when it did not also collapse. The disaster called for difficult rescue operations among the ruins to save survivors and brought out the entire population in rescue efforts, in an example of solidarity never seen before. The evening of the same day, September 19, saw 60,000 families literally sleeping in the streets, with the few belongings and clothes rescued from the tragedy, in circumstances of serious health, food and water supply, and security problems.

Thus, in conditions of a National Emergency, the problem of housing for the victims of the Mexico City earthquake arose, a problem which consisted in two challenges: most victims were in the street, with all the elements for generating social conflict if an effective and prompt solution to their housing needs were not found; and the fact that the efforts to control the disaster through institutional national emergency programme DM-3 of the National Army had been surpassed by the spontaneous activism of the masses, which took on salvaging and rubble removal, together with overall organization, in so powerful, efficient and inevitable an action of solidarity with the victims that the essayist, Carlos Monsivais, called it a "takeover" by the urban masses.

Thus, the issue of guiding the growing anarchy and spirit of solidarity through institutional channels was a central concern of the authorities during the ensuing weeks, producing an attractive space for social experimentation, which was to change political modalities and processes in Mexico.

To make the presentation of the experience of "recovering the housing heritage" of the Centre of Mexico City persuasive, I find myself obliged, with respect to the foreseeable limits of my intervention, to begin with the conflict I just mentioned as a "field of possibilities", within which the Mexican experience may

bear fruit in your analyses and conclusions, noting as well its limits for extrapolation, given the singular nature of the social moment within which the events unfolded.

We have, then, nearly 35,000 families living in the street, camping in the parks and in the gullies adjacent to their property, under plastic and scrap wood, and an unknown number of families living uneasily under the roofs of damaged homes. The latter remained in their homes in fear of losing their rights to housing, being mostly renters in buildings with "frozen rent". On losing those rights, their economic situation would leave them homeless. We cannot ignore, here, the fact that life in the centre of the city, even in slums, is complemented by the best network of urban services in the country: Metro, schools of all kinds, hospitals, markets, recreation and sporting facilities, and, most significantly, access to work, informal trade and the "fayuca" (or trade in goods imported either legally or otherwise), and a wide field of possibilities for changing jobs.

Thus, that same September 19, the State of Mexico found itself in an emergency which created tensions among various actors. The homeless victims, the State-organized groups with their functions appropriate to each case, and the volunteer activists who, in solidarity, took on tasks which arose from the need to aid the victims.

## II. THE EMERGENT HOUSING PROGRAMME: PHASE I

The first institutional solution to be implemented was the creation of National and Metropolitan Emergency Commissions and what came to be called the emergent housing programme: Phase 1, which began October 1, under the Government of the Federal District (D.D.F.) and the Secretariat for Urban and Ecological Development (S.E.D.U.E.) and with the participation of producers of social housing such as INFONAVIT, FOVISSSTE, FOVI/National Bank, AURIS, PEMEX, CFE, and ISSFAM.

Phase 1 managed to house victims in the available inventory of 14,146 dwellings already built by those bodies and through the temporary suspension of assignation and credit programmes for beneficiaries of normal programmes, generating a degree of social tension in those who faced postponements.

Programme aid was granted according to the socioeconomic characteristics and work situation of the beneficiaries, as well as the degree of damage done to their homes. Thus, Phase 1 granted housing to those victims who established rights to the services of the corresponding bodies, while offering diverse options of bank credit to those who did not have those rights.

The result of that programme, which by any account was only a palliative for the problem, was as follows: 17,387 applications for aid were received immediately and, during 1986, 5,482 more were received, yielding a total of 22,869 applications, of which the programme was able to respond to 16,077, by incorporating into the inventory housing under construction when the disaster struck.

The story of the 6,972 other applications was as follows: 2,000 were attended by Popular Housing Renewal programmes, after properties damaged by the earthquake were expropriated; the other 1,956 had to await Phase 2 of the Programme, which began in April, 1987, nearly 2 years after the tragedy, demonstrating the critically limited efficacy of the programme.

In Phase 2, coordination with the civil sector was initiated through agreements with institutions and professional associations to lower costs in the process of providing housing. The D.D.F. and the Government of the State of Mexico decided to exempt tax and State duty payments on the acquisition of housing by victims and the Notary Public associations of both entities agreed to register those properties at no charge, while state-owned banks eliminated the concept of downpayment for housing they financed.

