THE STATE AND SELF-HELP BUILDING IN PEREIRA, COLOMBIA

by

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VOLUME ONE

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ABSTRACT

This thesis examines state interventions into self-help building in Pereira, Colombia using a critical and analytical framework developed out of articulation theory.

In Part One the shift from 'conventional' to self-help housing policies in Latin America in the post-war period is understood in the context of the transition from 'modernization' to 'neo-modernization' development strategies, such as Redistribution with Growth and Basic Needs. A history of self-help housing theories and policies draws out the global and structural conditions of articulation underpinning their ascendancy in the Seventies. A systematic theoretical framework is elaborated that identifies 'spontaneous' self-help activities as a distinct form of housing production differentiated from state self-help projects by its specific conditions of articulation. A general model of Latin American urban politics is then presented. Part One concludes by postulating the specific conditions of economic, political and ideological articulation characteristic of state self-help housing projects.

In Part Two a systematic historical and empirical analysis is presented of those aspects of Pereira's urban and housing development related to the theoretical issues. State efforts at organizing self-help activities through housing and upgrading projects and community development structures are examined. Three models are developed to explain the political articulation of the low income settlement process by the local state, political party and patron-clientage structures. In the case studies of a squatter settlement and state self-help housing
project that follow, empirical evidence of self-help activities is assembled and the economic, ideological and political articulations that govern them are identified.

In Part Three an interpretation of the empirical materials from Pereira identifies the articulations governing state self-help housing projects and the economic, political and ideological limits to their use as low income housing solutions in the city.
ACKNOWLEDGEMENTS

The completion of this thesis has been a lengthy affair, and consequently the list of acknowledgements is long. Thanks are of course due to my supervisor, Dr. Alan Gilbert, the Department of Geography and the authorities of University College London, without whose flexibility this thesis would not have been completed.

Many people associated with the self-help and informal sector debates in Europe have contributed either through their support or criticism to the evolution my approach to the issues discussed in this thesis. They include: Ray Bromley; Marisa Carmona; Jorge Fiori; Chris Gerry; Hans Harms, Kosta Mathey; Geoff Payne; Ronaldo Ramirez; Reinhard Skinner; and John Turner.

In Colombia I was overwhelmed by the hospitality of people in general, and by the assistance of a large number of open-minded architects, planners and academics interested in urban and housing issues. Particular thanks are extended to the architect Emilio Pradilla; and to the sociologist Oscar Marulanda who greatly assisted my research efforts in Bogota and Pereira.

The civic traditions of Pereira are widely recognized in Colombia, and it is hoped that this work will in some measure repay the debt of gratitude that I owe to the many Pereiranos who assisted my research in the city. It was the architect Francisco Londoño Marulanda, Director of the Municipal Planning Department, who more than anybody else greatly advanced my understanding of self-help housing and state interventions into self-help building in the city. Despite disagreements on many issues, he provided an office and extended the facilities of the Planning Department to me, thus giving a unique opportunity to study the interventions of the local state and political system in the low income settlement.
process. My understanding of local political activities and the nature of the land market in the city was greatly advanced by conversations with Juan Guillermo Angel Mejía, Rector of the Technical University of Pereira and a former Director of the Valorization Department. Ivan Gomez, Manager of the Pereira branch of the ICT also assisted my research into the agency's self-help housing and upgrading activities. My understanding of the significance of design and planning issues and progressive development procedures in the city's squatter settlements and state self-help housing projects was considerably improved by my friendship with two architects, Guillermo Hoyos and Hernando Torres. Hernando, at the time a student in the Faculty of Architecture in the National University at Manizales, was particularly helpful as he assisted in the survey work in the two case study settlements, and was largely responsible for the original drawing of the settlement profile of Barrio El Plumon. Other Pereiranos who assisted my research efforts included Guillermo Castaño, Diego Londoño, Carlos Arturo Gonzalez and many others. Needless to say none of these people are responsible for the ideas and opinions expressed in the thesis, and to all I extend my thanks.

It is doubtful if the thesis would have been completed without the help of the Department of Geography and Environmental Engineering and the Whiting School of Engineering of Johns Hopkins University, Baltimore, who provided every form of encouragement and assistance to secure its completion. I should like to extend my gratitude to all the faculty and staff involved, and in particular to the Head of the Department Prof. M. G. Wolman.

Special thanks are also due to Richard Scott who did such a first class job as word-processor in preparing the final document.

Last but not least, I should like to thank my wife Farida and my daughter
Jazmin for their patience, resilience and encouragement in the long period involved in bringing this work to its conclusion.
DEDICATION

This work is dedicated to my mother, and to the people of Pereira.
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<td>A.D.</td>
<td>(Administración Directa) Direct Administration Programme</td>
</tr>
<tr>
<td>A.M.</td>
<td>(Ayuda Mutua) Mutual Aid Programme</td>
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<tr>
<td>ANAPO</td>
<td>(Alianza Nacional Popular) National Popular Alliance</td>
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<tr>
<td>ANDI</td>
<td>(Asociación Nacional de Industriales) National Association of Industrialists</td>
</tr>
<tr>
<td>BCH</td>
<td>(Banco Central Hipotecario) Central Mortgage Bank</td>
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<td>CAMACOL</td>
<td>(Cámara Colombiano de la Construcción) Colombian Chamber of Construction</td>
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<td>C.A.V.</td>
<td>(Corporación de Ahorro y Vivienda) Housing and Savings Corporation</td>
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<tr>
<td>CBD</td>
<td>Central Business District</td>
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<td>C.C.</td>
<td>(Contrato Cofinanciado) Cofinanced Contract Programme</td>
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<tr>
<td>C.D.</td>
<td>(Contrato Directo) Direct Contract Programme</td>
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<tr>
<td>CEDE</td>
<td>(Centro de Estudios Sobre Desarrollo Económico) Centre for Economic Development Studies</td>
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<tr>
<td>CENAC</td>
<td>(Centro Nacional de Estudios de la Construcción) National Centre for Construction Studies</td>
</tr>
<tr>
<td>CID</td>
<td>(Centro de Investigaciones para el Desarrollo) Centre for Research on Development</td>
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<tr>
<td>CNP</td>
<td>(Central Nacional de Provivienda) National Housing Action Centre</td>
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<tr>
<td>COLCULTURA</td>
<td>(Instituto Colombiano de Cultura) National Cultural Institute</td>
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<tr>
<td>COLDEPORTES</td>
<td>(Instituto Colombiano de Deportes) National Recreational Institute</td>
</tr>
<tr>
<td>DANE</td>
<td>(Departamento Administrativo Nacional de Estadística) National Administrative Department for Statistics</td>
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<tr>
<td>DAPM</td>
<td>(Departamento Administrativo de Planeación Municipal de Pereira) Department of Municipal Planning Pereira</td>
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DIGIDECE (Dirección General de Integración y Desarrollo de la Comunidad) General Board for Community Integration and Development

DLF Development Loan Fund

DNP (Departamento Nacional de Planeación) National Planning Department

DSE (Desarrollo Social y Económico) Fund for Social and Economic Development

EAP Economically Active Population

ECLA Economic Commission for Latin America

EE.PP. (Empresas Publicas de Pereira) Public Services Corporation of Pereira

E.T. (Erradicación de Tugurios) Slum Eradication Programme

E.P. (Esfuerzo Propio) Self-Help Programme (Family-based)

FDC (Fondo de Desarrollo Comunal) Fund for Community Development

FEDECAFE (Federación Nacional de Cafeteros de Colombia) National Federation of Colombian Coffee-Growers

FF.CC. (Ferrocarriles de Colombia) Colombian Railways

F.R. (Fondo de Redes) Services Fund

H.B. (Habilitación de Barrios) Settlement Improvement Programme

HIG Housing Investment Guaranty Programme

IBRD International Bank for Reconstruction and Development

ICA International Cooperation Administration

ICBF (Instituto Colombiano de Bienestar Familiar) Colombian Institute of Family Welfare

ICT (Instituto Crédito Territorial) Land Credit Institute

IDA International Development Administration

IDB InterAmerican Development Bank
IGAC (Instituto Geográfico Agustín Codazzi) The Agustín Codazzi Geographical Institute

ILO International Labour Organization

IIPUP Integrated Improvement Programme for the Urban Poor

INDERENA (Instituto Nacional de Desarrollo de los Recursos Nacionales) National Institute for the Development of Natural Resources

INSFOPAL (Instituto Nacional de Fomento Municipal) National Institute of Municipal Development

JAC (Junta de Acción Comunal) Community Action Board

MOIR (Movimiento Obrero Institucional Revolucionario) Workers Institutional Revolutionary Movement

M.V. (Mejoramiento de Vivienda) Housing Improvement Programme

NIDL New International Division of Labour

OED Oxford English Dictionary

OFISEL (Oficina de Investigaciones Socio-Economicas y Legales) Office for Socio-Economic and Legal Research

OO.PP. (Obras Publicas) Secretary of Public Works Pereira

P.3. (Terceras Partes) Three Party Co-financed Contract Programme

PICES Programme for Investment in the Small Capital Enterprise Sector

PMA (Plan Mundial de Alimentación) World Food Plan

PPL (Préstamos a Propietarios de Lotes) Loans to Lotowners Programme

P.T. (Plan de Trabajadores) Workers Plan Programme

RwG Redistribution with Growth

SENA (Servicio Nacional de Aprendizaje) National Apprenticeship Service

SPTF Social Progress Trust Fund
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>SSSR</td>
<td>(Servicio Seccional de Salud de Risaralda) Risaralda Health Services Branch</td>
</tr>
<tr>
<td>UPAC</td>
<td>(Unidad de Poder Adquisitivo Constante) Unit of Constant Purchasing Power</td>
</tr>
<tr>
<td>USAID</td>
<td>US Agency for International Development</td>
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Part 1

THEORETICAL ANALYSIS
Chapter One

DEVELOPMENT STRATEGIES AND URBAN HOUSING POLICIES IN LATIN AMERICA IN THE POST-WAR PERIOD

LATIN AMERICAN URBAN HOUSING POLICIES IN THE MODERNIZATION PERIOD

The Rise of Modernization Strategies

Modernization theory was the dominant development paradigm in Latin America in the immediate post-war period and all of its economic, political and cultural variants shared the argument that the transition from ‘agricultural’ to ‘modern urban/industrial’ societies could be achieved by the ‘developing’ country emulating the Western pattern of development. Here the capitalist mode of production had eradicated pre-capitalist modes of production in its rise to dominance.

The basic aim of modernization was to decrease the share of agriculture and increase that of manufacturing and services in employment and output through substantial capitalist investment. Development was understood as a process of economic growth measurable in terms of per capita GNP.

In Latin America, modernization strategies were focussed on ECLA import-substitution industrialization models (Prebisch, 1964; Furtado, 1971; Sunkel, 1969). In these models agriculture was assigned a secondary role to an expanding industrial sector identified as the ‘dynamic leading sector’ (Lewis, 1954). An explicit attack on problems of poverty, unemployment and income inequality
was considered unnecessary given the ability of growth to increase employment and income opportunities. Given the 'Eurocentric' reading, cultural modernization theorists (Hoselitz, 1960; McClelland, 1964 et al.) also identified the social, cultural, institutional and attitudinal transformations required for modernization to succeed. Many modernization theorists (Rostow, 1960; Hagen 1962; Kuznets, 1973) advocated the diffusion of western political, social and cultural structures and technology to facilitate the modernization process - through aid and technology transfer; the development of western capital, labour and market conditions; the reorganization or westernization of social and cultural institutions, and the modernization of 'elites' through training.

The theory that industrialization and urbanization required the replacement of pre-capitalist relations of production and their accompanying social, cultural, political and ideological structures had a profound influence on the formulation of urban housing, employment, and planning policies.

Modernization theorists frequently argued that the relationship between industrialization and urbanization revealed in the historical trajectories of the developed countries would be repeated in the Third World. This relationship was one where a pool of rural surplus labour generated by the capitalist development of agriculture found employment in the growing urban manufacturing sector. Modernization models, such as that provided by W. Arthur Lewis, identified the migration process as reallocating unwanted rural surplus labour to urban industry without any fall in rural output or productivity. Policies to stimulate migration included: differential urban and rural wage rates; urban bias in public investments in housing, employment, education, health and public
services; and the substantial subsidization of urban food, transport and fuel prices.4

Policies towards mushrooming inner city slums (*inquilinatos*) and peripheral shantytowns were also influenced by modernization theory. The settlements were almost universally identified with an undifferentiated mass of rural newcomers or as rural enclaves in the city (Bonilla, 1970; Matos Mar, 1961; Pearse, 1961). The social structure of the settlements was analyzed in terms of the preservation or destruction of peasant attitudes and institutions, and the assimilation of modern urban/industrial values by individuals in the process of transition.5 Culture of Poverty and Marginality Theory in the Sixties generally identified these settlements with a residentially and socially-immobile population fated to perpetuate its appalling living conditions because of the persistence of traditional values and the absence of a modern attitudinal behavior structure.6

These theories also resulted in a dualistic model of the socio-economic and spatial structure of the Latin American city: a modern capitalist urban/industrial city in which land, housing and improvements were provided through the market, coexisting with peripheral squatter settlements where goods and services were provided through subsistence production for self-consumption. This assessment resulted in housing policies advocating the physical eradication of slums and squatter settlements, and the public and private provision of alternative industrialized and manufactured housing that conformed to ‘modern’ minimum standards (‘conventional’ housing). Conventional rehousing of slumdwellers and squatters would result in the disappearance of the disfunctional personality traits, and antisocial patterns of behaviour and living conditions characteristic of the *barrios*.7
Eradication policies were widely used where squatters and tenants occupied land required for commercial redevelopment near the CBD; or where their continued presence contradicted the requirements of the 'modern' city (land for motorways, hospitals, universities, airports, municipal facilities etc.).

Similarly, the 'informal sector' employment activities that sustained so many of the settlers were regarded as 'unproductive' and even 'parasitical'. Attempts were made to control them through locational restrictions, zoning codes, tight licensing policies, and fines and taxation.

The reverse side of the eradication coin, and the universal housing policy formula, was the construction with industrial or semi-industrial techniques of public housing projects on peripheral land. In line with the industrial priorities of modernization strategy public housing contracts were used to favour those firms which were most active in pursuing the goals of capital-intensive industrialization. Essentially this meant state sponsorship of the industrial form with its standardized and prefabricated parts and structures, complex and multi-rise designs and 'packaged' housing arrangements. Where there was a lack of an indigenous capacity a common outcome was a reliance on foreign contractors and the import of industrial building systems and materials. The high standards and goals embodied in urban subdivision, building and zoning codes favoured the use of these systems over those of their small-scale competitors. Conventional state housing projects offered considerable investment opportunities for landed property, finance and construction capital; political opportunities for local political leaders and parties; employment opportunities for bureaucratic and professional interests, and were built according to industrial and manufactured planning and design ideologies.
Thus during the modernization period state housing policies in Latin America were aimed at developing the private sector in the land, finance, construction and construction materials sectors. The policies also had to deal with the contradictions and obstacles to the capitalist development of these sectors. Under the Alliance for Progress arrangements, attempts were made to deal with shortages of construction capital derived from high land costs, slowness in the land development and construction process, and shortages of foreign exchange for the purchase of industrial equipment. Measures implemented to increase the supply of circulating finance capital to the industrial housing form included: the mobilization of voluntary savings through the formation of savings and loans associations; the introduction of index-linked savings systems; the channelling of social security and compulsory savings funds to housing; the expansion of mortgage insurance schemes to attract direct U.S. foreign investment in housing; and state guarantees for liquidity and financial support to mortgage banks, savings and loans associations etc. In the late Sixties and early Seventies housing corporations were established (e.g. in Colombia and Brazil) to increase the flow of finance capital to the construction sector (Pradilla, 1977:18).

Subsidies were used to expand effective demand for conventional housing in the form of lower interest rates, longer amortization periods and reduced initial downpayments. Concessional user charges for public services were also common. In the Keynesian fashion government housing expenditures were used to even out the effects of fluctuations in demand on housing supply, whilst state contracts were used to stimulate the private sector. Indeed this was made an explicit condition of IDB loans under the Alliance of Progress arrangements. (Koth, Silva and Dietz, 1965:65). Under the Pastrana Four Strategies Plan in Colombia in the early
Seventies it was argued that housing policies involving these mechanisms could be used as motors for more general economic development.12

The Failure of Modernization Strategies

By the early Seventies modernization strategies were clearly running into trouble. It was certainly true that most Latin American countries had experienced relatively high GNP growth rates and even higher rates of growth in manufacturing output. Table 1 indicates that whilst the continent’s population more than doubled in the period 1950-70, real GDP increased more than 4.5 times; manufacturing increased its share of GDP from 20% to 26%; the value of manufacturing output increased by more than 5 times, and per capita manufacturing GDP almost tripled in real terms.

However the promised benefits of industrialization failed to materialize for a large proportion of the population. The rise in per capita GDP concealed the fact that in many cases there was a deterioration in living conditions, lower employment opportunities and an increase in income inequalities. Projections of these indicators suggested it was somewhat foolhardy to assert their transitory nature through further growth of the manufacturing sector.

The failure of the modern industrial ‘leading sector’ to generate sufficient jobs became obvious by the early Seventies. In the Sixties growth in manufacturing output exceeded growth in manufacturing employment by between two and five times (Table 2); annual unemployment rates were increasing more than twice as fast as population growth (Table 3); and by 1970 underemployment rates were estimated at 20% for Latin America as a whole (Squire, 1981:72).13 Indeed, Ayres (1983:151) claims that industry’s contribution to the non-agricultural
labour force actually fell between 1950-70.

In the early Seventies the effects of modernization policies on income distribution also became clear. Table 4 shows the high levels of income concentration in the top 20% of the population, who were typically receiving between 4 and 10 times as much income as the bottom 40%. Some writers (Chenery and Syrquin, 1975; Ahluwalia and Chenery, 1973; Adelman and Morris, 1973) claimed that industrialization and urbanization had led to a worsening of income distribution - this deterioration being particularly notable for those countries with the highest GNP growth (e.g. Brazil and Mexico). With high and rising unemployment levels; a highly skewed pattern of income distribution; and high dependency rates (generally over 50% of the population) the proportion of the total population living in conditions of absolute and/or relative poverty increased substantially.

The urban and housing policies associated with modernization strategies also ran into similar difficulties. Certainly the pace of urban growth had stepped up during these decades. In 1950 only 25.1% of the continent's population were living in cities - by 1975 40.5% were urban dwellers (Table 5). Between 1950-70 the rate of growth of the urban population (5.5% p.a.) was double the rate of natural increase (Table 6), and in absolute terms the urban population of Latin America almost tripled from 67.5 mills. in 1950 to 198.4 mills. in 1975 (Table 5). Given the social and political strains in the burgeoning cities, pressures on public expenditure, growing urban and environmental diseconomies, and alarming projections of existing trends, the wisdom of continuing with policies that encouraged rural to urban migration and urban rather than rural development was challenged (Table 7). Despite a decline in the contribution of migration to
total urban growth (UN, 1980), growth rates still far exceeded the rate of urban job creation and the absorption capacity of both the industrial and the service sectors. By the late Sixties it was also clear that the conventional solution to the housing problem was failing: output remained limited; there was the continued proliferation of slums and shantytowns, and an inexorable growth in housing deficits.

It also became obvious that despite subsidies, conventional housing was far too expensive for its intended beneficiaries. A World Bank policy paper (World Bank, 1975) revealed that between 1/3rd and 2/3rds of the urban population were unable to afford the cheapest public sector units during this period. Independent research revealed a pattern of massive rent defaulting and middle class encroachment in public housing, a result of serious diseconomies introduced into low income residents’ livelihoods by peripheral locations, restrictions on housing use, and limited utilities resulting from the implementation of ‘unrealistic’ design and planning norms.

In the absence of cheap conventional housing, policy attempts to restrict squatting and clear slum areas were doomed to failure and became increasingly unviable politically. By the early Seventies between a third and two thirds of the population of the larger cities in the continent were living in slums or squatter settlements (Table 8).

NEO-MODERNIZATION STRATEGIES AND THE RISE OF SELF-HELP HOUSING

Neo-Modernization Strategies

The Rise of Neo-Modernization Theory

Despite the popularity of dependency and marxist theories in academic and
Third World circles the most influential critique of modernization theory came from a group of writers in the tradition of neo-classical economics. Their policy recommendations changed the direction of capitalist development in the Seventies and Eighties, seeking new means to pursue the same ends as modernization strategies. It would therefore be fair to characterize these writers as 'Neo-Modernizers'.

They argued that the continued reliance on capital-intensive industrialization would be disastrous given: stagnant agricultural productivity; the low participation of manufacturing in total employment; manufacturing output to employment growth ratios of 3 or 4 to 1; rates of unemployment rising faster than rates of job creation; growing income inequalities; massive rural-to-urban migration, and widespread poverty. In particular, they attacked the Keynesian basis of modernization theories that had argued that unemployment was the result of insufficient aggregate demand remediable by state policies of demand management. With reference to free market employment models, they argued rather that the principal obstacles to expanded output and employment were 'supply side constraints' that included: the nature of land tenure arrangements; inadequate public administration; the values and attitudes of ruling elites; the absence of integrated and efficient product, factor and financial markets; serious deficiencies in physical and social infrastructure, and shortages of capital, foreign exchange, intermediate inputs and skilled and managerial labour. It was argued that the downward flexibility of wages in the modern sector was impeded by union bargaining strength, legislated civil servant salary scales, and by the hiring practices of multinational corporations. The modernization assumption that the rich would save or invest income increments derived from growth was challenged
by the widespread reports of capital flight and conspicuous consumption of products with a high import and foreign exchange content.