### III. THE ISSUE OF FROZEN RENT (LAW FROM 1943) AND THE ACCUMULATED DETERIORATION OF BUILDINGS UP TO 1985

From the first days of Phase 1, it became clear that the programme could not and would not cover the expectations of a real solution to the problem, given that the absolute majority of the victims were not covered by the provisions of that programme. The damage was concentrated in the centre of the city. The housing lost was located in buildings already in poor shape prior to the 1985 earthquake, the so-called "vecindades" (or cités, conventillos, or corrals) which usually consist in a room of 15 to 18 square metres, and about 4 metres high, which allows for dividing it into an attic or "tapanco", with the services in front: kitchen, bathroom, wash room, and a small courtyard called "azotehuella" with a lighting circuit which organizes the living space systematically. These cells are aligned against the side walls of the neighboring property, which have little frontage in comparison with their depth. Illumination, access and water and light services pass through a central corridor called "patio", in which an intense and interesting community life develops, with its fiestas, the altar of the Virgin of Guadalupe, the shared washing facilities and clothes lines and, at the entry, a kind of filter between the street and the neighborhood, as a discreet and singular collective identity, the portico. And, finally, nearer the street are the more prestigious apartments, for the "middle class" -as the neighbors would say- and access to places of trade, artisan workshops, and even medical and professional offices.

I have tarried in the description of that typology, held in disdain by architectural culture, because it was the most damaged - nearly 3,500 sites were left with severe damage, in total or partial collapse. In them, under the regimen of "frozen rent", nearly 50,000 families had lived, in groups of from 4 families per "vecindad" to groupings of 150 families or more, such as in "the White House" or the "Black Palace" in the Morelos colony.

Those "vecindades" were and are, to date, the most prevalent housing solution to be found in Mexican cities and, since 1943, the immense majority of rental housing in the country was in a state of exception: owners received only that rent payment which pertained in 1943 and which, since then, has been "frozen". In this way, renters were paying 50 cents of a dollar (\$60 in national currency) which, in 1943, amounted to a month's minimum wage, having dropped, by 1985, 2,000 times in value. For that reason, the "vecindades", with their walls of adobe or white rock and covered with wooden rafters and roof terraces, with antiquities from colonial times, and year after year of abuse and negative care, suffered severe damage from the seismic shock.

Popular response to the emergency was remarkable and proved decisive for the modality of the final solution. The solidarity of the first days mobilized the whole population and international aid, as it also generated a climate of faith and optimism in the face of the calamity: "We can recover everything with enthusiasm and abnegation". Nor were examples lacking: neighbours, who once lived in the streets, began to enroll in popular urban organizations and, once there, to collaborate in that new moment in which all had a place. Self-help and community initiative made new relations possible for the inhabitants of the central neighborhoods, hostile to and suspicious of the "helpers in solidarity" who came from all over to join in the participative efforts. Institutional and sector responses were patterned after what was happening in the street. The first requests and complaints, during the September 20, 1985 - May 14, 1986 period, were related to unsafe housing. Thus, as properties were about to be expropriated, the diverse actors and agents took up positions in new relationships which were to redesign the city: the State with all its powers, the Executive and legislators, the diversity of victims who include, in embryonic form, all civil society, and society's identifiable bodies which, for the first time in years, were to take participation seriously.

A few of those groups can be described here succinctly: the popular urban groupings in which the victims will recognize each other and which, in the disaster, achieve operative capacity; the groups of aid in solidarity in three dimensions: those that lend financial, moral and material aid; those that perform advisory services, in the technical, juridical, medical and psychological areas, such as those from the Universities; and the sector groups which were to assume the range of technical support tasks necessary

for reconstruction, some from an institutional perspective and others, much fewer, from the perspective of the popular organizations.

#### IV. THE EXPROPRIATION OF DAMAGED PROPERTIES AND THE PRE-PROJECT FOR RECONSTRUCTION ON THE BASIS OF ADDITIONAL RESOURCES AND PARTICIPATION IN SOLIDARITY

Within three days of the disaster, different popular and labour groups, political organizations and distinguished academicians appeared in the press pressing for the expropriations in favour of the victims, taking into account the situation of the "frozen rent" properties. On the other hand, the property owners believed that the time had come to recover the goods they had lost 40 years ago. Meanwhile, the victims continued to live in the ruined or severely damaged properties, or in the street adjacent to their "vecindad", in fear of losing access to that housing. In that situation of tension, the Federal Government began to take control of the situation and to generate a National Reconstruction Fund, with a bank account open to donations, at the same time that it organized the office for Phase 1, described above. Meanwhile, through the legislature, a pre-project for a "Programme for restoring housing for the victims and for up-dating construction norms in light of the experience of an 8.1 earthquake" was elaborated and, finally, the Federal Consumers' Protection Office was instructed to guarantee and protect the rights of renters in affected areas. Moreover, in a massive and tense march to "The Pines", the Presidential residence, the demand was made for "the reconstruction of housing and guarantees for continued occupancy of the original residences", as an historical programme which would synthesize the feeling of civil society. Thus, with an acute feeling for the moment, President De la Madrid signed two decrees to solve the problem: the first, signed on October 11, 23 days after the earthquake, was called "The expropriation of affected properties" and guaranteed the restoration of housing in the place of residence; the second, signed on October 14, called the "Programme of Popular Housing Renewal" (RHP), established the bases and guarantees for the social, technical and financial strategies needed to complement the collective social project of "restoring the housing patrimony of Mexico City".

The expropriation, which provided the necessary land for the programme, affected 5,427 properties or approximately 250 hectares, producing the foreseeable reactions: horror and indignation in conservatives and democratic enthusiasm in citizens who claim identity with the interests of the people. In fact, a just solution was provided for those affected: property owners, already affected by the "frozen rent" law since 1943, received indemnity in the form of 10 year government bonds, which will have higher yields than the rent they had been collecting; and the victims received guarantees

of stable occupancy and of receiving suitable housing in place of their modest or precarious shacks.

I have taken time to describe the generation of the RHP project to restore housing for the victims because the analysis of the Mexican experience asked of me calls for value judgments: what was extraordinary and effective in the RHP programme was its generation, through dialogue between civil society which discovers and defines itself in the face of the disaster and the institutional bodies which, operating in terms of their constitutional and reglamentary attributes, discover that only through "Urbanism through Dialogue" only when the actors and agents are committed in collective construction on the basis of the free play of ideas and partial projects, can a problem as truly serious as the construction of the City, with all the dangers which that task entails, within the complexity of mass Society, be faced with a guarantee of creative, effective realization, which will strengthen community identity. Is it possible to ask more, politically, of a programme of urban renewal? For that reason, the Mexican experience is a necessary and stimulating matter for study.

\* The programme component of popular groups, their historical claims and demands for identity and rootedness, together with the generation of their own culturally appropriate operative bodies for self defense and mutual support, expressed in confidence in self-help methods and pressure through activism, marches, the capacity for learning and dialogue as collective practices and notable evidence of their collective capacity and honesty in financial management, administration and fulfillment of commitments, merit your creative reflection.

\* The institutional component of the programme, the management of resources, controls and government agencies, in coordination with civil society and international aid agencies, together with a capacity for tolerance and the creation of decentralized bodies, as well as management sensitive to variations in social time and to the need to defend the historical and cultural patrimony of the city, also, I believe, merit your close attention.

The debate about the specific form of the project: its design, socially satisfying typologies, the modality and guarantees of property as patrimony, the democratic (or nearly so) form of resource administration and the public debate about the legitimacy of control of urban development, are, in my opinion, the elements you must analyse so that the minimum elements of the experiment will allow you to carry out the richest possible process of learning from that experience.

I will not tell the whole story. However, behind the legal framework, the expropriation affected 4,308 properties or 213 hectares and 25 billion Pesos were deposited in Bancomer to cover



the nominal bonds, which are tradeable in the Mexican Stock Exchange.

The Great Project was thus begun. A universe of 41,500 families was identified, with a total of 44,787 units, given that small sites for shops and artesan workshops were included which, in fact, are an inseparable part of the urban fabric and, therefore, are victims with equal rights and a constitutive element of the "neighborhood quality" which the Programme was designed to resotre.

Renewal was organized in two directions: consolidation of provisional Housing in the streets, waysides and parks, providing communal sanitary services, temporary housing of improved quality, and communal kitchens and dining facilities; and the elaboration of a census and registry to identify the victims and guarantee their rights (the Personal Certificate of RHP Rights), as well as the creation and acreditation of the Renewal Councils in each property. This, together with the organization of 13 RHP modules in strategic points of the city to receive and respond to the multiple problems which the Programme was to solve in the coming months.