Given these constraints it was argued that Keynesian attempts to reduce unemployment through the expansion of aggregate demand could lead to higher prices and chronic inflation. Neither could the spatial models of modernization theory be supported. Failure to stimulate rural development had encouraged outmigration and led to stagnant output and productivity; whilst in the cities widening income differences and growing unemployment and underemployment had led to widespread absolute and relative poverty.19

Neo-Modernizers pointed to substantial variations in the ‘pattern of development’ that indicated a significant role for government policy and the trade, aid and investment policies of developed countries (Chenery et al., 1974).20 Poverty, inequality and unemployment were not the inevitable consequence of growth per se but were linked to the political and institutional framework under which this growth was carried out.21 Policies should therefore be implemented that would achieve growth through a direct attack on inequality, unemployment and poverty.

Neo-Modernizers argued that the more unequal the income distribution the more supply and demand forces were determined by the consumption preferences of the rich. The resulting pattern of demand was thus weighted in favour of luxury rather than necessary goods whose complexity often required capital-intensive technologies with minimal employment effects. A more equal income distribution would therefore increase demand for labour-intensive necessary goods.

Neo-Modernizers identified unemployment as resulting from slow growth in demand and a rapidly growing labour supply associated with high rates of natural
increase of population, and rural-urban migration. In the modernization period most of the growth in *per capita* output was accounted for by imported technologies that substituted capital for labour. However benefits from increased labour productivity could be more than offset by reductions in total factor productivity and an increase in the average production costs derived from the underutilization of capacity. Lower absolute incomes and greater income inequalities in LDC markets blocked the optimal efficiency of imported technologies. Policy readjustments were therefore recommended that included employment generation with improvements in total factor productivity as a major objective. This meant investigating the possibilities of expanding 'labour saving' rather than 'capital saving' technologies and reexamining the whole question of technological transfer.

It was argued that an employment-based strategy had to promote low cost, labour-intensive production technologies. Neo-classical economics had argued that for a given technology, reductions in the price of labour relative to capital would lead to a substitution of capital for labour, which would occur where labour was abundant and capital relatively scarce. However structural, institutional and political 'distortions in factor prices' in LDCs had resulted in a market price for labour that was higher, and for capital that was lower, than their real scarcity or 'shadow value' would determine under conditions of the free interplay of supply and demand forces. Prices of capital were kept artificially low by capital subsidies and those of labour high by trade union pressures, minimum wage laws, social security and legislation, and the labour practices of multinational corporations. The net effect of 'distorted factor prices' was therefore to encourage capital-intensive technologies, to diminish the rate of employment generation, and to
increase income inequality by giving capital owners artificially high returns.

Measures to secure a lowering of the relative price of labour and the raising of the relative price of capital would increase factor substitution of capital with labour, and thereby increase output and employment, through the development of labour-intensive technologies. The consequence would be less poverty and greater equality through alterations in the functional distribution of income.

Policies suggested to address poverty and inequality included the transfer of a weighted proportion of the savings and investment generated by growth to low income groups; direct transfers and subsidies to the poor and the expanded provision of essential urban goods and services. By the late Sixties these ideas gradually crystallized into two development policy options: the 'Basic Needs' Approach and the 'Redistribution with Growth' Strategy.

**The Basic Needs Approach**

The Basic Needs Approach, argued that the principal policy emphasis should be the provision of an acceptable range and quality of 'life sustaining' goods, services and employment opportunities aimed at satisfying 'basic needs'. Although differences were expressed over what constituted 'the core bundle and priorities' (Payer, 1982:85) attention was focussed on five areas: universal access to basic consumer goods; basic services; productive employment; basic infrastructure; and mass participation (IDS, 1978).²²

The Basic Needs Approach emerged in the Seventies as a variety of policy options promoted by major international agencies, but its roots lay in a diverse set of ad-hoc experiences in the Fifties and Sixties.²³ The most influential agency was the ILO, which in the late Sixties set up its World Employment Programme (WEP), and changed its emphasis from narrowly-defined wage employment to a
broader concept of productive employment. Two publications *Meetings Basic Needs* (ILO, 1975a) and *Employment, Growth and Basic Needs* (ILO, 1975b) incorporated many of the ideas about poverty alleviation, income redistribution and employment-led growth already reviewed. ILO Country Mission Reports (particularly those from Ghana, Kenya and the Philippines) were also highly influential, advocating deregulation of the ‘urban informal sector'; technical and financial assistance for small-scale enterprises, and the development of appropriate technologies (ILO, 1970; 1976; Hart, 1973).²⁴

Despite considerable variations, some general characteristics of Basic Needs policies can be observed. All stressed: the merits of self-reliance; the need for changes in the patterns of production, consumption and demand; the need for the mobilization of domestic resources and the need to stimulate labour-intensive technologies and small-scale production units. Basic Needs strategies were espoused by a wide range of political regimes. Conservative governments tended to integrate consumption-oriented and non-participatory policies within a general economic philosophy of laissez-faire markets, deregulation and the stimulation of a small business class. Populist and progressive regimes tended to emphasize human rights, self-reliance and participation based on transfer payments and labour-intensive employment strategies. Radical regimes stressed primary redistribution of assets, income and power, mass participation, and a renunciation of elite consumer patterns.

**Redistribution with Growth**

The major development strategy that dominated the development policies of national governments and international aid agencies in the Seventies and early Eighties was ‘Redistribution with Growth' (RwG) (Chenery et al., 1974). The
theoretical stimulus for RwG came from the group of 'empirical structuralists' around Hollis Chenery in the World Bank's Development Research Centre. After 1973 the theory acquired semi-official status in the World Bank. Its policy prescriptions were elaborated at the sectoral lending level, and using the leverage of the 'matching funds' system and conditionality, the policy was applied in many less developed countries. The World Bank was rapidly followed in its sponsorship of the strategy by other multilateral and bilateral lending agencies.25

The basic argument of RwG was that 'the objectives of growth and equality may not be in conflict' (Chenery et al., 1974:17). Growth should take place in the context of sustained income growth for 'target poverty groups'26 and investment be redirected towards the poor to increase their productivity, incomes, output and welfare.27 The existing distribution of income was not to be changed, but rather there had to be a progressive redistribution of the new increments in growth towards the poor. The basic goals were thus to be an improvement in the absolute incomes of the poor rather than an attack on relative inequality; the distribution of income increments rather than a redistribution of existing assets or income; and measures to increase the productivity and output of the poor.

RwG proposed specific production and transfer policies to secure its goals:

1. More employment could be created in the modern sector by removing 'factor price distortions' in labour and capital markets. The elimination of capital subsidies, and holding the line on wages would lead, it was argued, to an increase in the employment absorption capacity of the modern sector. Although it was admitted that large capital-intensive units of production were mandatory for many capital and intermediate goods, considerable scope for labour substitution was identified in the handling, packaging and storage of manufactured products,
and in the footwear, clothing, food-processing and construction sectors. The labour absorption capacity of the modern sector could also be increased by changing the composition of output.28

2. Increased income-generating opportunities in the informal sector could be encouraged through the development of ‘mutually beneficial’ sub-contracting and marketing links between informal sector and modern sector firms; and by granting benefits to small scale enterprises in selected labour-intensive sectors (e.g. wood and leather products, truck and bus assembly, agricultural tools, construction goods, miscellaneous household goods etc.). The principal method of stimulating small scale enterprises was to be the removal of special incentives to large firms (subsidized credit, cheap foreign exchange, favourable licensing arrangements) in those sectors with the greatest potential for employment generation. However positive measures towards small scale enterprises were also proposed including the removal of licensing, registration and tax regulations; improved access to scarce resources, skilled labour and markets; technical and managerial training and the provision of financial aid by reforming interest rate structures, credit allocation mechanisms and collateral requirements.

3. The third policy area to secure redistribution with growth was through transfer arrangements. Public expenditures on water, electricity, sewerage, transport, education, health provision and housing should be increasingly targeted on the urban poor, and subsidies for rich consumers removed. These measures would secure a direct improvement in the living conditions, productivity and health of the poor.

After 1973 the World Bank diversified its sectoral lending by complementing traditional loans for basic economic infrastructure with loans specifically
directed towards RwG goals.\textsuperscript{29} Recommendations were elaborated for specific sectors in a series of sector policy papers, and organizational reforms were carried out to guarantee implementation.\textsuperscript{30}

Thus by the early Seventies a development strategy had emerged with distinct policy goals. These included the attempt to secure increased output, productivity and incomes through policies aimed at alleviating poverty, inequality and unemployment; the redistribution of income and investment increments derived from growth; the search for labour-intensive and appropriate technologies; the deregulation of informal sector activities; the elimination of factor price distortions in labour and capital markets, and the introduction of transfer strategies in public service investments and pricing policies. It was in this setting that self-help housing theories were to be operationalized.

The Rise of Self-Help Housing Theory and Practice

The Origins of Self-Help Housing Theory

No authoritative history of the origins of the Self-Help Housing Movement exists, but the phenomenon of people participating in the production of necessary goods and services that they consume themselves is as old as humanity itself. If we restrict the definition of ‘self-help’ to state attempts to encourage or sponsor self-help housing, then its origins can be traced back to the 19th century.

Harms (1982;20) identifies its earliest advocates as a group of German writers in the 1840s (Victor Huber, Julius Faucher and C. W. Hoffman). Huber’s book \textit{Self-Help of the Working Classes through Voluntary Consumer Associations and Inner Colonization} recommended rural colonization with model communities on the Owen and Fourier lines, with private property ownership achievable through

\textsuperscript{52}
collective association ('self-help') as the solution to the housing problem. The British Building Society Movement was also looked upon favourably in Germany at this time.

Subsequent debates on the housing question centered around the Proudhonist themes of the desirability of owner-occupation, the merits of the 'cottage system', and the need to create savings and loans associations. Proudhon had argued that the landlord/tenant and capitalist/wage worker relationship were similar and that tenants could become owners through legislation converting rent payments into redemption installments. In the 1870s Proudhonist ideas were widely propagated by Mulberger and Sax as a solution to the growing urban housing problem in Germany and were criticized by Engels (1975) in *The Housing Question*.

Mulberger aspiring to a 'world in which each person turns out a separate and independent product that is immediately consumable and exchangeable in the market' (Engels, 1975:312) argued for the redemption of rent payments to secure universal owner occupation. Against this, Engels argued that the universalization of homeownership would not affect the capitalist mode of production at all because the tenant/landlord relationship was concerned only with the distribution of surplus value created elsewhere (in the capital/wage relationship).

In the *Housing Conditions of the Working Class and Their Reform* (1869) Emil Sax aimed to solve the housing problem and raise the 'so called propertyless classes to the level of the propertied classes' (Engels, 1975:325) by the establishment of model working class colonies near the towns; the extension of land and capital by factory-owners to workers for self-help building; the formation of mortgage credit associations; and the extension of municipal loans to improve
workers’ housing. Sax recognized that in the cities self-help could only be realized imperfectly ‘insofar as the principle of private property ownership is strengthened as to react on the quality of the dwelling’; and he argued for the abolition or revision of all legislation that accentuated the low income housing shortage.

Engels opposed these proposals arguing that owner occupation would not result in an improvement in workers’ conditions because a lowering in housing costs (and thus the reproduction costs of labour power) would result in lower wages; that the threat of eviction in factory owner housing weakened the ability of workers to strike; that mortgage credit associations catered largely for the needs of the petty bourgeoisie and were prone to speculative practices; and that revision of building legislation would merely encourage worse forms of jerry-building. He concluded that ‘as long as the capitalist mode of production continues to exist it is folly to hope for an isolated settlement of the housing question or any other social question affecting the lot of the workers’ (Engels, 1975:353).

Self-help housing policies reemerged in Germany and the USA during the Depression of the Thirties. High unemployment and growing poverty had forced the unemployed to set up squatter settlements on the edge of German cities (Harms, 1982:44). Government policies of suburban ‘minimum estates’ (plots provided only with wells and pumps) were introduced to stimulate self-help housing and food production. The Nazis supplemented these policies with building materials loans.

Self-help housing programmes also emerged in the Pennsylvania coalfields in the Thirties where attempts were made to alleviate unemployment by stimulating the self-help production of food and housing.31
After the Second World War the principal developments in the Self-Help Housing Movement occurred in Latin America. In Puerto Rico in the late Forties a rural resettlement programme gave 67,000 landless rural workers three acre plots to farm, and the US Housing and Home Finance Agency (HHFA) developed the 'mutual aid' self-help system as a means of catering for their housing needs. Work commenced in 1949, and by the early Sixties between 30,000 and 40,000 houses had been built. The Puerto Rican programme remained the largest single demonstration of self-help housing methods for many years, and the manuals it developed for 'family-based' and 'mutual aid' self-help building were subsequently highly influential throughout Latin America.

Of course self-help ideas were of little significance in the Fifties given the dominant policy wisdoms of eradication and conventional housing. However, isolated aided self-help projects were established by the U.S. International Cooperation Administration (ICA) in Brazil, Guatemala, Costa Rica, El Salvador, Chile, Dominican Republic, Peru, and Colombia (Koth, Silva and Dietz, 1965).

The greatest single stimulus to the development of the self-help housing movement, however, was to come with the implementation of the Alliance for Progress agreements in 1961. The political purposes of the Alliance are now widely recognized. In the face of peasant unrest, sluggish economic growth and the impact of the Cuban Revolution Alliance money was used to pressurize Latin American governments to implement limited land reforms and the diversion of some housing resources to low and middle income groups.

Alliance for Progress housing policies were firmly based on Keynesian policies of demand management: housing investments generated growth and
employment; fluctuations in the construction sector could be evened out by state subcontracting policies; support for industrial technologies would improve labour productivity, and housing supply could be expanded by increased long term financing. However there were also compelling reasons for commitments to ‘low income housing’. Home improvement loans and self-help building on a family, mutual aid or cooperative basis would reduce costs by substituting paid with unpaid labour, and the capitalization of spare time would result in an increase in the housing stock and national income (Koth, Silva and Dietz, 1965:93).

A wide range of self-help housing projects were sponsored by the implementation agencies - the InterAmerican Development Bank (IDB), and the US Agency for International Development (USAID). The most common arrangement was for the beneficiaries to acquire the land with the assistance of USAID, IDB or government funds and for the housing agency to plan the settlement, provide the designs, and arrange for public utility connections. Under the aided self-help method, construction proceeded on a family-by-family basis, and under the mutual aid system through cooperative methods. Concessional loans were extended for the purchase of lots and building materials.

Self-help projects also planned for a financial contribution by the borrower; the development of ‘regular savings and thrift habits’; the organization of housing cooperatives, and the creation of effective implementation institutions. The IDB argued that the ‘self-help housing technique’ should be incorporated ‘in order to reduce the total cost, to reduce initial cash downpayments, to increase the participant’s equity by the value of his labour power (‘sweat equity’), and to permit the acquisition of new skills which might eventually be employed in other sectors of the country’s development’ (IDB 1965:75). Resources were exclusively directed
towards private homeownership which was regarded as 'the most important social objective of the housing programme' (IDB, 1965:7).

The Alliance for Progress arrangements resulted in an historical unprecedented encouragement of state sponsored self-help housing, generalizing what were previously one-off projects throughout the continent, and establishing the bureaucratic structures necessary to implement them as part of national housing policies. By 1965 it was observed that 'virtually all countries are executing, have prepared or are now preparing national housing programs which incorporate the aided self-help system' (Koth, Silva and Dietz, 1965:87).35

However support for self-help housing was neither the major goal nor achievement of the Alliance for Progress housing arrangements. By far the greater part of Alliance resources were directed at providing modernization solutions for the middle classes (e.g. savings and loans associations, stimulation of the private sector, industrialized housing etc.). In all countries (with the possible exception of Colombia), conventional housing output for the middle classes far exceeded self-help housing; the volume of output was minimal in relation to overall need; and many of the self-help housing projects themselves failed to reach the lower income groups.36

Few governments were willing to maintain a serious commitment to self-help housing strategies after 1966 when Alliance money was phased out, and consequently national housing policies and international housing aid returned largely to conventional housing.37

The Rise of Self-Help Housing Theory in the Sixties: Charles Abrams and John Turner

Despite this retrenchment, major developments occurred in self-help housing theory at this time. The growing influence of self-help ideas in Western
architectural and planning circles in the late Sixties was associated with growing discontent with contemporary modernist architectural and planning solutions; ghetto uprisings in the USA; idealistic notions about communal living and a return to artisanry amongst hippie youth culture; and a growing critique of the ecological effects of large scale industrialization. Major theoretical developments at this time came from Charles Abrams (1964;1966) and J.F.C. Turner (1963; 1965; 1967; 1968; 1969; 1972a; 1972b; 1976; 1978; 1982). A more positive assessment of slum and squatter housing led both writers to formulate a set of principles concerning the nature of housing, self-help and the role of the state. These principles informed both a critique of conventional housing policies and their policy recommendations which were to provide the intellectual rationale for the triumph of self-help housing policies in the Seventies. A full discussion of the theoretical contributions of Abrams and Turner is to be found in Appendix I and we shall turn immediately to their policy recommendations.

1. **Homeownership and Security of Tenure in Land**

Despite policy differences, both Turner and Abrams argued strongly in favour of the principle of homeownership and security of tenure in land in state housing policies.

Turner’s Peruvian experiences demonstrated the marked effect of granting security of tenure on the rate of development of squatter housing. Thus he recommended that the state legalize squatter settlements, provide legal access to land for the poor and limit land concentration through ‘a system of localized trusteeship’ in which rights of usufruct were ‘invested in the local community’ (Turner, 1976:116). These policies clearly meant the abandonment of eradication programmes.
Abrams also argued that the generalization of property rights in land and dwellings should be a fundamental principle of housing policy. Private property, he argued, encouraged savings and investment, and diminished political discontent, but tolerance of squatting reduced confidence in government and sanctioned breaches of existing property rights (Abrams, 1966:8).  

In resolving the contradiction between granting property rights to squatters and maintaining existing rights to land, the state should pursue pragmatic, flexible but firm state policies with policy options related to specific conditions (prevention, control, containment, eviction, legalization). In general, governments should publicize and implement their intentions to remove squatters from private property (Abrams, 1966:8). These measures required strong state powers in areas such as compulsory purchase, regulatory and police powers, squatter registration etc. (Abrams, 1964:67).

2. **Progressive Development**

Both Abrams and Turner recommended the introduction of the progressive development procedures observed in squatter settlements into housing and urban policies, where residents built at a pace and to a standard consistent with their needs and finances. Progressive development had a number of characteristics: on-site residence during construction; the incremental replacement of temporary and unstable by permanent and stable materials; the incremental expansion of built areas, and the progressive provision of services, infrastructure and community and social facilities.

Abrams proposed three types of projects involving progressive development and self-help principles. In land and utilities projects residents would be selected and allocated small plots of serviced land on which to build their houses. Loans
would be extended for land and building materials under favourable terms, and thereafter the resident would be free to 'decide whether to use his own skills or hire others for all, most or part of the work' (Abrams, 1964:174). In the core house option the government would provide a serviced site and a minimum living space with or without a sanitary unit, which could subsequently be expanded by the resident as time and finances permitted. Advantages of core housing projects included productivity gains from mass assembly, immediate on-site residence, a wide range of designs, and development possibilities for local materials industries. The third programme advocated by Abrams was the roof-loan scheme. If loans were made available for the purchase of this difficult and expensive element families would be greatly motivated to complete their dwellings through self-help or contract labour (Abrams, 1964:260).

Turner, however, saw progressive development as an expression of the principle of autonomy and dweller control - the exercise of the right of the 'freedom to build'. As squatter settlements were gradually improving the state should assist this process rather than eradicate the settlements - an idea that led to the concept of settlement upgrading. Operating with the assumption that there were no significant differences between initial and final costs that could be attributed to the phasing of investment in gradual construction (as opposed to the conventional alternative), Turner argued that incorporation of progressive development procedures could expand low income access to state housing projects.

3. **A Self-Help Contribution**

Despite the fact that they are known as the founders of the self-help housing movement both Abrams and Turner regarded direct 'self-help' labour contributions as essential only as an option. This apparent paradox is accounted
for by the fact that both writers used the term 'self-help' in the much broader
sense of self-help management.

Abrams advocated the reorganization of self-help housing policies on the
basis of a 'family decision-making model'. All of his recommendations allowed for
the possibility of self-help labour contributions, but households should also have
the right to contract skilled labourers for specific tasks (Abrams, 1964;1966).

Turner's concept of self-help was elaborated in terms of his theory of
'自主' and 'heteronomous' housing, characterized by the presence and the
absence of 'dweller control' respectively. Full dweller control was contrasted with
its absence in conventional housing and industrialized housing packages. Self-help
housing activities in squatter settlements were much nearer to autonomy, but
could only be fully realized through government initiatives to secure land, finance,
appropriate technologies and services for the settlers. The solution to the housing
problem could be achieved through the state helping the poor to help themselves.

For Turner, self-help was an expression of the right of 'freedom to build'
where families made decisions about the design, construction and management of
dwellings and settlements as well as about direct investments of unpaid labour
and/or money savings. The best results, he argued, were obtained when the user
was in control of the design, construction and management of his own house -
whether he built it himself was only of secondary importance.

4. *Access to Financial Resources*

Both Abrams and Turner favoured the expansion of affordable credit to
low income groups. Abrams saw the 'financial problem' as a root cause of the
housing problem. He supported all the Alliance for Progress measures aimed at
attracting capital to housing and was in favour of housing subsidies (interest
rebates and 'write-downs'). Rent controls should be avoided because they led to a lack of investment in the housing stock, and without tighter measures against rent defaulters and the depoliticization of the public rents issue there would be serious revenue and output constraints on public agencies.

Turner argued that the rigid selection criteria, restrictive collateral requirements and excessively high minimum loans of conventional financing systems all conspired to exclude low income groups; whilst heavy downpayments, high interest rates and an inflexible system of monthly repayments led to high levels of default and residential turnover in public housing projects. Current practices of income-generated savings, brick-savings, and money-lending provided the necessary flexibility for low income builders and could be extended in state projects through government guarantees for private lending (Turner, 1976:55).