In the technical area, victims who still remained in damaged housing were relocated and on-site inspections and studies were undertaken to verify the magnitud and variety of the renewal and new construction programmes which would be needed. This involved studies of the number of demolitions and rubble removals which would be necessary, in close relation to the provisional design of streets which must necessarily be left open to avoid the collapse of urban traffic, while reorganizing the affected areas for renewed urban life and while reconstruction was under way.

Thus, between October 14, 1985 and the first days of 1986, in a period of adjustments, tensions and a progressive return to order, the Programme established a numerical base for the Metropolitan Emergency Commision, as follows: 8,587 minor repairs, 14,490 major repairs, 21,260 demolitions and reconstructions, for a total of 44,787 activities.

#### V. THE DEMOCRATIC CONCERTATION PACT FOR HOUSING RECONSTRUCTION OF THE PROGRAMME FOR POPULAR HOUSING RENEWAL

The Pact was the explicit agreement between civil society and the Governemnt, was finally defined on May 13, 1986. It was signed by the victims' organizations, Institutes, Universities, Technical Support groups, Associations and Chambers, Foundations and Civil Associations, on behalf of "Civil Society", and by the Secretariat for Urban and Ecological Development and the Department of the Federal District, on behalf of the Government. That Pact established the political, technical, social and financial bases for the reconstruction tasks, as follows:

- \* Re-build on the same site and for the same inhabitants of each property;
- \* Build provisional and comfortable housing near the original home. Families wishing to live with relatives or to rent for the duration of the reconstruction were offered economic assistance.
- \* Build new units of 40 square metres, with living-dining room, two bedrooms, bath, kitchen and space for washing, which is approximately double the average space of the original units. In the case of repairs, the area would never be less.
- \* Programme beneficiaries would only pay for direct construction costs under the conditions established for other popular housing programmes.
- \* Resident organizations could present alternative projects, as long as they fell within the norms of the pact and construction regulations.
- \* Within acceptable cost and use parameters, historically and architecturally valuable buildings, which were inhabited and were affected by the earthquake, would be restored.

Thus, those families which were renters, prior to the earthquake, would become owners under the regimen of neighbour condominium, with free neighbour organization registry of the titles. Credit recovery began in the first days of October and, to date, has been satisfactory. The innovative legal figure is called: Regimen for Property in Condominium among Neighbors.

The RHP programme gave rise to two models of activity, within the framework of the Concertation Pact: projects accepted directly within the programme, amounting to 46,500 units and those built with the support of technical assistance groups and even with external philanthropic aid, which amounted to 7,547 units.

I will now analyse both models.

The broadest and most important model of RHP (the orthodox model) was organized into three basic areas: social, technical and financial, with the following goals and strategies:

#### A. THE SOCIAL AREA

In order to attend to the population, the Programme created 14 offices for the daily ratification of the Concertation Pact agreements with beneficiaries. This involved dealing with the legal and social aspects of the expropriation, property be property.

Personal Rights Certificates were issued according to the criteria and with the ratification of the neighbors. Sale contracts were signed by each family, as were the Projects of each "vecindad", following the corresponding discussion and approval. It was also necessary to resolve the needs for temporary housing of 41,952 families and for rent assistance of a further 19,892 families. Finally, the Social Area undertook the ratification of the process of Allocation and Titling when the construction was complete, through which the beneficiaries received a document reporting possible construction defects so that they could proceed to repair them, for which purpose RHP maintained work teams for six months.

## B. THE TECHNICAL AREA

The technical solutions used by RHP for restoration and construction were generated on the basis of the recognition and evaluation of the magnitude of the task. I will recall here that it was necessary to construct more than 3,500 non-contiguous units, dispersed over an area of 49 square kilometres, in the midst of general activity which continued during all of the construction. If we add the problems of community participation and of supplies, the true size of the challenge can be seen.

Work began in April, 1986 and ended in May, 1987. In somewhat more than 13 months, ruins were demolished, 39,790 units were built and 2,330 prefabricated units were installed. 4,210 units were repaired and 2,500 units were rebuilt in approximately 200 buildings designated as national monuments.

This huge task was performed with the participation of 1,350 private firms, nearly 800 construction companies, 70 supervisory offices, 200 suppliers and 280 architectural and engineering research and project service teams. It was said that, at the time of most intense activity, 114,000 jobs had been generated, of which 61% were for unskilled labour, 9% for professionals and 5% for administrative personnel.