5. **Access to Appropriate Technology and Building Materials**

Abrams emphasized the need for the maximum use of local materials, technology and labour power in his policy recommendations. At the same time he also argued that self-help labour contributions were often inefficient and unproductive; that local technology was almost 'Neolithic', and that local materials were often used to make a poor quality product or were underutilized. Consequently he proposed the modification of traditional techniques and labour processes to secure maximization of local inputs and improved productivity. Measures suggested included: improving construction methods with more efficient block-making machines and powered hand-tools; updating traditional techniques and the diffusion of skills through on-site technical instruction; the introduction of modern cost accounting methods for labour and materials control; the simplification of designs to allow increased use of local materials; and the
development of local building industries and alternative local materials (e.g. lime mortar cement, stabilized earth blocks etc.). Abrams also argued that: ‘There is a future for on-site prefabrication and quantity on-site production as well as for prefabricated parts. Efficient mass produced walls, roofs, pipelines, doors and windows will help reduce the cost, and economic prefabrication of a cheap shell will save money too’ (Abrams, 1964:168).

Turner was an enthusiastic advocate of appropriate housing technologies and materials. A viable housing policy, he argued, would use small scale, self-governed technologies and improved appropriate materials: ‘small is beautiful with the proviso that some jobs need large organizations and powerful machinery’ (Turner, 1976:155). Governments, should develop, test and make widely available appropriate technologies and materials. Traditional technologies and materials should be adapted to incorporate improvements in assembly, standardization and transport; and should be designed with an eye to cost, durability and mass production.

6. Standards, Planning and Levels of State Intervention

Abrams was one of the first of his generation to identify the cost implications of high and inflexible standards; and recommended design and planning flexibility and the reduction of service and space standards to cut costs. However nowhere in his work did he elaborate a systematic approach to the question of reduction of standards, support for small scale technologies and deregulation. He retained a firm belief in the need for a strong state presence in order to regulate and stimulate the private sector and to control the urbanization process.

Turner, proposed a radical restructuring of the levels of authority between
the local, municipal and central government levels in line with his theory of autonomous housing. He also clearly saw that legislation on minimum standards and building, planning and urban development had to be reformed in order to realize the benefits derived from self-help and progressive development. The centralization of power and resources in the public and private sectors contradicted the principles of user control that alone could be the basis of a 'viable housing policy'. Here the local level and the popular sector would control the design, construction and management of dwellings and settlement and the assembly of land, labour, materials and finance; the municipal sector would provide infrastructure and services; and the central government would develop the financial and legislative mechanisms necessary to support these activities. Turner argued that 'large organizations should withdraw from housing construction and management and should concentrate on installing infrastructure and manufacturing and supplying tools and materials that people and their own small enterprises can use locally' (Turner, 1976:123).

Turner also rejected the modern minimum standard concept in favour of the concept of standards as guides towards the progressive achievement of reformulated minimum goals. This concept should be written into legislation governing housing and urban development. The nature of these standards had to be changed - performance rather than specification standards were preferable as was 'planning through limits' achievable through proscriptive planning legislation. Moreover the definition of 'minimum' also had to change. Predetermined fixed standards for housing goods and services were too costly for low income groups, and outlawed progressive development procedures. Reasonable standards for shelter, infrastructure and services should be carefully related to costs and the 'felt
needs' of the population. The western planning principle of rigid separation of land uses should be modified to permit low income groups proximity to employment sources. These standards should be flexible allowing for as many options as possible to residents in lot sizes, materials, designs, and services.

The Triumph of Self-Help Housing Policies in the Seventies

The triumph of self-help housing policies in the Seventies and Eighties can best be explained in the context of the broader goals of Redistribution with Growth and Basic Needs strategies that dominated the lending policies of the major international agencies in this period (Burgess, 1988a, 1988b).

Under the presidency of the Robert McNamara (1969-81), the World Bank made a systematic attempt to elaborate broader RwG goals at the sectoral lending level and to use the leverage of the matching funds system to implement these policies throughout the Third World. In the realm of urban housing, servicing and employment, attention was focussed on the self-help theories of Turner and Abrams and on the proponents of the Urban Informal Sector and Intermediate Technology (Schumacher, 1974; Illich, 1978; Freire, 1972). It was in this setting of a limited reformism and a Bank-imposed financial regime of affordability, full cost recovery and replicability that these theories were to be operationalized.

After 1972 the World Bank became the most important sponsor of self-help housing, and changes in its policies generally brought on similar policy changes by the other agencies (e.g. USAID, IDB). Prior to 1972 loans for urban development generally received a low sectoral priority, and almost exclusively benefitted middle and upper income groups. The 1972 policy changes aimed at making a 'direct attack' on urban and rural poverty. Projects were designed specifically with a
target population in mind (usually the bottom 60% of the income distribution profile), and the 'poverty content' of the programmes had to be stated in staff appraisal reports (Williams; 1984:175). Two basic housing policies were developed.

First, there was the upgrading of slums and squatter settlements through the regularization of tenure; the granting of home improvement loans; the provision or improvement of basic services and physical infrastructure, and the construction of social, community and employment facilities. After 1978 these were often delivered as an integrated package, 'Integrated Urban Development Projects'. Second, there was the provision of sites and services - newly-serviced plots (sometimes with core housing) which selected beneficiaries could buy under favourable credit arrangements.

The early projects paid little attention to encouraging employment activities. By the late Seventies, however, an increasing proportion of international funds became available for informal sector activities at both the sectoral and project levels. The concept of 'small scale enterprise' was formulated - a category which included small shops, family businesses, artisanal activities, cooperatives and worker-managed enterprises. International agencies began to integrate support for these activities into urban project loans.43

Three main phases can be identified in the World Bank lending policies for housing after 1972. In the first phase (1972-75) attention was almost exclusively concentrated on sites and services; in the second (1976-79) the emphasis shifted towards upgrading slums and squatter settlements in the form of integrated urban development projects. In the third phase (1979-84) the emphasis on squatter and slum upgrading was complemented by attempts to stimulate labour-intensive
employment activities and community organization within projects.

These policies were repeated by other major bilateral and multilateral lending agencies particularly USAID whose urban lending policies supported sites and services, upgrading, core housing, and low cost projects. In the late Seventies the agency set up programmes (PICES, IIPUP) to support small scale enterprises, community development, employment generation and credit and savings programmes (USAID, 1984; 1985).

The influence of the self-help housing theories of Turner and Abrams on these policies was profound. Most of their policy principles and recommendations were taken up although there were some significant omissions (e.g. dweller control, radical land measures, decentralization):

1. The merits of homeownership and security of land tenure were stressed in World Bank housing policies, both for sites and services and squatter upgrading projects. The effects of the desire for tenure on urban residential patterns, and of security of tenure on the rate of physical development were accepted by the agencies.

2. The need to incorporate the self-help principle into public housing policies was also recognized. The self-help element was organized in sponsored projects in one or more of the following ways:
   - Through ‘mutual help’ in which residents were organized into workgroups supervised by project management.
   - Through self-help labour with the family exclusively using its own labour to build the house.
   - Through self-help management where the household hired and supervised individual workers.
Through self-help contracting where the family hired a contractor to build the house to order.

Initially the self-help projects were based on the first two types of self-help contribution, but by the late Seventies the third and fourth types became more common, and indeed loans for hiring labour became available to project households.

3. The third principle accepted from self-help housing theory was that of progressive development. In most projects it consisted of the staged development of fixed designs in which the serviced site and occasionally parts of the house (core housing) were built by a contractor, and where the obligation to complete the house remained with the household. The basic argument that affordability could be achieved by separating initial and final costs through the staged delivery of housing goods and services over longer periods of time was accepted by the international agencies.

4. The fourth basic principle accepted from self-help housing theory was the need to reduce planning, design, and technical standards to levels affordable by the target population, operating under the general principle of 'full cost recovery'. In propagating this measure, reference was frequently made to the ideological rationale of the self-help school: existing standards were inappropriate for the needs of the urban poor, and were dominated by Western values and priorities associated with colonial traditions and neo-colonial practices.

In reality the move to lower standards in World Bank projects had a more mundane goal: to reduce the quantity of goods and services which the resident could receive for fixed proportion of his monthly income (usually 20-25% was taken as an appropriate housing expenditure in affordability calculations).
Measures to increase densities, were considered indispensable for lowering escalating land, services and infrastructure costs. The World Bank also accepted the argument that excessive regulation increased building costs. Deregulation and the revision of conventional legislation on housing and urban development, was also urged on recipient governments.

5. The fifth principle accepted from self-help theory was that of increasing the access of residents to financial resources. Here traditional methods such as interest rebates, write-downs on land and building costs, extension of amortization periods and lower initial downpayments were used. However, loans were also extended for the purchase of building materials, and in the early Eighties for the hiring of labour, and the construction of rental units. However, under conditions of austerity in the first half of the Eighties increased efforts were being made to eradicate housing subsidies from the projects.

6. The sixth principle accepted from the self-help school was the need to develop, test and make available appropriate technologies and materials that could be used in the construction sector. The measures suggested by Abrams and Turner dovetailed with the macroeconomic employment and poverty policies suggested by RwG and Basic Needs strategists. Their measures to introduce productivity and efficiency gains through prefabrication, standardization and mass assembly were widely applied in sites and services and upgrading projects. They included: improved construction methods (particularly block-making equipment and powered handtools); the mass on-site production of simple components; the on-site assembly of core housing shells; the adaptation of traditional techniques and materials through improvements in assembly, standardization and transportability; the development of low cost water supply and sanitation technologies; the
diffusion of skills through on-site technical training programmes; the introduction
of modern cost accounting methods to regulate labour and materials flows; the
search for alternative technologies for power, heating and lighting; and the
substitution of expensive and imported materials for new, improved and cheap
local products. These aims were integrated with employment measures that came
to the fore in the late Seventies. Aid was extended to small scale enterprises,
often within project areas specializing in wood and metalworking, brick and tile
making, plumbing and carpentry, the manufacture of cement blocks, doors and
windowframes, and a range of housing-related products.

In this chapter we have attempted to locate the rise of self-help housing
theory and practice in Latin America in the context of the relationship between
development strategies and urban housing policies. The theoretical and policy
justifications that lay behind the shift to self-help housing in the Seventies and
Eighties have been examined in detail. In Chapter Two we shall critically analyze
these theories and policies from the perspective offered by articulation theory, and
in Chapter Three develop an alternative theoretical framework for analytical
purposes.
1. They included: the development of the nuclear family (and the break-up of traditional kinship patterns); the development of voluntary associations; status determined by achievement based on formal education; maximum mobility of factors of production (labour and capital); replacement of ascriptive feudal and communal land rights by transferable private property rights; economic decision-making based on profitability and efficiency by the rational bureaucracies of the state and modern business corporation; the need for a centralized state legitimized as a democratic polity (multi-party system, freedom of speech, free press, parliaments); the generalization of the wage/commodity economy, and the cultural reorientation of demand towards the goods and services offered by the leading industrial sector.

2. A series of statistical and factor analyses revealed a positive correlation between levels of economic development (in particular industrialization) and the degree of urbanization (Berry, 1969; Gibbs and Martin, 1962). A similar argument was pursued for urban systems. Gould's (1964) view that 'when we speak of modernization we are clearly discussing an emerging and strengthening urban system' was widely shared by Third World urban and regional planners.

3. Lewis's 'Two Sector Labour' Model argued that rural areas were characterized by zero marginal productivity and that rural surplus labour existed and could be withdrawn without a fall in agricultural output. This surplus labour would find employment in the high productivity modern industrial sector whose growth would be determined by the rate of industrial investment and capital accumulation. Lewis assumed that urban modern sector wages would remain constant, and argued that a 30% differential would be sufficient inducement for rural workers to migrate and at this level supplies of labour would be guaranteed to industry at a constant wage.

4. Although, in general, modernization theory regarded rapid urbanization and rural migration as necessary and/or desirable consequences of the modernization process, a number of observers expressed concern that Third World countries were 'over-urbanizing' - achieving urban growth rates higher than those that occurred during the urban 'take-off' of the developed countries, with much lower levels of industrialization (Davis and Golden, 1954; Hoselitz, 1960). Over-urbanization of this kind was seen as an obstacle to growth involving excessive expenditures on unproductive urban investments (Hauser and Schnore, 1965) and the creation of socio-economic conditions amenable to 'extremist political propaganda' (Hoselitz, 1959).

5. As Perlman (1976) has noted the immediate post-war period in Latin America was dominated by anthropological explanations for urban slums and squatter settlements. The search for explanation at the level of culture, values and institutions was combined with a concept of peasant/traditional societies as being homogeneous and integrated.

7. It appeared to many public policymakers that the very task of modernization, what in a sense it was all about, was the eradication of the conditions that observers were describing for these settlements. ‘Creeping cancers’ and ‘urban sores’ required drastic surgery. The rustic appearance of the settlements; the widespread belief in a high level of social and cultural breakdown within them; fears of the spread of disease to other parts of the city; fears of the loss of administrative control over large parts of the city and fears of the spread of political radicalism all served to justify these policies.

8. A body of legislation evolved to achieve this goal. The breaching of zoning ordinances and building codes was often used as a legal pretext to secure expulsion and expropriation. In addition there was the widespread use of police, army and courts to prevent further squatting and discriminatory policies were put into practice to discourage the proliferation and growth of the settlements. Amongst these can be included: the withholding of urban infrastructure and services to settlements on the grounds of illegality, even when many in these settlements had ‘effective demand’ for these goods and services; the refusal to regularize land tenure which limited the ability of squatters to raise collateral for public and private sector credit; the use of prescriptive and inflexible public service and infrastructure standards in planning regulations and building codes which put the cost of provision of these services beyond the economic capacity of many of the settlers; and discriminatory public utility pricing that failed to provide ‘life-line’ service rates for the poor (Linn, 1983).

9. This was particularly common in Africa. After 1963 USAID HIG credits were specifically geared to the function of stimulating foreign finance capital in Latin American construction activities. Of course transfers of capital, skilled labour and technology were advocated as necessary by modernization theorists such as Rostow.

10. Conventional housing policies usually started with the calculation of present and future housing deficits. Clearly the size of the deficit and the cost of eliminating or reducing it depended on the definition of the standards in use. These standards tended to focus on ‘conventional criteria’ - on space, services and structural characteristics. Urban subdivision, building and zoning codes were based on the use of standards that were developed out of the socio-economic, and cultural conditions of the developed countries. Thus regulations governing the use of standards for road space, design, lot sizes and dimensions, levels of public area provision, ventilation, quality of building materials, fire precautions, specifications for services and infrastructure provision etc. were all based on western ‘modern’ standards. Moreover zoning regulations imitated the desire of planners in developed countries to separate industry and residential uses, and to maintain the pattern of urban social segregation characteristic of these societies.
11. In 1963 USAID set up its Housing Investment Guaranty (HIG) Programme which after 1966 became the exclusive channel for USAID housing funds. It aimed at stimulating private US investments in LDCs and encouraging the private sector in land, finance and the construction industry in the borrowing country through the promotion of middle and upper income housing.

12. It was argued that they could stimulate savings and investments that otherwise might not have occurred; they could create employment in the construction and building materials sectors; and increased incomes and demand would stimulate the growth of a range of ancillary industries (wood, plastic, cement, iron, paper, furniture, paint, prefabricated parts and components).

13. Squire's (1981) underemployment rate was calculated as 'visible plus invisible underemployment and those employed part-time or whose productivity was particularly low'. He suggested a combined unemployment and underemployment rate of around 25% of the urban labour force in the early Seventies.

14. More precise evidence of the very low levels of income of the vast majority of the population and the tendency for income inequalities to widen is available for Colombia, however. Data compiled by the author from a number of sources, including the World Bank (1978) and ECLA, cover the period 1961-74. They show that the bottom 30 percent of the population received 8 percent of national income in 1961 but only 3.5 percent in 1974: in other words, its share of national income in 1974 was less than half what it had been in 1961. On the other hand in 1961 the top 5 percent of the population received 25 percent of national income, and in 1974, 36.4 percent, i.e. it had increased its share of national income from around one-quarter in 1961 to over one-third in 1974.

15. In 1975 it was estimated that 112 mills. people, 36% of the continent's total population were consuming below caloric requirements (Todaro, 1985:35). Ahluwalia, Carter and Chenery (1979) estimated that by 1975 19% of the continent's population were living below poverty levels. World Bank estimates (Linn, 1983:10) indicated that 24.8% of the urban population were living below the absolute poverty level in 1978 and 65.2% of the rural population.

16. Projections made in the Seventies (UN; 1982) indicated little deceleration in the urbanization process until the Nineties, when the rate of natural increase was expected to fall to 2.4% and the rate of urban growth to 3.6% per annum. The UN estimated that the urban population would roughly triple again from 162.4 mills in 1970 to 466.2 in 2000. In the Seventies around 90% of Latin America's population growth was being absorbed by its cities, prompting Robert Fox (Urban Edge Dec. 1982) to remark that 'the urban explosion is the population explosion'.

17. Migration now came to be regarded as a factor contributing to the urban surplus labour force, serious urban unemployment problems and low urban
wage rates. Ayres (1983:151) has argued that 'for non-communist LDCs as a whole new jobs in manufacturing and industry absorbed no more than 10-12% of the surplus rural labour force in the period 1960-70.'

18. An ECLA study in 1965 predicted that in the course of the next decade an annual construction rate of 1.5 million housing units would be required in Latin America to keep up with demand. It was calculated that by 1970 the continent would need 58 million units in order to clear its deficits, and by 1980 75 million units (Gunn, 1978:227). By the mid-Seventies it was estimated that 22% of the urban population of Latin America and the Caribbean lacked direct access to piped water and 19.7% lacked access to an adequate system of excreta disposal (World Bank, 1978).

19. It was argued that Lewis's Two Sector Labour Model failed to recognize the labour-saving effects of modern technical transfer; urban unemployment rates were exceeding rural unemployment rates; there was a distinct tendency for wages to rise in real terms in the modern sector despite high rates of open unemployment and for urban/rural wage differentials to widen. Adelman and Morris (1973) found that modernization strategies had decreased both the absolute and relative incomes of the poor.

20. Thus Chenery and Syrquin (1975) analyzing the patterns of development occurring in LDCs in the modernization decades (1950-73) concluded that industrialization and modernization were associated with: a declining share of agricultural output in GDP; a rising share of industrial output in GDP; the increased participation of savings and investment and government revenues in GDP; changes in the composition of domestic demand (declines in the share of food consumption, increases in the share of non-food consumption); all-round increases in labour productivity but with relatively slow growth in agricultural labour productivity; increases in the levels of urbanization and rural-urban migration; a worsening distribution of income with a heavy concentration of income increments in the modern urban sector; and a reduction in both mortality and fertility rates with rising national incomes.

21. 'In short during the Seventies economic development came to be redefined in terms of the reduction or elimination of poverty, inequality and unemployment within the context of the growing economy' (Todaro, 1985:84).

22. These five areas were defined as follows:

1. Universal access to basic consumer goods: a range of socially-defined necessities that included food, clothing, shelter, basic tuition, basic furnishings.

2. Universal access to basic services, the most important of which were primary education, drinking water, preventative and curative health provisions, sanitation, infrastructure, habitat and communications.

3. The universal right to productive employment.

4. Investment levels sufficient to sustain increases in the productive forces needed to satisfy basic needs.
23. The experiences and policy goals of a number of socialist or socialist-leaning countries were particularly important - Egypt under Nasser; China; Tanzania; India's 5th Plan; Sri Lanka and later Mozambique, Somalia, Algeria (after 1975); Chile under Allende and Vietnam. However, early versions of basic needs approaches were also implemented by right wing regimes in Taiwan and South Korea. The debates surrounding the New International Economic Order, UNCTAD and the North/South dialogue brought up the whole question of 'self-reliance' and 'basic needs' in the context of the proposed changes in the global structure and terms of trade, and in the international transfer of technology.

24. Basic Needs Approaches got global support at the ILO World Employment Conference in June 1976 when member states agreed that 'strategies and national development plans and policies should include explicitly as a priority objective the promotion of employment and the satisfaction of the basic needs of each country’s population'. The Timmergen Report on 'Reshaping the International Order' which was a spin-off from the Conference also called for 'the elaboration of new development strategies emphasizing basic needs satisfaction, poverty eradication, self-reliance and participatory development and developed attention to ecological considerations' (Ayres, 1983:9). Other international agencies associated with the Basic Needs Approach were UNEP, UNICEF, the International Council for Adult Education, and the World Council of Churches.

25. In 1973 the US Foreign Assistance Act ('New Directions' legislation) mandated a change in 'our whole approach to development by concentrating on the needs of the poor'. The USAID programme was henceforth empowered to concentrate on the problems of the poor majority (food, population control, health, housing, education etc.) The InterAmerican Foundation (IAF) was set up by the US Congress to grant small credits to non-governmental intermediaries in Latin America. In 1971 it started bottom-up development, self-help participatory development strategies, collective self-reliance, distribution-oriented projects and the like. Various aspects of the policy also dominated the lending policies of other major bilateral and multilateral lending agencies in the Seventies and early Eighties.

26. Two indicators were established to identify the poor. The absolute poor were identified as those living below an international poverty line of $50 per capita a year in rural areas, and $75 per capita in urban areas (1971 prices). On this basis RwG estimated that 44.5% of the population of LDCs (239 mills) were living below the $50 poverty line in 1969 (Payer, 1982:79) and given existing trends there would be as many as 1 billion absolute poor by the year 2000 (Ayres, 1983:245). The relative poor were defined in terms of the divergence between income shares and population shares. Clearly the absolute poor were included in the definition of the relative poor, but a part of the population whose incomes put them outside of this group could also be considered 'relatively poor' if their incomes were less than one third of the national average per capita income. In its application of RwG strategy, the
World Bank also defined its poverty target groups as being the bottom 40% of the income distribution profile.

27. RwG reviewed three other policy options for achieving these goals and dismissed them all. The first, the GNP-maximizing modernization strategies could not be continued because of the 'relatively weak linkage between poverty groups and the rest of the economy' (Chenery et al., 1974:48). A second strategy would consist in the redistribution of existing income or consumption to the poor. This too, it was argued, was unfeasible either because 'the existing wealth was too meagre' (McNamara) or because it represented 'too high a cost in terms of foregone investment to be viable on a large scale over an extended period.' (Payer, 1982:49) The third alternative was to transfer existing assets to the poor. This was more unfeasible than any of the others because 'political resistance to policies of asset redistribution makes this approach unlikely to succeed on any large scale in most countries' (Payer, 1982:49).

28. 'Defining products on the basis of the needs they satisfy rather than on their physical attributes, different qualities of the same product may well require very different factor intensities in their production' (Rao, 1974: 141).

29. Under the presidency of McNamara (1969-81) total World Bank lending increased in real terms by a factor of five and it has been estimated (Ayres; 1983:233) that by the end of the period between 1/3rd and 1/2 of all World Bank/IDA lending was poverty-oriented. Greater emphasis was placed on agriculture and rural development with sectoral lending increasing from $172.5 mills (18.1% of total lending) in 1968 to $3.8 bills. (31% total lending) in 1981. By the late Seventies over three quarters of lending for agriculture and rural development contained a small farmer element or component. Funding for urban projects (urbanization, housing, urban transport, water supply and sewerage and small scale enterprises) also increased dramatically and between 1973-83 $9.3 bills was lent for these purposes (9.6% of total World Bank lending). Between 1972-81 52 basic urban projects had been established and loans for $1.6 bills committed.


31. In 1933 the Westmorland County Relief Board set up a Mutual Self-Help Housing Program which 'sought to get unemployed miners back to the farm by forming a self-sufficient community' (Spohn, 1972:22). In 1937 the American Friends Service Committee, a Quaker organization, sponsored a self-sufficient cooperative community for unemployed miners called Penncraft in Western Pennsylvania. In the first programme participants were paid 1/4 of the value
32. The system involved the organization of a group of families by a building supervisor and 'social orientation' team, into construction gangs of around 30 families to work cooperatively on core houses that were to be expanded in the future through family-based progressive development.

33. In this respect the Alliance for Progress was unique and was to have a powerful influence on subsequent policies. Thus Ayres (1983:9) has pointed out: 'The Alliance aimed at reforms in the region's economic and social systems and proposed specific policy reorientations in agriculture, health, housing, education and other sectors that in many significant ways preceded World Bank initiatives a decade later'.

34. Under the Punta del Este agreements the US government agreed to grant $525 mills. to the IDB's Social Progress Trust Fund (SPTF) for concessional loans 'in the field of land settlements, improved land uses, housing for low income groups, community water supply and sanitation, and facilities for advanced education' (Blitzer, Hardoy, and Satterthwaite, 1983:104).

35. Some countries embraced these policies more readily than others. USAID data indicated that in 1962 there were 30,569 housing cooperatives in Chile, 6097 in Peru and 5382 in Colombia (Koth, Silva and Dietz, 1965:87). IDB and USAID funding for aided self-help was particularly active in Chile, Peru, Venezuela and the Dominican Republic. However by far the largest programme of self-help housing with external assistance during this period was undertaken in Colombia. In 1962 alone, the ICT using funds provided by the Development Loan Fund, the IDB, Punto 4 and its own resources built 19,556 houses using aided self-help and mutual aid - 61.3% of the agency's total housing output in that year. It has been estimated that the agency built some 50,000 houses between 1962-63 and the greater part of these houses were built through aided self-help systems. By 1967 45% of all houses produced by the ICT since its foundation in the Forties had been built using these systems.

36. The sums committed by the SPTF over the period 1961-66 amounted to only $525 mills. for all purposes. It is known that in the first two years of the programme 47% of these loans were directed towards housing (Koth, Silva and Dietz; 1965:72). Assuming that this proportion was maintained over the following three years, and allowing for a 50% matching contribution from national governments, it can be estimated that housing expenditures for both middle class and lower income groups were only $494 mills. or around $60 mills. per annum. It is also known that with SPTF Funds the IDB approved only 29 urban housing projects, 33 water and sewerage projects and a number of projects for the construction of markets, schools, and public health facilities in urban areas. In 1975 the World Bank estimated that 315,224 houses were built in 19 countries with the help of IDB funding over the period 1960-74. Given the fact that after 1966 IDB funding returned to conventional housing strategies, that none of these houses bore an average price of less than $1000 and only 6.5% had an average price of $1500 or below, it is clear that the extent of the IDB's commitment to low income self-help housing should not be
exaggerated (World Bank; 1972:57). Between 1949-71 the total value of USAID funds for Latin American housing was only $437.1 mills. excluding HIG loans (World Bank, 1972:33). Given that self-help housing investments were again concentrated in the period 1961-66 and even then did not constitute a majority of allocations (most of which were for savings and loans, and cooperative arrangements affecting the middle classes), then it is clear that similar considerations must also govern the analysis of USAID commitments.

37. In 1966 the SPTF allocations had been fully committed and were not renewed, and USAID commitments for the rest of the Sixties were almost exclusively channelled through its Housing Investment Guaranty (HIG) Programme which aimed at promoting middle and upper income housing.

38. Both had been directly or indirectly involved with USAID and Alliance for Progress projects. Abrams was a consultant for the UN Housing, Building and Planning Branch and had considerable experience with self-help projects in Africa and Latin America through his work with the UN, ICA and USAID. Turner had worked on self-help housing projects in Peru in the period 1957-64 and helped negotiate one of the IDB’s first housing loans for Peru (Turner and Fichter, 1972:139).

39. This indeed was a serious situation for the USAID officials who commissioned his influential paper *Squatter Settlements: The Problem and the Opportunity* who stated ‘protection of property rights is essential to economic investment and growth’ (Abrams; 1966:1).

40. Thus units could be designed for progressive development through front, rear, side or multistorey extension. Some of the varieties mentioned by Abrams were: a one room unit for all families; a two room unit for large families permitting horizontal expansion; a vertical added core; a row house core which was expandable front and rear; a core house built as part of a compound, and a floor and roof core whose walls could be built by the occupant (Abrams, 1964:177).

41. Accordingly Abrams argued that roofing industries (shingles, iron, asbestos, cement etc.) should be developed through international aid and foreign capital. He recommended the bulk purchase of prefabricated and standardized building materials, doors and windows by the state in order to stimulate their production. But where this was not possible or where imported units were cheaper or more efficient than the local product, Abrams argued for international aid to enable mass purchase (Abrams, 1964:260).

42. These measures included: government guarantees for foreign private capital interested in investing in housing; the channeling of pensions, social security and life insurance funds into housing; government guarantees and assistance for private sector construction activities; the subcontracting of government housing projects; and above all else the development of savings and loans associations. However, he criticized the Alliance for Progress sponsored associations for not reaching the poor: ‘the benefits of American aid at nominal interest went largely to the upper income groups in these
43. Initially the World Bank's interest in these activities was funneled through the Industrial Development and Finance Department and small business loans and labour-training components were introduced into its integrated urban development projects. In 1980 the World Bank opened a sectoral credit line for Small Scale Enterprises which was allocated 1.7% of total funds in 1981 and 3.7% in 1983. (World Bank, 1984:134) Between 1976-83 it was calculated that $828.1 millions was loaned by the World Bank to Latin America and the Caribbean for these purposes.

44. The move to increase densities in World Bank assisted projects was achieved by reducing the width of plots, the number and width of roads and pavements; by eliminating front and/or back gardens, by encouraging new forms of vertical building; by maximizing the amount of site cover (ie private use) to public land; by grouping houses around plazas or miniparks to permit smaller lot sizes; and by reformulating specifications for public and communal facilities (reduction in standards on primary schools, green areas, health posts, communal centers, markets etc.). A vital consideration in the need to increase densities was the attempt to lower infrastructure and service costs which were already very high and which had been increasing dramatically.
Chapter Two

THE THEORY OF ARTICULATION OF MODES OF PRODUCTION AND CAPITALIST DEVELOPMENT

INTRODUCTION

The failure of modernization strategies, unleashed a debate that has dominated development studies since the late Sixties. This debate focused on three questions: Why was capitalist development incapable of eradicating pre- and non-capitalist relations of production in the manner that occurred in the West? What exactly was the relationship between capitalist and non-capitalist modes of production in Third World societies? What is the role of the state in the context of these relationships? These questions were asked by all political tendencies in development circles.

At the same time Marxist theory fundamentally reappraised the classical model of capitalist development, which had also postulated that capitalist development could only proceed through the eradication of pre-capitalist relations and forces of production. This reassessment was largely undertaken within a structuralist framework that developed new concepts to answer these questions. They included: the concept of social formation; the concept of the articulation of modes of production; a redefinition of the process of surplus extraction; and the insistence on the need to analyze Third World capitalist development in a global perspective. Although inherent tendencies within the capitalist mode, such as the increase in the organic composition of capital, the generalization of wage labour, and the deepening of the social division of labour had led to the dissolution of
pre-capitalist relations of production in certain branches of the economy, it was now recognized that there were also opposite tendencies with contradictory effects. These tendencies were recognized as those of articulation - the dominance of capitalist economic, political and ideological structures was exercised through a combined and uneven process of eradication of pre-capitalist activities and their preservation, modification and reproduction. The state was identified as having a key role to play in the articulation process.

THE CLASSICAL MARXIST CONCEPT OF CAPITALIST DEVELOPMENT

In the classical view capital accumulation required the breakdown of pre-capitalist relations and forces of production and their replacement by those of capitalism. This had been the pattern of historical development in Western Europe, and Marx often argued that this process would be repeated in the colonies.

All modes of production, according to Marx, are characterized by structures of production and reproduction. The need to constantly recreate anew the means of subsistence and production required the creation of a surplus product, whose size in pre-capitalist modes was limited by the fact that labour was ‘unfree’ and subjected to extra-economic coercion. In pre-capitalist modes ‘the productive structures neither can nor must systematically increase the forces of production, the productivity of labour, in order to reproduce themselves’ (Brenner 1977:59). Thus an increase in the volume of surplus labour or product extracted in pre-capitalist modes is based on the expansion of absolute surplus labour - on the prolongation of the working day and the intensification of the work regime. The increase in relative surplus labour cannot become a systematic feature of such
modes of production. Pre-capitalist modes of production are therefore characterized by simple reproduction i.e. by the replacement of the same amount of the means of production and subsistence as used up in the production process.

For classical Marxists capitalism differs from all prior modes of production in that it is characterized by conditions of extended reproduction.¹ Capitalist accumulation is primarily the result of the expansion of relative surplus labour, where the surplus is primarily extracted through the systematic growth of labour productivity. An increase in labour productivity means an ability to reproduce the means of subsistence and production in less time than previously, or alternatively the production of a larger surplus beyond these means in the same work period as before. The expansion of labour productivity permits the capitalist class to increase surplus value and to transcend the limits imposed on accumulation when the only source of surplus is the expansion of absolute surplus labour.

In the classical Marxist view, a precondition for the systematic extraction of relative surplus value and a defining characteristic of the capitalist mode of production is the existence of 'generalized commodity production' where both the means of production and labour power are commodities. The historical precondition for capital accumulation and labour commodification is the direct producers' loss of ownership of the means of production (land, tools, raw materials) and his liberation from pre-capitalist systems of extra-economic coercion (e.g. slavery, serfdom etc.). Only in a system where both labour power and capital are commodities is there a need to produce 'at the socially necessary labour time in order to survive and to surpass this level of productivity to ensure continued survival' (Brenner, 1977;59). The prime mover in capital accumulation therefore is the extraction of relative surplus value through the growth and
deepening of the capital/wage relationship and the expansion of the productive forces.

Pre-capitalist modes are characterized by the extraction of absolute surplus labour/product from an unfree labour force through a system of extra-economic coercions. Economic and political power are fused and lie at the local level, there is regional self-sufficiency and simple commodity circulation, and the surplus is consumed rather than invested. In the capitalist mode labour is legally free, divorced from ownership of the means of production, in a system of generalized commodity production and extended reproduction of capital in which economic (class) and political power are separated (Laclau, 1977; Alavi, 1982). In the classical conception capitalist development is an ineluctable transformation of these pre-capitalist structures into those of the capitalist mode.  

FORMS OF PRODUCTION, MODES OF PRODUCTION AND SOCIAL FORMATION

By the late Sixties the characterization of capitalist development as a process of replacement of pre-capitalist structures with capital/wage relations, generalized commodity reproduction and extended reproduction based on relative surplus value was contradicted by the Latin American modernization experience which revealed the persistence of rural household subsistence production, and the rapid expansion of an ‘urban informal sector’.  

Although there was widespread rural commodity production and the growth of an agricultural proletariat, a substantial part of the peasantry remained subject to various types of extra-economic coercion; there was the persistence and even growth of subsistence food production on the wage-earners’ family plot; there was widespread contracting of seasonal and temporary labour; there was an expansion
rather than contraction of petty commodity forms of production and exchange; and artisanal activities based on a family-based division of labour were remarkably resilient. Everywhere there seemed to be the persistence of pre-capitalist rural social relations based on personal dependence and kinship obligations, and their accompanying political structures. Moreover, even those engaged in capital/wage relations seemed to employ multiple strategies to ensure their survival.

Rapid urbanization and the inability of the capitalist 'modern/industrial sector' to absorb the surplus population drew attention to the even greater complexity of relations of production in the urban economy. Here producers used their own means of production and labour power to produce goods and services in the context of competitive markets for commodities, subsistence goods and factors of production. In the squatter settlements subsistence horticulture and networking activities were widespread; there was large scale illegal occupation of land and the proliferation of construction activities involving self-help, reciprocal, kin-based and informal sector wage employment. There was a marked expansion of output and employment centred in artisanal workshops and household businesses characterized by simple technology, limited capital investment and a simple division of labour involving the use of unpaid family and/or informal sector wage labour. Again there was also an expansion of casual labour and various types of self-employment associated with the rapid expansion of putting-out arrangements and chain subcontracting in consumer goods production, retail, distribution, transport, construction and personal service activities (Bromley, 1978; Bromley and Gerry, 1979; Gerry and Birbeck, 1979). 4

The concept of social formation associated with the structuralist reading of Marx (Althusser, 1969; Balibar, 1977; Poulantzas, 1973; 1978) was developed in
order to understand the growth and reproduction of these activities and their relationship with those of the capitalist mode. As modes of production neither appear nor disappear 'overnight', the structuralists argued that in periods of transition a situation develops where two modes of production 'coexist' in a contradictory relationship derived from the historical superiority of different modes of production to develop the forces and relations of production in accordance with changing needs (Godelier, 1978). A social formation is therefore conceived as a concrete historical condition where two or more modes of production are related in conditions of domination and subordination.

In the Althusserian conception, a social formation is a complex totality of economic, political, ideological, and theoretical practices ('social practice'): economic practice involves the transformation of nature into social production; ideological practice the transformation of the subject's lived experience into forms compatible with the reproduction of the mode of production; and political practice engages in the transformation of social relations (Althusser, 1969). In a capitalist mode of production the economic practice is determinant and structures the inter-relation of the other practices. According to Poulantzas (1973: 15-16) the dominance of this mode in a capitalist social formation in effect 'causes the matrix of this mode of production ...to mark the whole formation'. In this interpretation the capitalist mode occupied an initially subordinate but determinate position in the European social formation to arrive at a determinate and dominant condition over the now subordinate feudal mode.

The historical and structural relationship between dominant and subordinate modes of production under conditions of transition is what is generally referred to in the concept of articulation, and we can therefore talk
about Latin American social formations in which the now dominant capitalist mode of production is articulated with other historically pre-existing modes of production which persist alongside the dominant one.\(^8\)

In articulation theory a distinction is also generally made between modes and forms of production (Banaji, 1977; Bernstein, 1977; Wolpe, 1980; 1986; Friedmann, 1978). General usage has defined a mode of production in terms of relations of production, mode of surplus appropriation, and forces of production with differences existing between authors over the relative significance of these elements for definition.\(^9\) In his later works Marx certainly seemed to be using the concept at this broader historical and social level - modes of production as ‘macro-economic’ structures, so to speak.\(^10\)

On the other hand, Marx’s attempt to analyze the laws of motion of capital was undertaken at two levels - at the level of the ‘enterprise’, ‘economic unit’ (Lenin, 1977) or ‘basic cell’ (Banaji, 1977; Friedmann, 1978) of the mode of production; and at the level of the totality of these economic units (‘capital in general’). In recent years Marxists have argued that the concept of ‘mode of production’ is conceptually appropriate for the concrete analysis of ‘capital in general’, and that of ‘forms of production’ for analysis of the basic economic units. In Marx’s view ‘forms of production’ were defined in terms of the social and technical relations internal to the economic units, whilst modes of production referred to the totality of these forms and the relations between them (Banaji, 1977; Bernstein, 1979; Friedmann, 1978).\(^11\)

In this thesis the relationship of articulation between capitalist and non-capitalist modes of production in the Colombian social formation is identified in terms of the relationships that exist between the industrial, manufactured and
artisanal forms of producing, exchanging and consuming land, building materials
and housing (Pradilla, 1976; Molina, 1976; Lenin, 1977; Burgess, 1978). The
forms are identified in terms of distinctive labour and technical processes;
relations of ownership of the means of production and product; forms of surplus
appropriation; relationship to commodity processes; and in terms of relations of
production, consumption and exchange. The relationship between these forms is
one of articulation where the reproduction of the non-capitalist (artisanal) form is
subordinated to the logic of development of the capitalist forms (industrial and
manufactured). Under conditions of transition each form represents a different
degree of subordination of the producer to capital in terms of relations of
production and exchange (Roldan, 1985).

THE NATURE OF THE ARTICULATION PROCESS

Articulation theorists, are united in rejecting dualistic interpretations of the
articulation process. All are agreed on the pre-capitalist or non-capitalist origins
of the articulated forms, and their loss of autonomy in a process that involves
subsumption by, but not complete integration with the structures of the capitalist
mode. Most are agreed that the articulation process does not involve the simple,
direct and unilinear destruction of pre-capitalist modes and forms proposed in the
classical marxist model, and that articulation analysis is an attempt to assert an
active rather than passive role for non-capitalist modes in the face of the dynamics
of capitalist development (Wolpe, 1972; 1980; 1986; Asad and Wolpe, 1976;
Foster Carter, 1978; Taylor, 1979). All are agreed that the articulation process
occurs at the level of economic, political and ideological practices and that the
economic level is ultimately determinant. Thereafter, there are major differences
Economic Articulation

Three different perspectives can be identified in the interpretation of the articulation process at the economic level.

Articulated Structures as Transitional, Combined and Hybrid Forms

One group of writers referring to the work of Marx, Lenin, and Kautsky (1988) on the European transition, and that of Luxemburg (1963) and Preobrazensky (1965) on colonial forms of production identify articulated structures as 'intermediate hybrid forms' (Marx) with a transitory and combined character. Wolpe (1986:92) in discussing the work of Philippe Rey (1973) notes: 'In the first stage, non-capitalist modes are dominant; but despite capitalism's dependence on the latter, it brings about their transformation such that in the second stage they 'exist' on the basis of capitalism, and are modified accordingly. In the third stage, which has not yet been reached in the Third World, capitalism completes the destruction of pre-capitalist modes in agriculture' (Wolpe, 1986:92).

Both Marx and Lenin argued that in the initial stages of the European transition from feudalism to capitalism 'capital always takes the technical process of production as it finds it, and only subsequently subjects it to technical transformation' (Lenin, 1963:466). However, Marx also insisted that further capitalist development required that 'the technical and social conditions of the process, and consequently the very mode of production must be revolutionized before the productiveness of labour can be increased' (Marx, 1977b:432). He analyzed this process using the concepts of 'formal subsumption' and 'real subsumption' of labour to capital (Marx, 1977b:1019-1038).
The initial encounter between capitalist and pre-capitalist modes of production, and a pre-condition for further capitalist development was the ‘formal subsumption’ rather than transformation of pre-capitalist labour: ‘capital subsumes the labour process as it finds it, that is to say it takes over an existing labour process’ (Marx, 1977b: 1021). Similarly Lenin identified ‘semi-feudal forms of appropriation of surplus value’ from ‘simple commodity’ producers in transitional Russia (Lenin, 1977); whilst Kautsky (1988) also identified the extraction of surplus value from a ‘feudally subjugated labour force’ during the transition in Central Europe.

Of course, it was precisely in the colonies ‘that the process of mediation of capitalist relations of production by archaic forms of subjection of labour assumed historically unprecedented dimensions’ (Banaji, 1977:11). The concept of ‘formal subsumption’ clearly guided early assessments of the colonial plantation/hacienda systems, which were identified as ‘capitalist accumulation with forms of slavery and serfdom’ (Luxemburg: 1963) and ‘undeveloped transitional forms of surplus value which are not completely characteristic of a developed capitalist mode of production’ (Preobrazhensky, 1965:185).

In its pure form, simple commodity production was a subordinate and transitional form with a patriarchal labour process geared to self-sufficiency and simple reproduction. In analyzing the relationship between capitalist and non-capitalist modes of production in the European transition, Marx and Lenin argued that the capitalist intervened between the producer and the market in the units of production involved. They operated, however, with the labour process inherited from pre-capitalist conditions and without that specific to the capitalist mode. In other words these forms were ‘articulated to capital no longer as an
independent unit of production imposing its own laws of motion on the process of production, but as a quasi-enterprise with the specific social function of wage labour’ (Banaji, 1977:35).

This view of articulated pre-capitalist forms and modes as ‘formal’, ‘transitional’, ‘combined’, ‘intermediate’, and ‘hybrid’ represents a strong current within contemporary articulation theory. Lewin for example argues that they are ‘mixed forms’ (Lewin, 1985:111), whilst Bienefeld (1975:54) notes: ‘the component parts (capitalist/non-capitalist) influence each other and gradually loose their individual identity and independence, so that we are faced with one coherent whole, a system with its own character and dynamics.’

However, Marx also argued that the full development of the capitalist mode of production required a transformation from conditions of ‘formal’ to ‘real’ subsumption. Here the hybrid forms, according to the logic of capitalist development, will give way to the full development of capitalist relations and forces of production, and the system of extraction based on relative surplus value typical of the classical model. The key elements in this process were the enforced destruction of self-sufficiency by the separation of the worker from his means of production and subsistence (land, raw materials, tools) and the creation of a market for the labour power commodity, within a greatly expanded and deepened division of labour.