The basic strategy consisted in: 1. Damage evaluation; 2. The creation of flexible prototypes for diverse programmes and properties; 3. Management of the works programme; 4. New anti-seismic security; 5. Treatment of historic monuments; and 6. Management of the urban image. I will comment on what was outstanding in several of those areas because they constitute the most important aspects of the Programme:

**Housing Prototypes:** Reconstruction posed a technical problem which proved to a source of creative energy. It was necessary to discover the way to systematize project processes of construction and works administration, while taking into account the diversity of sites which varied in size, proportion and number of families which

constitute the "vencindad". Therefore, 7 prototypes were created through diverse architectural research efforts and the basic norms for site accomodation and minimum dimensions were established.

**The Works Programme:** The works programme was designed and made uniform for mass construction from the beginning. It is remarkable that it was possible to coordinate more than 800 medium and small constructors in more than 3,000 different fronts and amidst the normal urban activity of the affected areas. This was possible due to the specific agreements with each community and neighbourhood organization.

Another relevant technical aspect was security, especially given the concern generated by the recent earthquake. The fact that the land in the region is highly compactable and that the watertable is at only 1.5 metres made it necessary to improve sites with fill of light stone on which foundations could be laid. It was also necessary to bring up the standard of reinforce concrete structures above the existing norms, which had proven to be unrealistic. Constructions were limited to three stories, which constituted a basic design parametre. Structural elements were left visible until the end of construction in order to determine their visual dimensions and their behaviour in terms of settling and weight-bearing. This was also the case in other solutions that were developed.

**Treatment of historical monuments:** In those buildings, prior habitational use was preserved, although now in adequate conditions, and their structural elements were reinforced or renewed, and sanitary, water and gas service was installed, without damaging their architectural and/or cultural value. Modifications adapting them as fitting housing did not affect facades or patios, even though they did involve the use of modern techniques and materials, without however fulfilling the most rigorous and extensive restoration norms.

**The urban image:** Since the reconstruction works were concentrated in the historic centre of Mexico City and given the number of RHP works to be undertaken in the neighborhoods, it was decided that, although the project would be based on prototypes, great attention would be paid to facades and their relation to the surrounding urban context. As a sign of singular identity for each property, an specific entry-way and colour scheme were designed.

### C. THE FINANCIAL AREA

The reconstruction programme called for the mobilization of a very important volume of economic resources, which made it necessary to budget the necessary funds, seek sources of financing, design credit schemes to which beneficiaries would have access and

recovery mechanisms, together with administrative and supervisory operational systems for resource management. At the peak of operations, 13 billion Pesos a week were being spent. I will describe several significant aspects of this Area:

The RHP budget was designed on the basis of the types of works required and their projection over time, for the purpose of foreseeing the impact of inflation. Therefore, both direct and indirect costs were estimated. In this case, the latter proved to be considerable because, along with the normal indirect costs involved in housing programmes, they involved: demolition costs, provisional housing and rent subsidies, among others.

The RHP budget was integrated into the Federal Expenditure Budgets for 1986 and 1987. The first year, \$200.512.6 billion Pesos were allocated, of which 64% was to finance direct works costs, 34%, indirect costs, including taxes, and 2% for operational costs. For the second year, \$74.1119 billion Pesos were added, yielding a total budget of \$274.6245 billion Pesos.

As for finance sources, the budget authorities decided to finance part of the reconstruction effort with external resources from the International Bank of Reconstruction and Development (World Bank). In that way, the best manner of mixing available fiscal funds with credit was sought, and the decision was taken, in terms of the beneficiaries capacity to pay and the rules of the World Bank, to pay direct works with credit (approximately 57% of the total) and to allocate fiscal resources to the so-called non-eligible expenditures, such as Studies and Projects, demolitions, works supervision, temporary housing, rent support and current expenses. An effort was made to make beneficiary credit comparable to that extended to low-income families for housing. The prices which were established were: \$3,210,000 for new units, \$2,470,000 for repaired units, and \$1,280,000 for minor repairs. Credit recovery was assigned to an inactive Trusteeship, within SEDUE. Beneficiaries made payments in the branches of the National Credit Society. That payment amounted to between 20% and 30% of the minimum monthly wage, according to programme type. Amortization schedules range from 5.5 to 8.5 years. The funds recovered will be used for the construction of popular housing throughout the country, through the National Fund for Popular Housing Trusteeship (FONAHPO).

Given that it was an emergency programme, control mechanisms over resource management were strengthened. Therefore, together with the usual obligatory controls for any institution of that type, RHP implemented specialized accounting practices during the entire course of the project.

## VI. THE SELF-HELP "VECINDADES"

I will now proceed to analyse the second modality, that of those neighbors who opted for deciding for themselves, in a self-help modality, on the basis of the fifth clause of the Concertation Pact mentioned earlier, which provides that: "those groups which work with their own projects and self-help and construction programmes must have adequate executive projects and works supervision. RHP will create a projects committee in which representatives of the diverse support groups working with victims will participate with personnel of RHP and SEDUE, in order to guarantee the integrity of the structure and the security of the installations made in those units". This modality allowed for the construction of 7,546 units, approximately 15% of the total.

The groups which opted for this modality were oriented toward neighbourhood renewal, rejecting the "pigeon coops", as the institutional housing projects were popularly called, and seeking to preserve urban identity and atavistic rootedness. Thus, for them, the technical support group, working in solidarity, was their "project agent", who would develop personalized designs in frank, participatory dialogue with the neighbours, adjusting to the peculiarities of the unique and stimulating experience of the group, which, for the first and surely only time, would be allowed to know and decide on their house and neighborhood, as active citizens.

Their real support came from the urban struggles prior to the earthquake during which neighbours had organized socially and culturally, although some groups were formed in function of the earthquake itself. The solidarity which the disaster produced in the whole world brought new and non-tied up resources from associations and philanthropic groups of all kinds: the International Red Cross and that of Germany, the Red Half Moon, the Swiss Workers, the Catholic F.A.C. of long-term presence in the neighbourhoods of the central areas, the Lutherans, the Mormons, the Anglicans, and even the priests and nuns of the towns arrived with generous and disinterested aid.

Each of the 1,000 vecindades found a financial patron and its technical support group, with them, adjusted the works programme and the amount of financing needed, which fluctuated between US\$2,500 and US\$1,000 for the most modest projects. For its part, RHP supplied the sites, the construction licence and supervision, integrating them into the final process of granting titles in equal terms with the rest of the programme.

In this modality, the neighbours of each "vecindad" generated their own programme; decided on their "made to order" project in participatory fashion; received their resources in cash; and administered them through the neighbour (usually a woman) who, as

far as is known, managed them with transparent honesty; and (what is most attractive) obtained differential advantages in the day-to-day management of the resources, achieving larger constructed spaces, community use areas and facades "to taste", "just like the middle class persons we are, Mr. Architect...".

Thus, in this modality which was classified as "atypical" in official documents, a "de facto" criticism was simultaneously undertaken of the large housing renewal programme (RHP), making it possible to analyse the contrasts between the diverse ways of conceiving the recovery and repopulation of the central areas of the city.

In fact, the atypical modality contains a range of positions: from those which were identical to those of RHP, but with self-help execution in assuming the solution and making it their own; to completely self-help cases in which the norms, housing concepts and relations with the site and surrounding city were re-thought; as well as experiments in the more ingenuous use of resources.

Given that spectrum, it is impossible to describe all cases in detail. However, there is room to note some of the most important elements, which, although operative in only some cases, will be of interest in your continental reflection on housing in central areas - at least that is my hope:

#### A. IN THE SOCIAL AREA

I will highlight three issues:

The appropriation of the programme by beneficiaries who placed emphasis on cultural affirmation centred on the permanence of the neighbours in their place. The issue of belonging to the neighbourhood, to the street and "their vecindad" led them to recover the cultural values of their surroundings lovingly, without ceasing to be "vecindades". This involved the recognition of the neighborhood as a source of identity, and coming to appreciate significant spaces and traditional customs as important for constructing community defense and recovery projects. Thus, the housing project came to focus on the virtues of the terrace, with the washing areas and clothes lines, and of the kitchen independent of the living-dining areas, given the cultural manner of preparing food, and on the access to the units at ground level, in consideration for the elderly and handicapped. This, together with the constructive criticism that it was necessary to incorporate three separate spaces for sleeping into the typology of "vecindad" units in order to avoid over-crowding and promiscuity, and that the complete independence of the master bedroom, illumination and ventilation from independent open space, and avoiding placing units one on top of the other, as a guarantee of harmonious living together, were also necessary.