The shift from ‘formal’ to ‘real’ subsumption represents an attempt to overcome the limits on profit maximization derived from simple technology, low productivity, and diminishing returns from the maximization of rates of absolute surplus value. Increases in output and profits could only be met by a ‘lateral expansion’ of the existing system - by the intensification of coerced labour services
and the expansion of the area in cultivation of marketable crops at the expense of subsistence requirements. The limitations of this system of political economy were amply revealed in the 'Second Serfdom' in Eastern Europe (Dobb, 1963; Sweezy, 1942; Kula, 1976) and in the demographic collapse that occurred in Latin America in the 16th and 17th centuries.

Two conclusions can be drawn about this tendency in articulation theory. First, in one version articulation is compatible with the classical Marxist view, the most significant innovation being the introduction of a 'long view' of the historical process of capitalist development. Second, it is clear that the issue of the 'limits' to Third World capitalist development emerges here in the form of the question: what specifically are the obstacles that prevent the shift from 'formal' to 'real' subsumption occurring in Latin American development? We shall return to this theme shortly.

**Articulated Structures As 'Conserved/Dissolved' Forms**

A second tendency argues that the articulation process results in an uneven, and contradictory process of 'conservation' and 'dissolution' of pre-capitalist modes and forms of production under overall conditions of subordination to the capitalist mode: 'the main tendency is not to the dissolution of the non-capitalist modes of production but to their conservation-dissolution' (Bettleheim, 1972). This approach has been widely used to explain the persistence of rural, pre-capitalist subsistence production and the role of rural to urban migration in Southern Africa (Meillasoux, 1972; Arrighi, 1973; Wolpe, 1980; 1972). Thus although the absorption of migrant labour in the urban capitalist economy tends to undermine the patriarchal basis of agricultural 'labour reserves', remittances from migrant labour also help perpetuate rural, household subsistence
economies enabling capitalist enterprises to shift the replacement and welfare
 costs of their workforce onto this sector. De Oliveira (1985:86) has argued that
the post-1930 capitalist expansion in Brazil ‘emerged out of the introduction of
new relations into a pre-existing, ‘archaic’ social formation and the reproduction
of ‘archaic’ relations within the new system ie, a method of making compatible the
overall process of accumulation with what had preceded it’. Breman (1985:61)
argues that the existence of an urban surplus of casual labour leads to a ‘tendency
to informalize labour relations, particularly at the lower echelons.’

Similarly the petty commodity production school (Gerry, 1974; 1979;
Lebrun and Gerry, 1975; MacEwen Scott, 1979) stresses the inherent limitations
of Third World capitalist development but also points to the embryonic devel­
opment of capitalist relations and forces of production (increased
proletarianization, and more sophisticated technology) that results from sub­
contracting, domination by commercial capital, and state intervention.

Another variant of this argument is that proposed by Taylor (1979:215). In
those branches of the colonial economy of direct interest to foreign capital there
was a complete transformation to capitalist relations and forces of production,
whilst elsewhere non-capitalist techniques and relations were partially transformed
in various combinations.

Articulated Structures as Modes of Reproduction

A third tendency in articulation theory identifies articulated non-capitalist
forms of production as modes of reproduction of labour power and capital for the
capitalist mode, thus securing the conditions for capital accumulation. The
conditions governing the reproduction of the non-capitalist forms are not ‘internal’
but rather determined by their subordinate and articulated relationship to the
capitalist mode. This conception of articulation is widely held within articulation theory, and indeed by many outside of it e.g. world system theorists such as Wallerstein (1978) and Kaplan (1978). In order to understand the argument fully we must first examine the pre-capitalist origins and structure of petty commodity production, and then elaborate the significance of this interpretation of the articulation process for contemporary Latin America.

In *Capital* (Vol 3) Marx pointed out how the production and exchange of the surplus product in the capitalist mode was governed by rational cost calculations based on a socially average level of productivity; whereas in the 'peasant mode' of pre-capitalist Europe they were governed by the goal of simple reproduction (subsistence). However with the development of the capitalist market there was a tendency for the limits to the exploitation of labour to be set by the average profit rate and not by subsistence definitions (Marx, 1975:805-806).

At the same time articulation by the capitalist market generates a condition where simple commodity production 'internalizes the patriarchal logic of the subsistence mode of production' (Banaji, 1977:32). The producer continues to regard his surplus product as if it cost him nothing in labour terms, and as Marx (1975:32) put it 'even a sale below value and the capitalist price of production still appears to him as profit' and make it unnecessary that the market price rises either up to the value or price of production of his product.' Kautsky (1988) called this an 'incomplete remuneration for the labour power expended' and saw this devalorization of labour time as the specific advantage of all small scale production threatened with capitalist competition. However, as Engels pointed out the devalorization of labour power from the capitalist viewpoint allows for the depression of wages 'in a fashion unequalled elsewhere'. Amin (1977:15) has also
noted that when the products of the simple commodity producer compete with those of capitalist enterprises 'the capitalist mode 'protects' its own autonomous dynamics by imposing its prices'. This consideration was vital for understanding the links of unequal exchange between Latin America and the 'metropolitan' centre.

Once petty commodity production has been 'formally subsumed' in this way a number of distinct characteristics are introduced to the form of production including: a sale price for the product that is in effect a 'concealed wage'; the exercise of 'capital's command over labour power' in contractual agreements; and the operation of the form 'as the specific form of reproduction of labour power within a capitalist process of production.' (Banaji, 1977:36) Subsequently Luxemburg (1963) argued that the constant reproduction of pre-capitalist modes in the colonies was essential to secure surplus extraction. Contemporary articulation theorists have taken up and amplified this theme.

Articulation theorists working in Africa in the Seventies, argued that capitalism's strength lay in its ability to externalize its reproduction costs by preserving and manipulating rural pre-capitalist household or kin-based subsistence activities (Meillasoux, 1971; 1981). They argued that the pre-capitalist accounting logic referred to earlier had remained intact despite an increased dependence on commodities for production and consumption requirements (Bernstein, 1977; Dupre and Philippe Rey, 1980) and significant transformations in the sexual division of labour, and domestic and subsistence activities (Redclift, 1985; Roldan, 1985). Thus whilst adult male labour was drawn into wage employment, the social cost of those not actually working (women, the sick, children, the old) was absorbed by the articulated form (Meillasoux, 1972; Wolpe,
perpetuation of non-capitalist relations of production in agriculture accompanying
the development of fully capitalist relations of production in 'the strategic
industrial sector' was also noted for Brazil by de Oliveira (1985). The
externalization of reproduction costs has led according to De Janvry (1976) to a
'collapsing of the price of agricultural labour by an amount equal to the
production of use values by the worker's family on the subsistence plot'. Along
with rural labour surpluses this has generalized low wages throughout the
economy through the effects of cheap food on urban wage rates (De Janvry, 1976;

A similar process of 'reproductive' articulation was also observed in the
urban areas. Amin (1977:219) has identified a number of mechanisms whereby
surplus generated by articulated forms was transferred to the benefit of the
dominant capitalist mode. First, in developed countries the goods necessary for
the reproduction of the labour force were themselves commodities produced
under capital/wage relationships. In Third World cities, however, the 'urban
informal sector', 'marginal sector' or 'petty commodity production' has cheapened
the reproduction costs of those working within the capitalist mode by trading
goods and services based on an incomplete remuneration of the value of labour
power they embodied (Amin, 1974; Kowarick, 1982; Portes and Walton, 1981; de
Oliveira, 1985; Connolly 1985). Portes and Walton (1981) have identified
three major income strategies of the urban poor which have a direct bearing on
reproduction costs: subsistence and networking activities (domestic horticulture,
purchase of food through informal networks and self-help housing construction);
the illegal occupation of land, and the petty commodity production of a wide
range of wage goods and services.

Second, it was argued that cheap labour embodied in products supplied to the capitalist mode enabled a reduction in the value of the various components of constant capital (Amin, 1977). Increasingly large capitalist firms introduced petty commodity producers to a network of money-lending, rental, subcontracting, commission selling, and franchising arrangements which created 'concealed wage labour' among those who regarded themselves as self-employed (Gerry, 1974; Gerry and Birkbeck, 1979; Lebrun and Gerry, 1975), and which allowed the capitalist mode to increase its diversity and profitability without long-term capital commitments (Bromley; 1985:103). Similarly self-help building and informal sector labour directly contributed to fixed social capital with part of the transferred value being realized in the form of ground rents (Connolly, 1985). Moreover petty commodity exchange networks reduced the distribution/circulation costs of goods produced in the capitalist mode, and as de Oliveira (1985:52) remarks the low earnings in these activities represent the marketing costs which have been expelled from industry's own production costs.

These mechanisms were analyzed in terms of the transfer of surplus generated in non-capitalist modes to the benefit of the capitalist mode (Amin, 1977; Lewin, 1985; Cohen, Gutkind and Brazier, 1979; de Oliveira, 1985; Connolly, 1985). In the Seventies there was also a growing consensus that these activities rather than being 'pre-capitalist vestiges' were in effect reproduced by the dominant capitalist mode. On the other hand the further growth of these forms was limited by their 'external determination' and its associated contradictions (MacEwen Scott, 1979; Gerry, 1974; Lebrun and Gerry, 1975; Gerry and Birbeck, 1979; Breman, 1985). The overall position is well stated by de
The particular specificity of such a model lies in the creation and reproduction of a sizable periphery in which non-capitalist patterns of production relations predominate. These patterns constitute both the form and the means whereby the periphery supports and sustains the growth of unambiguously capitalist sectors of the economy. In turn over a long time scale, this growth guarantees the continued viability of the structures of domination and reproduction of the capitalist system.

This perspective within articulation theory has revived interest in the debate on the role of housing in the determination of the reproduction costs of labour power, which was first established by Engels (1975). Engels argued that the cheapening of the commodities that made up the 'basket' of goods and services that were socially necessary for the reproduction of labour power would result in a higher rate of surplus value. Widespread interest has now focussed on the role of self-help housing activities in achieving these effects (Pradilla, 1976; Molina 1976; Pickvance, 1977, 1980; Burgess 1978; de Oliveira, 1985). The argument has been well summarized by Portes and Walton (1981) as follows. First, it was argued that in the face of massive land speculation, high interest rates, rising building materials costs and limited government subsidies, capitalist sector wages were insufficient to permit access to land and housing markets: 'stated differently the cost of providing shelter to all members of the urban working class through conventional market channels would require a quantum increase in wages or alternatively massive state subsidies' (Portes and Walton, 1981:90). Squatter settlements, illegal subdivisions and state self-help housing projects helped to cheapen the housing element in the reproduction costs of labour power because they involved the use of unpaid family, and cheap 'informal sector' labour. The
use of this labour, shifted a crucial element of reproduction costs onto the informal economy. Second, it was argued that these settlements allowed the household to engage in activities which extended budgets and again lowered the reproduction costs of labour power (e.g. horticulture, subrenting, use as a workplace).

**Articulation and Accumulation at the Global Level**

Articulation theory has also been developed in recent years to give an account of global accumulation and the role of surplus transfer in generating underdevelopment and development. The most contentious issue in this literature has been the question of ‘internal’ and ‘external’ determination in accounting for the persistent and growing inequalities between the centre and the periphery.

Thus Bettelheim has argued that the articulation process was ‘doubtless connected with a group of determining factors produced by the ‘external’ domination of capitalism’ (Bettelheim, 1972). Mandel (1978:49) also argues that ‘the world capitalist economy is an articulated system of capitalist, semicapitalist, and pre-capitalist relations of production linked to each other by capitalist relations of exchange and dominated by the world market’. This combined and uneven development was responsible for the different levels of productivity, rates of surplus value and profit levels that fuelled the flow of surplus value from periphery to core. Mandel identifies three epochs in the historical development of the global capitalist economy, each characterized by specific forms of labour control and surplus transfer: freely competitive capitalism (surplus accumulation in the core, primitive accumulation in periphery); classical imperialism (capital exports and profit repatriation), and late capitalism (capital interpenetration in the core, and surplus transfer based on unequal exchange, monetary debt and profit
repatriation). Taylor (1979:102) in a similar vein has argued that the articulation process derives its character from external capital penetration which historically has assumed three forms: domination by merchant's capital; commodity export, and capital export.

Amin (1977) has argued that in the periphery the capitalist mode of production required the reproduction of non-capitalist modes and that the surplus generated in the reproduced non-capitalist modes is transferred to the dominant capitalist mode allowing lower wages in that mode. This is the key to the unequal exchange (surplus transfer) mechanism which occurs whenever labour of equal productivity (to that in the core) receives lower wages. Articulation, according to Amin, was not merely an external determination because local capitalist classes also used part of the surplus to acquire international consumption standards detached from the level of development of the local forces of production (Amin, 1977; 219).

According to Portes and Walton (1981) the crucial mechanism for holding down wages in the capitalist sector was the urban informal sector which they regard as a continuously reproduced consequence of the way in which peripheral economies are incorporated into the global structure of accumulation: 'direct subsidies to reproduction by informal to formal sector labour are also indirect subsidies to core nation capital and hence the means to defend the rate of profit on a world scale' (Portes and Walton, 1981:106).

Lewin (1985:122) similarly argues that the articulation process forms 'the essential function of reproducing the trajectory of economic, political and cultural/ideological dominance which ultimately enables the capital drain from the periphery to the core'.

Perhaps the most trenchant defense of the external determination thesis has come from Froebel et al. (1980) in the theory of the New International Division of Labour. Following the world systems school of analysis (Wallerstein, 1974; 1978; 1979; 1980) they argue that the global economy is divided into a core, periphery and semiperiphery on the basis of an international division of labour with different forms of labour control for different types of production in these different regions. Three new developments have affected the process of capital accumulation since the late Sixties.

First, the development of global labour markets has allowed peripheral countries to offer vast amounts of labour at wage rates at a fraction of core rates, with comparable productivity rates, and with distinct advantages in terms of the conditions of purchase, performance capacity and labour control.

Secondly, capital mobility has increased as a result of developments in transport and communications technology (containerization, air freight, tele-communications, data processing etc.) allowing for 'global scanning' by multinational corporations, and a decline in 'non-labour' factors in the locational calculus (Storper and Walker, 1983:2).

Third, technical and organizational developments have made it possible to valorize capital through the further division of labour along the lines proposed by Charles Babbage: the decomposition and subdivision of complex production processes requiring skilled labour, into a range of elementary tasks that require unskilled labour with little training.16 This enabled production processes that previously required high cost skilled labour (previously only available in the core countries) to be replaced by low cost, unskilled labour power in the periphery. In a large number of manufacturing industries, which had segments of their
production processes that could be spatially dispersed, multinational corporations could ‘globalize’ their manufacturing industries and introduce a new division of labour. The dominant concern of multinational corporations in manufacturing industries in the periphery, it was argued, was to take advantage of international differences in labour costs, and the incentives offered by countries committed to export-oriented industrialization strategies.¹⁷

Froebel et al. (1980: 24-26) identified three forms under which capital accumulation was achieved in the capitalist world economy. Surplus could be appropriated: first, by preserving or introducing non-wage labour relations based on extra-economic coercion (slavery, serfdom, share-cropping, indentured labour, subcontracting); second, by extracting subsidies from the ‘non-capitalist’ sectors (subsistence agriculture, domestic labour, the urban informal sector, petty commodity production); and third by ‘capital accumulation proper’ on the basis of free wage labour and the extraction of relative surplus value. The latter choice would only be made if it was more profitable, and if the extra-economic constraints could be broken (Froebel et al., 1980:29).

On the other hand, some writers have stressed the effects of ‘core’ capital on the internal structures of peripheral social formations. Alavi (1982a) argues that the articulation process is a structural characteristic of the peripheral capitalist mode of production derived from the fact that its commodity circuits are only completed by their links with core economies, producing surplus transfer that leads to the growth of productive powers outside of the periphery. He therefore, discounts the concept of ‘conservation/dissolution’ and accepts the notion that the articulated forms are new capitalist creations specifically characteristic of peripheral capitalism.
Brenner (1977:69) similarly argues that reliance on absolute surplus value in the export sector, and 'subsidy' transfers from non-capitalist modes to this sector discouraged capital investments aimed at technical innovation, the extraction of relative surplus value and the full emergence of labour power as a commodity. The articulation process is here identified as an obstacle to rather than a stage in the evolution of fully-capitalist relations of production, but one which nevertheless facilitates surplus transfer to the core.

Finally, de Janvry and Garramon (1977) argue that peripheral economies are characterized by 'sectoral and social disarticulation'. In the periphery demand for capital goods has to be met externally and is governed by balance of payments constraints; whilst market expansion through proletarianization is limited, because the maintenance of non-capitalist modes permits low labour costs in the export sectors, whose benefits are siphoned off to the core through unequal exchange (de Janvry and Garramon, 1977:210). The articulation process is here again identified as an obstacle to the full development of capitalist relations and forces of production.

**Political Articulation**

Most theorists attach a great deal of significance to the role of the political dimension in the articulation process. The role of the state, and class struggle and alliances have been the focus of attention. Contemporary accounts, however, differ from earlier versions, which exclusively focussed on the theme of 'primitive accumulation'.

The historical precondition for the development of the capitalist mode of production in Europe, according to Marx, was primitive accumulation which was
'nothing else than the historical process of divorcing the producer from the means of production' (Marx, 1977b:874-875). Marx identified several elements in this process of primitive accumulation all of which involved the use of state power, often in a brutal fashion. They included: the enclosure movement; the protectionist system; the 'modern mode of taxation'; commerce and the 'colonial system.'

For Marx, however, primitive accumulation was a condition that preceded capitalist accumulation, its starting-point ('wealth') and not an on-going necessity. It fell to Rosa Luxemburg to demonstrate that 'the accumulation of capital as an historical process depends in every respect upon non-capitalist social strata and forms of social organization' (1963:366). This 'non-capitalist social environment' was essential as an 'external market' (along with the purely capitalist circuits of the 'internal market') for absorbing the products of capitalism and supplying its raw materials and labour power.

Luxemburg stressed that in the global encounter between capitalist and non-capitalist modes of production the role of the state and political coercion was an intrinsic and critical factor for capital accumulation, for 'if capital were here to rely on slow internal disintegration it might take centuries' (Luxemburg, 1963:370). In this context the goals of colonial policy were clear: to gain immediate possession of the productive forces; to liberate labour power and coerce it into service; to introduce a commodity economy, and to separate trade and agriculture. Luxemburg also stressed the on-going nature of the process of primitive accumulation: 'the accumulation of capital seen as an historical process employs force, not only at its genesis but further on down to the present day' (Luxemburg, 1963:371).
This account was highly influential. Sweezy (1982) has associated primitive accumulation with the origins and development of the centre/periphery structure, and recently world systems theorists have proposed that the process of primitive accumulation is a 'permanent and functional part of the system as a whole' (Chase Dunn, 1978:165), an argument that is also shared by Marxists such as Mandel (1978:46).

Attention has focussed on the role of the state in destroying the conditions for the independent reproduction of pre-capitalist modes of production in order to guarantee markets, means of production and labour power for the dominant capitalist mode. Policies of this type have been clearly exposed in Southern Africa (Arrighi, 1973; Wolpe, 1972; 1980; 1986; Friedmann, 1978; Bernstein, 1977) and Latin America and Asia (Portes and Walton, 1981; Alavi, 1982a). Measures identified include: the imposition of taxes and fiscal burdens on self-sufficient tribal and peasant communities in order to force them to acquire a monetary income through participation in capitalist activities; changes in conditions of access to land and resources through legislation on land rights (expropriation, replacement of communal rights with private property systems etc.); free trade policies that encourage the destruction of peasant manufacturing; the introduction of discriminatory subsidies to white farmers to prevent the development of African commercial agriculture (Arrighi, 1973); systems of contract labour and labour legislation that ensure the periodic repatriation of workers to tribal areas to guarantee the 'subsidy' function of the non-capitalist mode; and (particularly in the Americas) politically manipulated migrant labour legislation (Portes and Walton, 1981).

Attention has also recently focussed on the complex class structures and
political positions that emerge out of the articulation process but not adequately accounted for by classical Marxist analysis (Petras, 1970; 1975; Grupo Russi, 1975; McGee, 1976; Taylor, 1979; Burgess, 1981b, 1982, 1986; Cliffe, 1982; Janssen, 1984;). Many pointed to the complex and heterogeneous nature of the urban proletariat and conflicts generated within it by the articulation process: there was a skilled, unionized and permanent proletariat tied to the capitalist sectors that espoused reformist or socialist positions; a substantial artisan class often hostile to imports of manufactured goods, and periodically amenable to right-wing political ideologies appealing to the image of the self-sufficient pre-capitalist artisan; and there was a massive urban 'sub-proletariat' sporadically employed in the capitalist sector, the informal sector and petty commodity production or exchange with intervening periods of underemployment and unemployment. The political volatility of this sub-proletariat reflected its 'contradictory class location' (Gerry, 1979; Olin Wright, 1978), shifting from right-wing to left-wing populist and socialist positions with a persistent responsiveness to reformism, paternalism and patron/clientage relationships. Similarly a substantial petty bourgeoisie existed with an equally complex structure and a range of political positions. Observers (Baudelot, Establet and Malemort, 1974; Taylor, 1979; Petras, 1975) recognized three strata in this class: those who owned small production and distribution units; those owning enterprises involved in servicing capitalist and petty commodity producers, and those employed in the state sector. Many writers (Alavi, 1982b:6; Taylor, 1979 et al.) also identified a split between a 'national' bourgeoisie (industrial capital), pushing for protection for local industries, restrictions on imported commodities, technologies, and foreign capital, the expansion of the state sector, and land reform; and a 'comprador bourgeoisie'
(commercial, financial and agricultural capital) interested in stimulating foreign investment in the export sector, and maximizing import/export trading links and foreign financial penetration.

In Latin America the need to guarantee a semi-feudal land-owning class access to state power was seen as an obstacle to the enlarged reproduction of capitalist relations of production, and attempts to block the independent reproduction of the semi-feudal mode of production in the countryside (Taylor, 1979:253).

All articulation theorists stress that there is no simple linear causality between economic and political practices - in line with Marx's argument that the ruling class rules but does not necessarily govern. Political hegemony is often exercised by a class or class fraction that is not economically dominant, and the exercise of state power is often dependent on class alliances at the political level.

Ideological Articulation

Unfortunately little work has been carried out in elaborating articulation theory for ideological practices, despite a clear potential. We have already reviewed the significance attached to ideological transformations by modernization theorists and how 'modern' value systems were generally counterpoised in a dualistic fashion to those of the non-capitalist modes. Political variants of modernization theory had argued that with industrialization and modernization, Latin America would evolve similar political structures to those of advanced capitalist societies. Latin America was moving towards a liberal democracy based on the pluralistic model of competing pressure groups, with an executive responsible to representative bodies, an independent legislature and judiciary,
political parties organized along 'modern lines' and so on. Criticisms of these approaches focused on their Eurocentricity, the 'formal' nature of the indicators identified (Bodenheimer, 1969); and the failure to take adequate account of the resistance of the political and ideological structures of the subordinate modes of production.

Articulation theorists have argued that the political and ideological structures of pre-capitalist modes are equally as susceptible to the subsumption processes outlined earlier, and that there is a reworking, a sort of 'formal subsumption' in the political and ideological realm. Thus Taylor (1979:255) argues that 'the continuing articulation of a non-capitalist division of labour with a capitalist mode of production... provides a constant basis for the insertion of non-capitalist ideologies within the political forms produced by a specifically capitalist class structure'. This approach can be applied to the study of Latin American political and ideological systems (Burgess, 1982). Thus the constitutional provisions and formal relations so rapidly identified by the modernization theorist do little to contest a body of attitudes and informal institutional networks, inherited from pre-capitalist modes of production. Latin American (and specifically Colombian) political systems can be conceived in terms of tiers of patron/clientage linkages which operate at all levels of the system, and in all of its structures (the representative bodies, the state apparatus, the political parties, settlement organizations etc.). In this thesis we shall argue that the existence of phenomena such as ventajismo, caciquismo and systems of patron/clientage provide evidence of this political and ideological articulation process, and are vital for understanding political mobilization around, and state responses to urban demands.
One of the subjects unexplored by, but also highly amenable to articulation analysis at the ideological level is architectural design and urban planning practice. A principal goal of this thesis is to identify and explore the ideological significance of these practices in the terms of reference of articulation theory and will be discussed fully in the next chapter.

In this chapter we have attempted to outline the general theory of articulation of modes of production and capitalist development. In Chapter Three we shall proceed to construct an analytical framework for studying the state and self-help housing from this theory.
Notes for Chapter Two

1. The ‘extended reproduction of capital’ refers to the ‘fact that not only is the capital used up in production replaced from the proceeds, but also that the surplus value that is extracted from the worker contributes to the accumulation of capital and thereby to a constant enlargement of the capacity to produce’ (Alavi, 1982a:181).

2. ‘The process therefore that clears the way for the capitalist system can be none other than the process which takes away from the labourer the possession of his means of production; a process that transforms on the one hand the social means of subsistence and production into capital; on the other, the immediate producers into wage labourers’ (Marx, 1977b:714).

3. In recent years the literature on this theme has proliferated. Particularly useful are ILO (1975a); ILO (1975b); Bromley and Gerry (1979); Bromley (1985); Redclift and Mingione (1985).

4. Here the capitalist sector used the informal sector to fulfill seasonal and fluctuating export demands. Patterns of short term wage work; ‘disguised wage work’; dependent work; and precarious self-employment were recognized.

5. There now exists a considerable literature associated with the concept of social formation and the transition from feudalism to capitalism. See: Hobsbawn (1964); Wolpe (1972; 1980); Poulantzas (1973; 1978); Hilton (1978); Hindness and Hirst (1975; 1977); Althusser (1977); Balibar (1977); Banaji (1977); Anderson (1979); Taylor (1979); Alavi (1982a; 1982b).

6. ‘The notion of irreconcilability between the rising capitalist mode of production and pre-capitalist modes of production in a social formation is a pivotal conception in historical materialism’ (Alavi, 1982a:173).

7. ‘A mode of production defines the structure of social relations of production; it is an analytical concept. The concept of ‘social formation,’ on the other hand, is a descriptive term. It denotes an actual and specific societal entity. As such it refers to a particular, geographically-bounded and historically-given societal entity with given resources and given forms of economic and political organization and cultural features’ (Alavi, 1982a:178).

8. ‘The central problem of articulation theory is that the relation of articulation ...is a relation of transformation of the modes of production implicated in the relationship’ (Wolpe, 1980:91).

9. See the works of Sweezy (1942; 1982); Baran (1957; 1982); Dobb (1963); Frank (1969; 1978); Meillasoux (1972; 1971; 1981); Hindness and Hirst (1975; 1977); Melotti (1977); Taylor (1979).

10. For a brief survey of the historiography of the concept of mode of production in Marx see Banaji (1977).
11. Unfortunately clarity has not been served by the wide range of forms identified, and by the lack of rigour in the maintenance of the distinction between forms and modes of production. In the Seventies a wide range of terms came into usage: 'petty commodity production and exchange' (Bose, 1974; Gerry, 1974; 1976; Lebrun and Gerry, 1975; Moser, 1978; McEwan Scott, 1979; Lewin, 1985); 'simple commodity production' (Banaji, 1979; Bernstein, 1979; Friedmann, 1981; Wolpe, 1972; 1980); 'household and domestic economies' (Redclift, 1985; Roldan, 1985); 'labour reserves' (Arrighi, 1973; Amin, 1977); 'subsistence enclaves' (Portes and Walton, 1981). Perhaps more confusing has been the failure to maintain the conceptual distinction between modes and forms of production. Meillasoux talks of a 'domestic mode'; Banaji (1977) has talked of simple commodity production as being a 'specific form of reproduction of labour power'; Taylor (1979) has talked of different 'forms of capitalist penetration' when talking of the different phases in the development of the global capitalist economy etc. Although most writers have been cautious to distance themselves from the dualistic formulation of the relationship with the capitalist mode (modern/traditional; formal/informal etc.), some writers have argued for the coexistence of both the petty commodity forms and the urban informal sector (Portes and Walton, 1981). On the other hand relations of articulation have been identified between 'backward' and 'modern sectors' (de Oliveira, 1985) and 'superior' and 'inferior circuits' (Santos, 1975).

12. 'Capital no longer leaves them (artisans) in the mode of production already found in existence, establishing its power on that basis, but rather creates a mode of production corresponding to itself as its basis' (Marx, 1975:587).

The production of relative surplus value revolutionizes out and out the technical process of labour and the forms of social grouping. It therefore presupposes a specific mode, the capitalist mode of production, a mode which along with its methods, means and conditions, arises and develops spontaneously, on the basis provided by the formal subsumption of labour under capital. In the case of this development, the formal subsumption is replaced by the real subsumption of labour under capital' (Marx, 1977b:510).

13. 'Because of this process of absorption of migrant labour within the capitalist economy the agricultural communities maintained as reserves of cheap labour power are being both undermined and perpetuated at the same time' (Meillasoux, 1972:103).

14. '..but we can now see clearly that some modern marginal sectors are reproduced by the system' (Amin, 1977:219) and 'the modern sector reproduces itself and expands on the basis of the very existence of a backward sector' (de Oliveira, 1985:65).

15. 'Every reduction in the cost of production of labour power, that is to say, every permanent price reduction in the worker's necessities of life is equivalent to a depression in the value of labour power and will therefore finally result in a corresponding drop in wages' (Engels, 1975:45).

16. Charles Babbage argued 'That the master manufacturer, by dividing the work to be executed into different processes each requiring different degrees of skill or of force can purchase exactly that precise quantity of both which is necessary for each process; whereas if the whole work was executed by one workman, that
person must possess sufficient skill to perform the most difficult task and sufficient
strength to execute the most labourious of the operations into which the art is
divided' (Quoted in Froebel et al., 1980:38).

17. 'The existence of an abundant supply of cheap labour in the low wage
countries may well mean that a world wide calculation would lead to the
conclusion that the substitution of labour by new machinery is given all the
relevant factors simply not profitable whereas a similar calculation on a national
scale might produce exactly the opposite result' (Froebel et al., 1975:44).

18. In the Sixties modernization theory attempted to elaborate the preoccupations
of Weber, Durkheim and Schumpeter in the discussion of the development,
industrialization and urbanization of LDCs. Hoselitz (1960), McClelland (1964)
and others tried to combine Parson's pattern variables (universalism, achievement-
orientation, and functional specificity) with Weber's ideal type method and found
the mechanism for the transformation of the one into the other, following
Schumpeter in the causative psychological state of the individual. Modernization
involved the assimilation of urban/industrial values by individuals in a process of
transition. The inhabitants of the slums and shantytowns were not integrated into
urban life because they lacked the 'modern' attitudinal behaviour syndrome. The
modernization process could be explained in terms of the attitudinal changes of
the individual and obstacles to this process could be traced to the persistence of a
'traditional' mentality.
Chapter Three

THE STATE AND SELF-HELP HOUSING POLICIES IN LATIN AMERICA: 
A THEORETICAL FRAMEWORK

THE CONCEPT OF HOUSING

In this thesis housing is defined in terms of three fundamental dimensions.

First, housing is a necessary good - a means of subsistence necessary for the reproduction of the labour force, and therefore a good whose cost enters directly or indirectly into the production of all commodities (i.e. it is an indispensable element of productive consumption). Thus housing is of interest to classes other than those who immediately consume it, and housing costs are an important determinant of the reproduction costs of labour power (Engels, 1975). The debate on the contribution of self-help housing to the lowering of the reproduction costs of labour power relates directly to the nature of housing as a necessary good. (Portes and Walton, 1981; Burgess, 1985; Pickvance, 1977; 1980; Nientied & Van der Linden, 1983; Steinberg, 1983; Gilbert, 1986).

Second, housing is a fixed good (Molina, 1976:9-11). Land is a material condition for housing production, a scarce commodity that cannot be reproduced at will, governed by legal rights to private property. The private appropriation of a non-reproducible resource means that rent has to be paid to the landowner for its use. The issue of rents, landowners, land markets and property capital are thus crucial for understanding the nature of housing.

Third, in a capitalist social formation, housing has both a use-value and an
exchange value - it is a commodity that is produced and exchanged for the purpose of reproducing and expanding the value of capital by obtaining profit.²

As a use-value, a house is an object that through consumption satisfies an individual, family or collective need. These needs, however, are not simply defined by biology but are ultimately determined by humanity itself according to the level of material development reached by society, and the totality of values involved in the process of their satisfaction.³

Housing needs can be formulated in terms of individual, or household requirements for shelter, space, privacy, access to employment, services, status etc. But these needs are determined socially and historically, rather than as a function of an a-historical and autonomous realm of individual rationality. In a capitalist social formation housing commodities are produced to realize profit, and to the measure that need is converted into 'effective demand.' In this way human needs are translated into the 'alienated needs' of capitalist production: the need to expand the value of capital and to reproduce labour power in the manner permitted by the distribution of the social product amongst the social classes.⁴

The character of the housing commodity as an exchange-value is realized (and with it the profits of the different capitals involved) in the transformation of the housing object into money capital through commercial circulation (Pradilla, 1976:13). In this way the commodity cycle (M-C-M’) is completed and the three moments of the single housing process are defined: production, exchange and consumption.⁵ In the commodity form, use-values are appropriated only by being realized as exchange-values.
In the capitalist mode the housing needs tend to be satisfied in the form of real housing commodities defined as:

those houses which are built immediately for exchange i.e. those houses which are destined for consumption by social agents who are different from those directly tied to the process of their production (e.g. workers, builders, investors).

(Pradilla, 1976:5)

Here the house will only be accessible to the consumer if he can meet the sale price which will include: ground rent, capital invested in land development and construction, commercial costs, general costs, profits on production and exchange, and interests on producer and consumer credits.

However, although the vast majority of houses in advanced capitalist countries are produced and exchanged as real housing commodities, this is far from true of Third World social formations with articulated modes of production. Pre-capitalist or non-capitalist forms of housing production and exchange have continued to survive albeit in modified and transitional forms. However, this does not mean that this type of housing has escaped the influence of commodity processes. In a capitalist social formation, housing produced under subordinate non-capitalist forms is equally exposed to the laws of the capitalist market and the use of money as a means of exchange (Pradilla, 1976). Here we can talk of potential housing commodities where housing is built by consumers for their own use but has a value attached to it which can be realized through sale or rent.

THE CONCEPT OF SELF-HELP AND FORMS OF HOUSING PRODUCTION

Marxist analysis locates the issue of self-help building within the theoretical and historical frameworks derived from analyzing the laws of motion of a capitalist mode of production in a social formation. In particular the question is
understood in terms of the need for the capitalist mode of production to expand and deepen the social division of labour, to commodify labour power and to generalize the production and circulation of commodities.

In the advanced capitalist countries the historical precondition of this process was the destruction of small scale pre-capitalist forms of production based on 'self-help' and a limited division of labour, and their replacement by the large-scale production of commodities through a complex division of labour based on capital/wage relations of production. From this viewpoint, self-help is not a new idea or form of political economy, but a very old one. Historically its persistence has been a function of the degree to which the capitalist division of labour has been directed towards the production of housing commodities, in a process involving the complete separation of the future consumer of the house from the production process.

However, given the conditions of articulation governing Latin American social formations, capitalist forms of housing production where the social division of labour is well developed 'coexist' with forms of production based on self-help labour practices. In the Seventies, Marxist analysis began to analyze the historical movement of the separation of the producer agent from the consumer agent in terms of the articulated relationship between three forms of housing production - the industrial, manufactured and artisanal forms (Pradilla, 1976; Molina, 1976; Burgess, 1978; 1981). No matter how self-help housing activities are organized, they are articulated by the economic, political and ideological structures of the dominant capitalist mode (and forms) of production, and it is here that the limits of artisanal and state self-help housing can be identified. The most important questions that can then be asked about this process are: how far has the capitalist
mode of production deepened the social division of labour and generalized the production of housing commodities for the purpose of reproducing and expanding the value of capital? and what are the specific characteristics of this process in Latin American capitalist social formations (Pradilla, 1976; Molina, 1976; Burgess, 1978; Portes and Walton, 1981).

Identification and analysis of the specific forms of housing production in Latin America has been greatly advanced by the contributions of Emilio Pradilla (1976, 1977) and Humberto Molina (1976), and the following schema develops and modifies their theoretical framework. Each form is defined and examined in terms of the production, exchange and consumption processes involved in the acquisition and development of land; the provision of construction materials, and the construction process. The framework also identifies the relations and agents of production in each form, certain ideological aspects of the housing commodity cycle, and its conditions of articulation. Particular attention will be paid to the artisanal form.

The Industrial Form

The industrial form produces real housing commodities for a general market, in which the direct relationship between the consumer and producer in the production process disappears, and is mediated in the exchange process by specialist agents. Capital is invested in the purchase of land (frequently through property companies); mass-produced industrial building materials, machinery and wage labour. Industrial housing takes the form of mass-produced housing estates and multi-storey apartment blocks derived from a ‘functional’ design ideology that rationalizes the technical and economic requirements of the industrial form.
The high price of industrialized housing in relation to the distribution of demand, restricts it to the upper sphere of circulation of the housing market. This high price is determined by the capitalist conditions of its production, and in particular by the presence within it of all the profits of the various capitalist agents participating in the process. These agents, the fractions of capital they represent and their significance for the final cost of the house can be identified for each of the three moments of the housing commodity cycle and each of the three phases of the housing process (Pradilla, 1976; Bassett and Short, 1980).\(^8\)

Thus a significant component of the sale price of an industrial house is derived from the costs incurred through the participation of profit, rent and wage-seeking agents involved in the process of land acquisition and development (levelling, drainage, infrastructure and service provision). These include: landed capital, property capital, construction capital, commercial capital, finance capital, intermediate technical agents and direct and indirect wage labour.

The industrial form almost exclusively purchases industrial building materials which tend to be of a higher quality than those from the artisanal and manufactured forms, whilst standardization and prefabrication permit on-site productivity gains in assembly.\(^9\) However they tend to be high priced because of production bottlenecks caused by undercapitalization (derived from shortages of foreign exchange and the high cost of imported machinery); and because of oligopolistic price structures in some materials markets.\(^10\)

The system of participating capitals and the complex division of labour embodied in the construction process can also be identified. They include: finance capital (e.g. banks, state credit institutions, commercial sections of construction companies); construction capital; intermediate technical agents;
subcontractors; direct and indirect wage workers, and property agents (commercial capital).

Thus specific relations of production within the industrial form determine the type of house produced and its price is determined by the 'accumulated thirst for profits of productive capital, commercial capital, finance capital and the rents of landed property' (Pradilla, 1976).

This commodity is confronted by consumers who are profoundly differentiated according to their incomes, giving rise to distinct spheres of circulation for the housing commodities produced by the various forms. Poorly paid wage workers, and the unemployed and underemployed masses with subsistence incomes cannot constitute themselves into 'effective demand' for industrial housing despite their great need. Effective demand is confined to the high and medium income groups and this exclusion constitutes a major reason for the Latin American housing problem.

Historically, the development of the industrial form of housing production, demanded a new relationship between designer, producer and consumer, and a radical change in the form and design of the house (Pradilla and Jimenez, 1973). In the industrial form not only is the consumer separated from the design process by the principle of full commodification, but the designer is also distanced from direct involvement in the production process by a complex division of labour. Designs and plans respond to the technical and economic requirements of the productive forces, the architectural ideology of the designer, and ideological definitions of consumer need. The resulting mass-produced, low-rise housing estates and multi-storey apartment blocks reflect these determinations. A uniform and standardized design facilitates economies of scale, prefabrication, the use of
shared structural components and on-site mass assembly; whilst technical norms dictate maximum weight and dimensions of materials, altitude, structural modes etc. The designer also responds to dominant cultural and ideological models in style, in the arrangement and allocation of use to internal spaces; and to ideological values embodied in the minimum standards governing subdivision, building and planning codes.

Consumer sovereignty is confined to the acceptance or rejection of this pre-designed object, a decision that is influenced by the dominant ideology of the ideal mode of housing consumption. Mass advertising is often used to establish the product as this ideal mode (Pradilla and Jimenez, 1973). The deformation of use-value in order to create exchange value, and the ideological redefinition of need to accommodate this deformation - a species of commodity fetishism in Marxist terms - contrasts strongly with the mode of consumption of artisanal housing, and underpins the issues raised by the self-help school's critique of standards and conventional housing.

As the most developed capitalist form of housing production, the industrial form is also the dominant form articulating the manufactured and artisanal forms and defining the limits of their survival or dissolution. The articulation occurs through the industrial form's domination of land, building materials and financial markets, and manifests itself in the dependence of other forms on industrial technologies, commodities and specialist skills; in the overall determination of prices and acceptable qualities in building materials markets; in the spatial allocation of land for different residential uses; and in definitions of performance and specifications.

Nonetheless the artisanal and manufacturing forms not only continue to
survive but are also reproduced in this articulation process. Reasons include: the obstacles raised to capital accumulation in the industrial form derived from monopoly in land, shortages of circulating capital and the narrow sphere of circulation of the housing commodity; political pressures on the state to support the manufactured form (through incentives, subsidies, and contracts) because of fears of unemployment; and in the case of the artisanal form because of the ineluctable need of low income groups for some form of shelter.

The Manufactured Form

The manufactured form rises historically when capital purchases labour power as a commodity to produce real housing commodities. It differs from the industrial form in the predominance of simple means of production and manual labour, and from the artisanal form in the restricted role of the consumer in the production process. Usually capital is advanced to a small building firm to construct a house ‘to order’ using a pool of skilled and unskilled contract labour.

Manual labour dominates the construction process, technology is relatively simple, and the scale of operations and capitalization limited. Building materials are derived from industrial and manufactured sources. Management functions are often assumed by an intermediate agent (architect/engineer or maestro de obra).

Given the limited division of labour, a personal relationship between the designer and client is maintained. This gives rise to an individualized and formal design that reflects the materials and technologies used, the amount of capital invested, minimum standards legislation, the architectural ideology of the designer, and the expressed preferences of the consumer. When the state intervenes to support the manufactured form (using salaried designers), it often introduces a
measure of 'rationalization' in the designs that results in two-storey terraced housing with shared walls and structural components.

The sale price of the house incorporates the capital invested and the resulting profits of all the fractions of capital involved in its production and exchange. These can include the full range of land-owning interests, commercial capital, construction capital, state capital and finance capital. Low productivity, limited economies of scale and rudimentary technology result in a commodity that remains unaffordable by the majority of the population.

Often the manufactured form has to compete with the industrial form and continued survival in these markets demands the further development of capitalist forces and relations of production within the firm, in order to match its competitors prices. Other firms that are not as successful in following this process will be constrained in growth or forced to abandon the market.

However, the articulation process also generates contradictory tendencies that encourage the survival and reproduction of the form including: low and unregulated wages that permit competition through expansion of absolute surplus value; the limits on the development of the industrial form already discussed; state subcontracting policies aimed at allocating production to labour-intensive firms; and the persistence of the manufactured design as the ideal mode of housing consumption.

The Artisanal Form

The expansion of the urban land market has occurred under conditions of significant population growth, overcrowding in inner city slums, widespread subrenting throughout the city and rapid increases in land values (Edwards, 1982;
Gilbert, 1983). The numbers excluded from 'formal' land markets have increased with land prices rising faster than incomes leading to the growth of forms of land acquisition and development associated with the artisanal and manufactured forms - squatter settlements and illegal subdivisions (*barrios piratas*).