With respect to the practical way of grouping units (the "vecindad"), the following programmatic elements were defined: the convenience of placing the sets of units on adjacent property lines so that all non-built space would be concentrated in the "neighbours' patio" and the preservation of private terraces, thus achieving the greatest possible space between neighbours who will be facing each other, a solution typical of "vecindades" since the XVIII century, in Mexico; the street facade should be completely occupied to the established municipal reserve and, there, shops and workshops should be located so that there would be no blind walls on the street, because experience teaches that, in the case of blind walls, there is no control over that area which thus becomes a place of thugs and violence. Finally, an access closed by a gate and linked to a covered passage (zahuán), space used to socialize and for the traditional customs, which should contain an altar to the Virgen of Guadalupe, Patron of Mexico and of the "vecindades", leaving no spaces without specific uses because they are a source of inter-neighbour problems, either as garbage disposal areas or because the strongest neighbour usurps them asymmetrically.

In third place is the issue of the recovery of the neighbourhood. Organizing themselves for successful reconstruction gave the neighbours a new scale for valuing their capacity for action. Deciding, once and for all, to recover control of the form and fate of the neighbourhood led them to rethink the historical, spatial support which constitutes them as a group: the Neighbourhood, "their neighbourhood": Los Morelos, Tepito, La Obrera, Atlampa, La Guerrero, became cultural spaces to be recovered and, since the earthquake had turned the streets and spaces of the area upside down, vacant lots and residual spaces were subjected to harmonious consideration in projects. Not everything would be achieved but, in the "collective memory" they remain as projects which, since 1988, are called "micro-urbanisms" in Mexico.

## B. IN THE TECHNICAL AREA

With respect to technical matters, allow me to highlight three suggestive issues for your reflections:

Several atypical projects argued that three levels of units with shared stairways and galleries in the facades of typical RHP housing are surpassed by small-surface three story units, linked by internal stairways, thus managing to convert uniform construction and loss of privacy into increased habitable space, independence, and visual and acoustic privacy. As well, three story units allow for greater spatial separation between reception areas and bedrooms, all achieved with the same technical structural module of the same constructed area.



Another typological innovation which appeared in these projects was that of housing modules, when financing needs were less than US\$1,000, which allowed for the construction of units of 25.5 square metres on sites of 30.5 metres. Through use of the "large shed" procedure, the units cost the equivalent of 32.38 square metres or nearly US\$950 (at the 1986 exchange rate) but which allow for progressive expansions of up to 55.87 square metres in their interiors, or 39.67% more than the 40 square metres of RHP constructions. Of course, this expansion is achieved by dry-walling in the interiors or through the additional efforts of the inhabitants, but through the use of appropriate technologies, easily appropriated and cheap, and allows for units with three bedrooms, instead of the two provided for by RHP, with a terrace which increases useful and habitable private space to 60.65 square metres for the family.

The third significant issue in the self-help modality is the use of appropriate and appropriable technologies in different atypical projects: first, the technology which allows for constructing more square metres and is called "maximum space at minimum cost", which, by rationalizing the structural use of foundation areas, prefabricated structural elements of reinforcement concrete on bearing walls and roofs of resistant geometry, together with self-help construction procedures which incorporated all available work capacity, including children and the elderly, guaranteed increased works programmes, with the result that what characterised the atypical projects was that they produced more units at lower cost. Finally, another innovative technological and ecological aspect was the incorporation of mechanisms to catch rain water, with filters and gravity tanks, and the recycling of soapy waters to flush toilettes with the corresponding saving of drinking water, for both reasons. And the curiosity and acceptance of the inhabitants.

### C. IN THE FINANCIAL AREA

The different ways of obtaining resources for the programme merit your attention.

When foreign agencies passed monies in cash to the beneficiary groups, without the mediation of technical groups or of the authorities, current expenses of money management were avoided, as well as excessive indirect expenses. That management by beneficiaries, in positions of Treasurers or Accountants, is surprising, not only for its efficiency and honesty, but for the circumstantial way in which multiple controls were generated: those of the neighbourhood organization itself; of the international agency; and those of the support groups which lent advisory services to the administrators. The cost differentials per unit between the official programme and the atypical projects give

eloquent testimony of the advantages of the latter. Is it possible to generalize that experience to other cases? I leave that issue to your reflections.