In their purest (and not necessarily their most common form) squatter settlements are pre-capitalist forms of land acquisition because the land is destined for self-consumption, and in its acquisition and development money does not enter into relation with wage labour. However as an articulated form they rarely remain outside of commodity processes. The squatter's plot becomes a potential land commodity affected by his and his neighbours' land-valorizing activities and many squatters often seize sufficient land to engage in illegal land transactions. Here we can talk about a real land commodity because rights to land have been transferred through a money payment, and the land 'developed' specifically for exchange. Third, although some aspects of land development can be accomplished through self-help labour (drainage, levelling, enclosure), further development requires the extension of public service and infrastructure networks that increase the value of the land and integrate it within the broader urban land market.

Again despite the original mode of occupation, the process transforming land from a potential to real commodity can quickly set in with 'improvements' being stimulated by tenure legalization over time. Thus a squatter settlement can be converted in time into a legal settlement fully-integrated into the land market. The legalization process not only involves the granting of security of tenure and rights to mortgage of property to squatters, but also profits to the original landowner, and rights of taxation to the municipality.
The second form of low-income access to land is the 'unimproved' or 'illegal' subdivision, the *barrio pirata*. The most common form of unimproved subdivision in Colombia is one where a subdivider acquires land legally from an original owner, and then develops the plots to illegal specifications for sale. As a specific legal form that conveys possession but not ownership (*promesa de compraventa*) the unimproved subdivision can often be a form of entrance into 'formal' legality.

Despite its illegality we can talk about the real commodity character of this form of land acquisition and development. The land is consumed by social agents different to those who are tied to its development. The developed land as a commodity confronts a consumer endowed with a certain sum of money in an exchange relationship. The subdivider will include in the price he charges the consumer the capital invested in land and its development, interests on this capital, capital invested in its commercialization, and profits. Potential consumers will have to meet this price and also cover the interests on consumer credit. The unimproved subdivision caters for those low-middle and middle-income families with insufficient savings and income to enter the 'formal' land market. The developed land continues to increase in value, as a result of its improvement and its gradual physical and legal integration into the urban land-market. This value can be realized by subsequent sale, further subdivision of lots and the subrenting of space to other families.

Both forms generalize private property in land, and reproduce the ideology of private property (*ser propietario*), a matter of considerable political importance (Engels, 1975; Pradilla, 1976; Burgess, 1978, 1985).

The artisanal form of housing production utilizes materials from all three
forms. Income constraints compel self-help builders to utilize self-produced or low-priced materials from the artisanal and manufactured forms which are subsequently replaced by better quality and higher priced materials from manufactured and industrial sources. However, some of these materials are also indispensable at a relatively early stage of construction.

The artisanal form of housing production is based on *autoconstrucción* - a process whereby the individual, the household or community use their own labour power and a part of their subsistence incomes to build their own houses. It is further characterized by: the absence or limited use of wage-labour; low skill levels, the use of rudimentary tools; a casually-programmed labour process; an important element of self-design; and the simultaneous consumption/production of the house.' Housing is produced for the direct satisfaction of need not exchange. The house, however remains a potential commodity.

The artisanal labour process is essentially a form of simple cooperation in which the family provides the labour, administers the resources and organizes the construction process. In its pure form this labour process is realized through a family-based division of labour without the participation of paid labour and utilizes additional rather than normal labour-time. The construction process is dominated by manual labour, and rudimentary tools (pickaxes, shovels, barrows etc.).

Construction is generally carried out using the system of progressive development. The duration of the construction process is in the hands of the family, but is determined by the degree of stability in employment, the possibilities of extending the working day, the income available for investment, and the capacity to reduce other essential consumption. A typical characteristic of the
artisanal form is the lack of a preconceived ‘concrete’ plan or design that is an institutional requirement for legal construction.

In the pure artisanal form there is no separation of the producer agent from consumer agent - the future consumer is also its designer, and in control of the production process. Thus the relationship between use-value and housing need is not mediated by an exchange process, and designs attempt to maximize use-values through a personal assessment of need. Nevertheless, the design intentions of artisanal builders can be frustrated by lack of income, low quality materials, and rudimentary technology, whilst low skill levels can result in design faults (e.g. inadequate illumination, over- and under-estimation of volumes).

On the one hand the artisanal builder will design his house, according to conceptions of his housing need and accepted design models derived from his cultural (and often rural) experience. In these cases traditional value systems are reflected in the designs which permit progressive development to fit changing household income and spatial requirements. On the other hand, artisanal designs will also be influenced by the dominant models of housing consumption - that is by an architectural ideology that transmits the values that characterize urban capitalist society - private property, the family, individual privacy, social differentiation, conspicuous consumption etc. The artisanal self-builder formulates new housing needs according to a process of cultural and ideological reconstruction and integration into urban society which is expressed through preference for modern materials and designs and adherence to the signs, symbols, and elements of capitalist urban housing ideology.

The financing of artisanal building is largely derived from family incomes, with low interest or interest-free loans from friends and relatives and high interest
loans from informal credit networks. Formal sector workers or state employees can sometimes receive construction loans from social security benefits (C.P.U., 1976).17

A typical characteristic of the mode of consumption of the artisanal form is the combined construction/consumption of the house. This permits immediate capitalization of rents; flexible adjustment to changing income and spatial requirements; minimization of transport costs etc. However, it can also result initially in overcrowding, bad living conditions and lack of services.

In terms of its relations of exchange, artisanal housing is realized under non-capitalist conditions when the object of production is not exchange but self-consumption. However, given the dominance of capitalist relations of production and exchange in the social formation, the house is a potential commodity, which can become a real housing commodity if the producer ceases to consume it, or a part of it, through sale or rent.

An adequate understanding of the articulation of the artisanal form requires an appreciation of the distinction between its 'pure' (pre-capitalist) and 'real' (non-capitalist) variants. This distinction refers to the characteristics of the form before and after capitalism was dominant and determinant in Latin American social formations - or to put it another way - its characteristics before and during the articulation process. Although the pure artisanal form may still be found (with increasing difficulty) in isolated rural areas, in the cities the real articulated form is the predominant variant. In urban areas 'pure' artisanal activities are quickly converted into their 'real' counterparts through rapid articulation by the dominant capitalist forms.

Thus, in the pure artisanal form land is invaded without payment; it is
developed through self-help family labour and subsistence incomes; it uses 'collected' or 'self-produced' materials that are not commodities; the resident is in control of the design and production process, and the house is produced for self-consumption not exchange. However, in contemporary capitalist social formations the real artisanal form is subordinate to the dominant capitalist mode with its tendencies to deepen the social division of labour to generalize commodity production and exchange; and to create and expand land, building materials and financial markets in activities organized by the other forms. The resulting articulation process determines the character and dynamics of the artisanal form.

Thus in the real artisanal form commodity markets develop in land that has been squatted on or illegally subdivided, confronting new residents with ground-rents and profits in the sale price, whilst the development process and state investments in infrastructure and services combine to create new differential ground-rents.

Similar considerations affect the provision of construction materials, where most materials for self-help building can only be acquired as commodities. Markets even develop for recycled throwaways as the acquisition of a new use value results under capitalist conditions in the creation of a new exchange-value.

In terms of the labour process, the penetration of capitalist relations of production results from the contracting of wage-labour for specific tasks; and the introduction of an intermediary agent of production (maestro de obra). This partly separates the consumer from the production process, and sometimes from the design process.

The artisanal builder will also be introduced to commodity markets for money - either inside or outside of the formal banking system. From the point of
view of consumption and exchange, the house can be realized as a commodity by its introduction onto the market for sale or for rent.

At the same time the artisanal form is reproduced by this articulation process. Two explanations have been proposed. Molina (1976:125) suggests the profound segregation of ‘markets’ - the products of the industrial and manufacturing sectors are realized in different markets, and the products of the different forms do not compete amongst themselves. Pradilla (1976:11-12) on the other hand emphasizes the low and unstable incomes of the urban majority which exclude access to industrial and manufactured housing leaving no other alternative, outside of renting, than to build in the artisanal form.

**THE CONCEPT OF THE ROLE OF THE STATE IN THE URBAN AND HOUSING PROBLEM**

**The General Concept of the State**

The Marxist theory of the state disputes the claim made by liberal theory and by the state, that it represents the ‘general interest’ of the whole of society. On the contrary the capitalist state is identified as an instrument and expression of the capitalist mode of production that acts in the interests of the dominant class or classes in their inherently antagonistic relationship with the subordinate classes.

The Marxist theory of the state also takes issue with the claim that the capitalist state stands above or is separate from society. Rather the state, the law, and all political and ideological institutions and values are subject to the laws governing capitalist development. State policies cannot get beyond or contradict capitalist relations of production, exchange and consumption, though they are capable of producing secondary modifications in these structures. The essential functions, then, of the capitalist state are to secure the reproduction of the
capitalist regime of production; to exercise class domination over the subordinate social classes, and to conciliate the secondary contradictions within and between the fractions of the dominant class.\textsuperscript{18}

State power is exercised by a ‘hegemonic bloc’ of classes and class fractions that are organized around the dominant class or class fraction at a given historical conjuncture.\textsuperscript{19} Conflicts arise over the distribution of surplus-value between the various fractions of capital (agricultural, property, industrial, commercial and financial), and at the political-ideological level, political fractions are differentiated according to their conception of the role of the state, the process of reproduction of capital, and the forms of exercising class-domination (Pradilla, 1974; 1977). Passage of hegemonic control from one class to another (e.g. owners of capital to owners of land), or from one fraction of a class to another (industrial to financial capital) will lead to a change in the nature and content of state policies. In addition, the dominated classes (e.g. industrial and agricultural proletariat, the subproleteriat, petty bourgeoisie, peasantry) develop their own forms of organization and struggle (e.g. trade-unions, squatter organizations, urban social movements, peasant associations etc.). The balance of class forces between dominating and dominated at any one time will establish conjunctural limits to state policies at the economic, political and ideological levels.

In the Marxist view state interventions do not transcend the capitalist nature of the urban and housing process, but rather are aimed at developing it or regulating the contradictions that arise out of it. In recent years a large body of Marxist theory has addressed itself to the analysis of state urban and housing policies which we shall briefly examine before turning specifically to state interventions into self-help building processes.
The Economic Interventions of the State

In the Seventies and Eighties the French School of Urban Sociology (Castells, 1977, 1974; Lojkine, 1976; Lamarche, 1976 et al.) argued that urban planning and the class struggles that challenged its class partiality (urban social movements) set the framework within which state interventions could be understood.

According to Castells (1977:126-7) the urban elements can be identified as the spatial aspects of production (P), consumption (C), and exchange (E), whilst the activities of urban planning can be identified as management (M) - the process of control and regulation of the relationship between production, consumption and exchange. The state uses urban planning to mitigate the negative urban effects derived from the contradictions of capitalist development. However, urban planning is itself determined by, rather than transcends these contradictions; it is modulated by rather than supersedes class struggles, and in its turn can become a source of new contradictions.20

The general economic goals of urban planning are pursued through specific planning instruments - land use plans, zoning and subdivision codes, road plans, urban renewal plans, infrastructure and service master plans etc. These goals can be identified as follows:

1. To mitigate the negative effects of the free play of market forces in land acquisition, distribution and development on the reproduction of capital and labour power. Land use plans are used to oversee the distribution of urban land between the competing fractions of capital and branches of economic activity; whilst infrastructure and service plans attempt to improve the material conditions necessary for the circulation of commodities and factors of production.
2. To regulate the land market in ways that meet the investment requirements of capital in the construction sector (property, finance and construction capital). Urban renewal plans and urban and land reforms attempt to resolve the conflict of interest between these fractions and urban landowners. Part of the increase in ground rents is transferred to the state through taxes; and road plans, municipal codes, urban renewal plans and valorization taxes can be used to expel small owners and their tenants from inner city locations required by capital for redevelopment.

3. To use taxes and subsidies to provide those material supports which are necessary for profit-making activities, but which private capital is reluctant to undertake because of low rates of return in relation to the levels of investment required. These include road networks, water and electricity, drainage and sewerage systems. However, state actions continue to produce conflicts over the quantity and quality of services and their location amongst their various users.

4. To guarantee the supply and lower the subsistence and reproduction costs of labour power by investments in the means of collective consumption including health, education, labour-training, cultural and recreational facilities, water, sewerage, electricity etc. (Lojkine, 1976; Castells, 1977). These investments benefit all the fractions of capital that consume wage labour, as well as landowners.

The economic goals of state intervention into the urban housing process can be analyzed in terms of the acquisition and development of land, the provision of construction materials, and the organization and financing of the construction process.

1. State interventions in the land market take several forms and have
contradictory aims and effects. On the one hand, the state attempts to regulate speculative increases in ground rents through taxes, in order to limit the negative effects on profit and wage rates. On the other hand, the state can permit owners to appropriate a considerable part of the differential rents created by public investments in housing, infrastructure and services. New ground rents can be realized by landowners when the state makes normative changes in land use through rezoning measures, and through the redefinition of the urban perimeter.

The state also stimulates private ownership through the passage of public land to the private domain, the defence of private property against squatting, and regularization of tenure in illegal settlements. On the other hand, urban renewal measures decrease the number of small property owners and concentrate ownership in corporations dominated by property, construction and finance capital.21 The state also acquires developed and undeveloped land for its own projects on the market.

2. The state also intervenes in the production of construction materials. National development strategies have tended to allocate capital incentives and foreign exchange to large-scale industrial investments (e.g. iron, glass, cement, plastics etc.), and state housing programmes have often been used as a guaranteed outlet for these materials.

3. The state promotes housing production by using its housing agencies as technical, financial and commercial agents or as clients of the private sector. Where it advances capital for construction it seeks to recuperate its investments through ‘administrative’, ‘inventory’ and ‘general’ costs charged to the consumer. State capital is derived from revenues from the national budget, employees’ social security funds, foreign aid and national bank loans. Housing agencies act as
finance capital in aggregating these resources and extending them as credit for housing production and consumption.

In the Sixties and Seventies conventional housing strategies were largely based on the state acting as a client to private construction capital. The state also subcontracted production to small building firms either to implement employment-based growth strategies or as a response to political pressures over unemployment rates.22

4. The state often identifies the financial problem as the fundamental cause of the housing problem. Its interventions occur in the context of conflicting demands from construction capital, property capital, industrial capital, and housing consumers. State attempts to resolve these conflicts aim to expand effective demand by extending subsidized credit to consumers; to provide finance, guarantee liquidity and subsidize mortgages issued by public and semi-public bodies, and to consolidate and articulate the different fractions of capital tied to land and housing with finance capital within housing and savings corporations. In all of its measures the state cannot get beyond the limits imposed by the capitalist mode. Thus credits from national mortgage banks and housing corporations transmit interest rates to housing consumers, and in general the amount of consumer subsidies is limited by threats of decapitalization. State housing despite these concessions continues to fall outside of the effective demand of the large majority of the population.

5. The state also intervenes in the housing process to increase the productivity of the working class and to cheapen the reproduction costs of labour power (Pradilla, 1977; Molina, 1976; Burgess; 1978). General improvements in housing and essential services are believed to bring about an increase in labour
productivity and housing subsidies, a laissez-faire attitude to squatters, and rent controls can reduce pressure for real wage increases.

The Ideological Interventions of the State

The ideological interventions of the state into the urban and housing process can be identified in three areas: Attempts to expand private property rights in land and housing; attempts to institutionalize urban social segregation; and the transmission of ideological values in designs and plans.

1. State actions in preserving and expanding the right to private property have important economic goals and effects (including the expansion of the tax base, the integration of commodity markets in land and property, and the encouragement of housing savings and investment). They also have important ideological dimensions. Private property has always been historically linked to the ownership of the means of production in the capitalist mode, and the state has sought to increase the number of property owners as an ideological buttress for the system. The state has four mechanisms for generalizing private property in land and housing: the transference of public land to property and finance capital; the defence of private property against squatter movements; legalization of tenure in squatter settlements and illegal subdivisions; and the insistence on homeownership in state housing.

2. State attempts to institutionalize urban social segregation are carried out through its zoning regulations, municipal codes and through its land use and urban renewal plans. These regulations are directly related to class-based inequalities and are an important means for strengthening the ideological identification of the different neighborhoods.
3. The state exercises regulatory and control functions aimed at maximizing the social benefits and minimizing the social costs associated with private decision-making activities in housing and urban development. These functions are exercised through subdivision, building, and zoning codes that are underpinned by a set of minimum standards.25

The basic goal of state conventional housing programmes was the production of housing conforming to professional, technical and legal norms.26 Arguments in favor of minimum standards were based on technical and economic criteria such as fire protection, structural safety, public hygiene and the excessive costs of future rationalization of unregulated housing. However the values and priorities on which standards were based also had a distinct ideological content that manifested itself in state housing designs and settlement plans.

State housing programmes maintained the separation of the consumer from the design process with specialist designers drawing up a limited number of design models based on minimum standards, using conceptions of consumer need based on social research and affordability criteria. In the modernization period these models produced uniform and easy-to-administer projects which maximized the use of assembly techniques, standardized building materials, and prefabricated and structural components associated with the industrial form. In many cases the process led to the imposition of a design ideology on the residents; a discrepancy between the use-values delivered and the preferred mode of consumption of the resident; a marked insensitivity in the designs to critical domestic economies; and tensions between the community and the state.27 The inevitable result was high cost building that was not affordable in the long term by the poor.

Similar considerations also affected the planning of conventional housing
and settlements where the state found itself in a contradiction: non-implementation of standards resulted in serious diseconomies at the settlement and urban level, but the attempt to build or rebuild settlements on the basis of accepted minimum standards greatly increased costs and represented a waste of scarce resources.

The Political Interventions of the State

State interventions also have a political logic with specific political effects. State interventions in favour of the hegemonic bloc in power are also accompanied by the political mobilization of the subordinate social classes. This means the politicization of the urban question where urban demands become treated in terms of political power. An adequate account of this issue must therefore be able to unite in a single theoretical framework an account of the low income settlement process for the Latin American city, with the political activities of the state and the various social classes around urban issues.

Latin American empirical studies have failed to do this, either depoliticizing the settlement process or artificially separating it from its political dimensions. On the other hand the accounts offered by the French School of Urban Sociology also have serious flaws. Too much significance is given to the role of property capital and the expulsion model in its explanations of the widely observed patterns of intra-city residential mobility. Whatever its other weaknesses (Burgess:1982) the expulsion model underestimates the significance of political elements for understanding the low income settlement process and structure. It fails to identify the political processes associated with the organization of this ‘exodus’ (squatter movements) and the integration and co-option of
'popular' urban demands by the state. Although the Althusserian and Poulantzian concepts of the state that underpin this work stress the equivalence of integration and repression for class domination (domination-integration and domination-repression), Latin American interpretations have concentrated on the domination-repression relationship between the state and low income urban demands. This is accompanied by an emphasis on the 'extra-institutional' nature of the political processes associated with urban demand-making by low income groups (urban social movements).^{30} The critical role of 'institutional' political action by low income groups and the integration functions of the state have been underplayed or ignored.

The following account attempts to restore the significance of institutional forms of political mobilization and the integration functions of state interventions within a Marxist theoretical framework. Diagram 1 shows the main elements and relationships involved in this model.

**Urban Demands**

Urban demands are of two types. On the one hand, demands for housing and the means of collective consumption will be directed towards the state. These demands will reflect the political and ideological consciousness of those who make them, and will change amongst other things with the nature of the state response to them. Thus *inquilinato* dwellers threatened with expulsion may demand financial compensation, access to alternative state housing, or access to resources for self-help building. A recently-organized squatter settlement will demand relaxation of police, legal and military opposition to the *de facto* occupation of land, and press for the regularization of tenure. The more established settlements
political issues they can take the form of a demand for a bill of urban social
rights, for progressive municipalization of land, for rent controls, restrictions on
the development of property capital etc.

On the other hand, the state is entrusted with the provision of the material
supports necessary for the reproduction of capital and labour-power; it has to satisfy some of the housing needs of the upper and middle income groups (par-
ticularly state employees); it has to conciliate conflicting interests in the
distribution of land between the different branches of production and fractions of
capital, and to make those essential investments private capital is reluctant to
undertake. These interventions are aimed at increasing worker's productivity,
maintaining class domination, valorizing land markets, stimulating the construction
sector, and assuring the solution of political conflicts. In pursuit of these goals the
state will make demands on low income groups that can include: the expropriation
of inner city properties affected by urban renewal projects; demolition and
resettlement as a result of public works; eviction from invaded land in defence of
the principle of private property; and the enforcement of municipal codes to
strengthen the principle of urban social segregation.

Political Mediation

These urban demands will be mediated through the political system where they will find either an 'institutional' or 'extra-institutional' expression (Castells, 1977:372-373; Pickvance, 1976:209). Institutional action takes place within the existing political-legal framework, seeking to separate urban issues from general social issues by addressing institutionally-defined demands to the state.
Diagram 1: A General Model of Latin American Urban Politics.

STATE

"POPULAR"

URBAN DEMANDS

EXTRA-INSTITUTIONAL

URBAN SOCIAL MOVEMENTS

INSTITUTIONAL

PRO-GOVERNMENT

LEGAL OPPOSITION

POLITICAL MEDIATION

REPRESSION

INTEGRATION

STATE MECHANISMS FOR DOMINATION
Institutional forms of political mobilization around urban demands usually involve vertical integration political structures outside of the community (pro-government and opposition political parties, trade unions, regional migrant associations etc.). Indeed horizontal connections with other settlements may well be weak, and weakened further by the politics of divide and rule. The degree of institutional political participation can vary widely - from settlements with only weak institutional connections, to a total political mobilization based on paternalistic integration within state institutions (e.g. community development). A particularly important consideration is whether the settlement is organized by the legal opposition or governing parties. All institutional forms stress the determinant role of the state and the political process, and are associated with the politics of paternalism, populism and reformism.

Institutional political mobilization of urban demands can vary greatly from petitioning local officials, legal demonstrations and passive membership of legal parties, to active participation in political meetings and election campaigns. It can range from an irregular relationship with urban agencies to closely-integrated participation in state housing projects, community development structures etc.