Another suggestive issue was the creation of collective patrimony by several groups. Some "vecindades" managed to leave some space free on the street which, therefore, acquired commercial value due to its friction with urban life. It was possible to register those sites as belonging to the whole "vecindad" through use of a form of the juridical figure of neighbourhood property in condominium for the following purpose: to permit the administration, income and use of profits to guarantee and reinforce the neighbourhood organization which, once housing had been acquired, could enter into a process of dissolution. On the other hand, the resources generated by those spaces could constitute a common fund for the future maintainance costs of the "vecindad" and to subsidize the late payments of those inhabitants who would require that service, which demonstrates the spirit of community solidarity which was the hallmark of those experiences and endures in the new relations created. To end this reflection, in third place, I will mention that the funds generously supplied by the agencies were donated on the condition that they be recovered in fideicommissionaries, as a revolving fund for the continuous creation of new housing for the homeless, through organizations and technical groups of support and solidarity.

## VII. CRITICAL EVALUATION OF THE EXPERIENCE

To end this presentation, I will attempt to summarize those elements which may serve to motivate your reflections on the restoration and repopulation of the central areas of the cities of Latin America.

I believe that what is relevant about the experience of Mexico City after the earthquake of 1985 is: the communitarian creativity which emerged from the social practice of dialogue among tensions, conflicts and the capacity for tolerance and dialogue which enabled us to arrive at the Democratic Concertation, which itself contains the most flexible programmatic terms and represents all parties, without authoritarianism and fear of dissidence. That process, at least in the case of Mexico at that time, produced rich and stimulating results. Perhaps that is the form of communitarian learning and is, why not?, the best way to face the design of the recovery of cities, guaranteeing, through the consensual participation of the community, that the technicians and the bodies of civil society and the institutional apparatus, the norms, the programme and projects and the works themselves enjoy legitimacy and democratic acceptance, which acknowledges that the solution may be far from ideal but is what we were capable of, all together,

and, therefore, is what most identifies us and makes us recognize ourselves in the solution.

Our experience demonstrates that achieving the free use of an amount of urban land is a necessary and sufficient condition for undertaking the recovery and repopulation of the historic centres of our cities which, moreover, in Mexico, resolved an historical problem of unrationalized economics in urban rent policy and is an example of the need to make institutional criteria for expropriation, which is not necessarily a measure which restricts individual liberty, flexible, at least as demonstrated in the case of the "frozen rent vecindades" in Mexico.

Our experience demonstrates that the traditional solutions based on inventories of institutional housing resources and characteristic ways of acting can be surpassed by measures which place society and the bodies of Civil society and the associations of architects, engineers and the construction industry in tension. As well, the norms, regulations and forced methodologies for work in limit situations allow for qualitative leaps, through which urban culture adjusts and brings up to date the best thinking of the age with respect to the needs and imbalances of complex urban life, in permanent development. Moreover, the Mexican experience seems to demonstrate clearly that socially satisfying typologies are not only a matter for specialists but involve attentive efforts at participatory generation of architectural programmes and their analysis and comprehension by all: designers and politicians, on the one hand, and citizens aware of what is necessary and possible, on the other, which will guarantee housing programmes which the beneficiaries will appropriate and greater political efficiency in Government in terms of social satisfaction.

Finally, it seems to me that you should reflect on the overlapping between housing policy and design, which is usually treated with disdain or given secondary importance. In the Mexican experience, there seem to be noteworthy elements in the restoration and repopulation of central areas: given the scope of the works involved, it is possible that the multitude of small construction companies and architects' and engineers' offices come to form an organic body to respond to the diversity of widely dispersed works and, simultaneously, work together within a common strategy and project, far from the limitations which the large construction company and sole professional firm impose on the size and complexity of this kind of challenge.

The final reflection to which I invite you is that calibrating the true importance of design within a housing programme of the type studied here, with the physical form of the space and its insertion into the preexisting urban fabric, which can be vital for enthusiastic appropriation by the community or, on the contrary, can generate rejection and vandalism of the units built. Examples of this latter situation abound. Here, we have seen that, after a

weak attempt to use institutional models for housing blocks, the population affected by the emergency and the thinking citizenry struggled so that the designs would be coherent with the identity and rootedness of the beneficiaries. It is to hoped that their efforts and success will serve in other occasions and places.

It is also worth recalling that more coherent designs can convert the norm of "40 square metres, 2 bedrooms" into 55 or 50 square metres, with 3 bedrooms (There are fathers, daughters and sons, which gives three, and not two.), and greater privacy in coherence with Mexican habits and traditions, and even in terms of respect for the elderly and handicapped. Success was achieved in Mexico. Why not in other places?