Institutional political participation is linked with broader political institutions through a range of traditional kinship and cultural structures (Lomnitz, 1976; Perlman, 1976), and more importantly through extended patron-client relationships and dyads of many types (Cornelius, 1975; Ray, 1969; Collier, 1976; Lomnitz, 1977; Eckstein, 1977). The most important institutional connections are with the competing political parties of the legal opposition (which can have their comites operating in the same settlement); and with the institutional structures associated with the state (e.g. housing cooperatives, community development,
self-help housing projects etc). The settlement can also be linked with a range of institutions associated with the Church, charitable bodies, and international aid agencies.

Extra-institutional action embraces illegal activity and the formation and membership of illegal political parties. Most commonly it takes the form of an 'urban social movement' in which urban demands are linked overtly to class struggle in ways that unite urban contradictions with broader political and economic contradictions (Castells, 1977:378). Urban social movements are characterized by class mobilization around urban issues and high levels of horizontal integration with other settlements. However, vertical linkages can be found with various illegal organizations (revolutionary political parties, illegal workers movements etc.) and indeed these can be critical to their survival and success. The forms of political activity associated with extra-institutional mobilization include violent and offensive demonstrations; the organized seizure of land; militant resistance to eviction; the occupation of public installations; direct action against urban renewal projects, and various types of revolutionary political activity.

It should be noted that the distinction between institutional and extra-institutional forms tends to make static what is in effect a dynamic situation. A settlement can shift its political allegiance from one type of institutional participation to another, or indeed to the extra-institutional form. Much will depend on the response of the local state to the demands being made (e.g. repression or integration), and on the general economic and political conjuncture. At any one time in a settlement there will be political competition between supporters of the different political tendencies (e.g. pro-government, legal opposition, revolutionary
opposition) one of which will be dominant. The ability of this group to maintain its dominance will depend on the neighborhood’s assessment of its ability to arrive at a satisfactory solution to its demands.

The Political Role of the State

Some of the most serious contradictions that the state has to resolve, arise out of the clash of class interests and demands that arises in the process of capitalist urbanization. Here the state can assure class domination through policies of integration or repression depending on the strength of the class mobilization that surrounds the demands, and the structural and conjunctural restraints on its ability to meet them.

All forms of integration share common features: to redefine needs according to what the state is prepared to give; to use access to land, housing and the means of collective consumption as a form of social control and political mobilization; to use scarcity of resources as a method of politically defusing opposition to the governing party or the state; to reinforce traditional mechanisms of access to public resources (paternalism, patron/clientage), and to convert the consciousness of low income groups in favour of the state’s version of legitimacy.

A common form of political integration is the use of state resources for partisan political purposes through a complex interaction of extended patron/client relationships, the governing party and the state apparatus. Here state power can be used to advance the political cause of the governing party at the expense of the opposition (ventajismo) (Ray, 1969). Alternatively when urban demands are expressed through the legal opposition, the governing party can attempt to undermine it by establishing parallel institutions with privileged access.
to state resources (*paralelismo*). The state can also attempt co-option through the encouragement of clientist relations with its various apparatuses. In this goal, access to urban resources will be determined selectively according to the settlement's political allegiance. In order to win political support in illegal subdivisions and established squatter settlements, it can relax municipal codes and may even embark on a policy of regularization of land tenure.

A second type of integration involves the comprehensive integration of settlement organizations within vertical and hierarchical state structures including a wide range of political, cultural and ideological organizations that were introduced into Latin America in the Sixties, largely as a response to Alliance for Progress pressure. They include various forms of 'popular integration', 'community development', 'civil defence', 'civic-military action', 'popular cultural action' etc. Each was placed under the direct control of one of the dependencies of the Church or State and administered at national, regional and local levels through their hierarchies. Although they tend to channel settlement demands toward economistic goals within paternalistic or reformist ideologies, they also allow settlers access to legal status and to public funds. They are, therefore, a powerful means for the political co-option of opposition movements.

State initiatives or responses to urban demands will depend on the balance of forces between the dominant and dominated classes, and the composition of the bloc in state power at a particular conjuncture. When these demands take an extra-institutional form the state will use (either before or after integration measures have been tried) the instruments of legal, military and administrative repression in order to maintain order and legality. Indeed the sponsorship of invasions and illegal settlements by the legal opposition may at certain conjunctures
be a sufficient motive for the governing party to call in the agencies of state repression (police, law, army) to secure demolition and eviction. Where land has been invaded that belongs to powerful landowning interests, the state will most commonly use repression to defend the principle of private property. Where there is political difficulty in securing this goal, the state will use repression whilst trying to mediate between settlers and the landowner. The vital role of the state in adapting the urban form to the requirements of capital will often demand the eradication of low income housing in the process of urban renewal, road expansion etc. Here the state will use a range of legal instruments to secure its goals (compulsory purchase, valorization taxes, deregulation of rents), if necessary backed up by police or military support. Success will again be contingent on the conjunctural balance of class forces both within and between the competing social classes. The state can also maintain a constant repressive presence through strict adherence to municipal codes, national legislation, and by the strict policing of vacant lots.

Later in the thesis, this general model will be used to generate a number of specific models for the analysis of the urban politics of Pereira. We can now proceed to Chapter Four where we shall first establish the significance of state interventions into self-help activities, and then identify our research aims.
1. The concept of 'necessary good' is derived from the work of Ricardo and Sraffa and has been defined by Molina (1976, 4-5) as a 'commodity that directly or indirectly enters into the production of all other commodities' as opposed to 'luxury goods which are not used either as instruments of production or as subsistence articles in the production of other commodities'.

2. On the concept of housing as a commodity see Pradilla (1976), Molina (1976), Burgess (1978; 1981; 1985), Bassett and Short (1980:159-182). Marx pointed out that when talking about a commodity, use-values and exchange values have no meaning in themselves but only in terms of their dialectical interpenetration. In the commodity form, use value can only be realized as use-values by being realized as exchange values.

3. For a discussion of the distinction between human and natural needs see Marx (1977b) and Heller (1974).

4. On the concept of 'alienated needs' see Heller (1974).

5. On the concept of the commodity cycle see Marx (1977a) and Bassett and Short (1980). Marx argued that production was the dominant moment of the commodity cycle: 'The conclusion which follows from this is not that production, distribution, exchange and consumption are identical, but that they are links of a single whole, different aspects of one unit. Production is the decisive phase both with regard to the contradictory aspects of production and with regard to the other phases....A distinct mode of production thus determines the specific mode of consumption, distribution, exchange and the specific relation of these different phases to one another. (Marx, 1977a:204-205).

6. Thus Molina (1976:9) argues that in the periods of colonial and semi-colonial dependency in Colombia identified by Arrubla (1975), housing fell outside of the realm of simple commodity production - in the rural areas it was directly built by the family, often with the kin-based cooperation of other community members; whilst in the city an artisan class sold its services, but not the house to those who wished to build one.

7. Two principal points are relevant here. First, these forms are identified by Pradilla at the level of housing production, but to each form there also corresponds a distinctive form of exchange and consumption. I have identified the three moments of production, consumption and exchange for each form. Second, housing construction is only one of the phases making up the process of housing production. There are two other prior conditions for construction - the development of land, and the production of construction materials. Each of the forms of housing production, consumption and exchange has its corresponding form of producing, exchanging and consuming developed land; and in the construction materials branch of production there also exists the full spectrum of artisanal, manufactured and industrial forms of production that are closely tied to the corresponding forms of housing production. See Pradilla (1976:14-19) and Molina (1976).
8. For the concept of fractions of capital see Clarke (1978).

9. The same range of artisanal, manufactured and industrial forms of production, and the same dynamic between them, can be found in the branch of production producing construction materials. Productive units in the branch range from the archaic and precapitalist chircales to small and medium-size workshops producing wooden parts, ceramic fittings and craft-made pieces, to large monopoly companies that control the production of cement, iron and prefabricated structural components.

10. Pradilla (1976) also argues that the prices of industrial building materials can be fixed at a higher level on the basis of the high average costs in the backward form.

11. This price will therefore include:
   1. The ground-rents of the owner of undeveloped land.
   2. Interests on consumer credit extended by finance capital for the prior purchase of land before development.
   3. Profits on capital invested by intermediaries in the commercialization of undeveloped land.
   4. Interests on credit capital used by productive capital in land development.
   5. Profits on capital invested in the commercialization of developed land.
   6. New differential ground-rents emerging from the development process that are totally or partially ceded by the state to landowners.
   7. Interests on the sale price through its amortization which are appropriated by finance capital.
   8. Profits on capital invested in construction (in raw materials, machinery, labour-power, design, control, administration) which is appropriated by the builder capitalist, and his subcontractors.
   9. Interests on circulating finance capital used by productive capital for housing construction.
   10. Profits on the commercial capital involved in the circulation of the housing produced, that are appropriated by the estate agent.
   11. Interests on the sale price of the house over the period of amortization which are appropriated by finance capital.
   12. Miscellaneous costs (legal costs, property taxes, etc.).

12. This dominance rests on its ability to increase relative surplus value through capital intensive investments, the collaboration (and often integration) of fractions of capital; the deepening of the division of labour in the production and exchange process; and the success of ideological and political pressures in redefining housing needs towards its requirements.

13. The barrio pirata has been defined by the C.P.U. study (1976, 132) as 'a mode of acquiring land for urban use through the sale of land subdivisions without municipal permits and in breach of the norms covering subdivisions,
infrastructure, and the provision of community facilities. From the viewpoint of national law, sale and possession of the lot are perfectly legal.' See also Carroll (1980).

14. This is obviously variable: the family can participate in the development process putting in individual lot facilities. It is also obvious as Doebele (1975) points out that 'pirate subdividers have produced the easy part of the product and externalised the difficult problems to the general public or the consumer.'

15. According to Vernez (1973:105) in Bogota one third of families in barrios piratas receive rent from their dwellings averaging about 1/5 of income. 1/5th also received income from commercial activities in their homes (2/3rds of which was commercial and 1/3rd some sort of services or crafts). In Doebele's study (1975:50) 73% stated they believed persons did speculate in lots.

16. It is not so much that the campesino had no skills but rather the wrong sort of skills, ie. many migrants are skilled in the use of rural artisanal techniques, materials and designs, but have low skill levels for manufactured and industrial building.

17. The very illegality of many settlements is often used as a pretext by employers for refusing loans to their employees for self-help building.

18. There are of course a number of different currents within the Marxist theory of the state, which cannot be entered into detail here. Perhaps the most significant division is between the 'instrumentalist' (Miliband 1969; 1970; 1973; 1977) and 'structuralist' views (Poulantzas 1969; 1973; 1976), and in the thesis we clearly stand nearer to the structuralist view. The debate on 'relative autonomy' first discussed by Marx in the Eighteenth Brumaire was revived in the Seventies and Eighties leading to the emergence of a number of distinct interpretations including: the 'under-consumptionist' view (Baran and Sweezy, 1960); the 'state monopoly capitalist' view (Bocarra, 1974; Castells 1975); the 'capital requirements' view (Yaffe, 1973) and the 'state derivation' view (Holloway and Picciotto, 1978; Hirsch, 1978). In the late Seventies and early Eighties debate also focused on the state's financial and legitimacy crises (O'Connor, 1973; Habermas, 1976; Mingione, 1977). The impact of these debates has extended beyond the Marxist arena. In the Eighties a growing body of literature developed in Latin American and Third World housing studies that explored the relationship between international agencies, the national and local state, and the formulation of housing policy. The issues dealt with in the Marxist debate were often discussed or challenged within this literature (Angel, 1983; Ayres, 1983; Batley, 1982; Drakakis-Smith, 1986, 1988; Gilbert, 1982, 1986; Gilbert and Ward, 1982; Hardoy and Satterthwaite, 1981; Payer, 1982; Payne, 1984; Skinner and Rodell, 1983; Ward, 1981a; 1981b; 1982).

19. For the concept of 'hegemonic bloc' see Gramsci (1971).

20. 'If it is true that the state expresses in the last instance, and through the necessary mediations the overall interests of the dominant classes, then urban planning cannot be an instrument of social change, but only one of domination, integration and regulation of contradictions' (Castells, 1977:203).
21. The ability of the state to achieve this goal is severely restricted by the need to stay within the limits prescribed by the principle of private property; by the commodity character of urban land; and the conjunctural balance of class forces both within and between the competing social classes.

22. Associated with this function, is the attempt by the state to use housing policies as antirecessive mechanisms, and motors of economic development. This policy is justified by the alleged multiplier effects on the production of construction materials, and its ability to absorb unemployed labour-power. Thus it is maintained that the construction sector uses limited quantities of imported machinery, it can absorb a relatively large mass of unemployed and unskilled labour-power; it consumes raw materials from a wide range of industries; and there exists a high 'potential' demand for what it produces.

23. State intervention in property rights in land and housing came relatively early in the history of Latin America. The 19th century constitutions of many Latin American states confirmed the right to private property in land and improvements, and various constitutional norms and legal codes were evolved to regulate the use and exchange of private property, which recognized the commodity nature of land and housing, and the right to act in defence of this property. Moreover, the state has been an important force in generalizing private property in land through the liquidation of communal lands (resguardos and municipal ejidos) and through the delivery of state lands (baldios) to individual owners. The introduction of the principle of the 'social function of property' and the right to state expropriation into the constitutions of some Latin American states, including Colombia, in the Thirties did not seriously interfere with the hegemony of the institution of private property, but merely introduced the state to the commodity circuit in land and housing through the mechanism of the compulsory purchase order.

24. "The cleverest leaders of the ruling class have always directed their efforts towards increasing the number of small property owners in order to build an army for themselves against the proletariat* La Emancipación (Quoted in Engels (1975:31).

25. Standards are directed at achieving something considered necessary or desirable. It is in this sense that the OED defines a standard as a 'thing serving as a basis of comparison'; 'a thing recognized as a model for imitation'; and as a 'measure to which others conform or by which the accuracy or quality of others is judged.'

26. 'Standard' housing incorporates a large number of essential components which must be provided to a given set of specifications before occupation e.g. permanent roof, walls and floors, electricity, drinking water, sanitary equipment with sewage connections, minimum per capita space regulations, permanent construction materials.

27. The process whereby a use value is deformed in the process of making it an exchange value, and is then ideologically redefined so that the consumer will have to adapt his mode of use of the house to the physical characteristics of the
object that production has delivered to him, can be seen as an elaboration of the principle of commodity fetishism.

28. Thus Castells (1977:42-43) argues that state intervention ‘politicises the totality of urban contradictions, transforms the state into a manager of the means of daily life, and globalises and politicises the conflicts which emerge in this sphere.’

29. We can outline this account as follows. The function of property capital is to generate absolute and differential rents through normative changes in land-use. Property capital is thus most active in geographical areas suitable for commercial, office or luxury residential development, since it is in these areas and with this type of development that it can maximize its profits. It is of course in the inquilinato zones surrounding the C.B.D. that these opportunities are primarily concentrated. There thus begins a process of urban renewal which involves the monopolization of urban land, the expulsion of small-owners and their tenants, and the concentration and transference of land to property capital and housing corporations dominated by finance capital. This process of expropriation and expulsion is further exacerbated by the effect of public investments in buildings, motorways, commercial centres, hospitals, road projects, and housing programmes for upper and middle income groups, which often not only involve the physical eradication of low income settlements, but which also extend the locational advantages on which the profitability of property capital is based throughout the city as a whole (Lamarche, 1976:117). This process combined with the structural inability of low income groups to acquire land and housing commodities developed by private and public sector alike, results in an exodus of low income groups from the centre of the city to the urban periphery where access to land, and housing can only be obtained through rental, invasion, illegal subdivision and the development of artisanal practices. The intra-urban movements of the low income population are thus understood as being largely derived from the process of expulsion and expropriation associated with the activities of property capital (Grupo Russi, 1975: 33-34).

30. The French School, however argues that an urban social movement only exists when urban demands are linked to the political structures of broader class struggle. It is this connection which transforms them from mere ‘instruments of reform’ into the sources of social change.
THE NATURE AND ORIGINS OF THE LATIN AMERICAN HOUSING PROBLEM

In this chapter we shall give an explanation of the nature and origins of the housing problem and the role of state interventions into this problem. Articulation theory will be used to examine the failure of state 'conventional' housing strategies in Latin America in the modernization decades, and to examine the self-help housing theories and policies that followed. A comparative methodology for the identification of the economic, political, and ideological limits of the artisanal and the state self-help forms is then presented.

In a capitalist social formation housing and its related services are or can become commodities, including those produced under non-capitalist relations of production. The satisfaction of housing needs appears as a play between supply prices and 'effective demand' determined by the relations of production and exchange in the various housing forms; and the levels and distribution of income which are intrinsically tied to the class position of the consumer (e.g. capitalist, rentier, wage-earner, unemployed etc.).

On the supply side, the expansion of the value of capital in housing commodities produces a price structure that impedes low income access to the market. The seller of the house will include in the price he charges the consumer the total capital invested in its construction; the interests on this capital; the
ground-rents; commercialization cost; the remaining general costs, and profits. The consumer must pay this total sum, and an additional rate of interest on consumer credit.

On the demand side, consumers can only participate in the market insofar as their incomes permit. Thus a major structural factor contributing to the Latin American housing problem is the absence of sufficient incomes amongst wide sections of the population which is derived from the unequal distribution of productive assets, low returns to labour, and large scale unemployment and underemployment.¹

In a capitalist social formation industrial, manufactured and artisanal housing commodities are confronted by consumers who are profoundly differentiated in terms of the income they have available for housing. Only a small number of consumers are capable of covering the costs of production, ground rents, and the profits of the various fractions of capital tied to the production and exchange of industrial and manufactured housing. The large mass of population that is excluded is thereby confined either to the market for rented accommodation or to artisanal production.

At a structural level state policies are not able to transcend or contradict capitalist relations of production, exchange and consumption; and at a conjunctural level policy content and changes will depend on conflicts and alliances between the political fractions representing the different fractions of capital, and the course of the struggle of the subordinate social classes with the state. Thus state housing involves the consumption of commodities, the appropriation of ground rent, the purchase of wage-labour, the payment of interest to finance capital, and the fixing of prices by the market.
In Chapter One we identified as the underlying premise of modernization strategies the belief that further capitalist development could only proceed by the eradication of pre-capitalist modes of production and their replacement by the structures of industrial capitalism.

It is worthwhile recapitulating the impasse reached by conventional housing policies in this context. On the demand side, a large mass of the population were excluded from conventional housing markets by stagnant or declining levels of living, a more unequal distribution of income, and rates of unemployment rising faster than rates of job creation. State financial interventions to increase effective demand through subsidies were effectively limited by the constant threat of decapitalization. On the supply side, conventional housing prices were increasing faster than the incomes of the majority of the population. State projects could not escape the effects of the dramatic increases in the cost of raw land, given massive land speculation, and increasing land development costs associated with ever more distant projects.²

Substantial increases in building materials costs derived from underinvestment and low productivity in the industrialized construction materials sector kept this component of conventional housing costs high. In both the industrial construction materials and construction sectors the depreciation and foreign exchange costs of expensive imported machinery and equipment had to be incorporated into product prices. The use of Western technology was often accompanied by declines in total factor productivity derived from underutilized capacity. Output remained very small - insufficient some argued to cover even middle and upper class demand. Conflicts between the various fractions of capital
and their political representatives over the amount of state resources to be allocated to what some regarded as consumption expenditures were also a restraint on expanded output.³

Thus housing prices were increasing relative to the incomes of the majority and there was a progressive exclusion of broader sectors of the population from access to conventional housing markets. With growing housing deficits the state came under increased pressure from middle and low income groups for access to urban housing, employment and services.

Given the obstacles to the reproduction of capital in the industrial form, a number of counter-tendencies secured the reproduction of the artisanal and manufactured forms. In the case of the manufactured form these included low wage levels; the difficulties of the industrial form in operating profitably on small plots of land; the persistence of the ideology of manufactured housing consumption, and political pressure on the state to subcontract production to the manufactured form. The reproduction of the artisanal form was a result of the necessity of low income groups for shelter - a necessity which was to seriously undermine any systematic policy of slum and squatter eradication.

THE STATE AND THE HOUSING PROBLEM IN THE NEO-MODERNIZATION PERIOD

In Chapter 2 the relationship between capitalist and non-capitalist forms was identified as one of articulation - an asymmetric relationship wherein the reproduction of the non-capitalist forms was subordinated to the logic of capitalist development in a process that involved subsumption by but not complete integration with capitalist relations of production and exchange. The articulation process took place at the economic, political and ideological levels with the
economic level being determinant.

Whereas modernization strategies had foundered on the mistaken belief that capitalist development could proceed through the direct and unilinear destruction of pre-capitalist forms, the new Neo-modernization strategies of the Seventies were based on a recognition (albeit in ideological terms) of the hard realities of the articulation process; of the importance of state policies in facilitating capital accumulation through articulation; and of the increasing need to make these interventions given growing internal difficulties, and the changing nature of the global accumulation process.

By the beginning of the Seventies a macro-economic development strategy had emerged with distinct policy goals. These included:

1. The attempt to secure increased output, productivity and incomes through policies to alleviate poverty, inequality and unemployment.
2. The redistribution of income and investments derived from growth.
3. The search for labour-intensive and appropriate technologies.
4. The deregulation of the informal sector.
5. The elimination of factor price distortions in labour and capital markets.
6. The introduction of transfer strategies in public service investment and pricing policies.

These policies were proposed by the major international aid agencies and elaborated at sectoral lending levels. Using the leverage of the matching funds system, they were applied in a large number of Third World countries in the period 1972-84. After 1984 Redistribution with Growth strategies continued, but their effects were increasingly contradicted by the austerity measures associated
The relationship between these strategies and the articulation process can be identified in three areas: policies towards the capitalist sector; towards the informal 'sector' and small scale enterprises; and towards appropriate technology.

Measures Towards Capitalist Production

The general policy goals of neo-modernization strategy were not prejudicial to capitalist development, and indeed were identified in terms of the establishment of free markets, deregulation and the elimination of 'supply-side constraints'. They aimed at creating and consolidating product, factor and financial commodity markets; stimulating maximum mobility of factors of production; eliminating price distortions in labour and capital markets; introducing and consolidating transferable private property rights; generalizing wage and commodity conditions; improving infrastructure, and changing consumption patterns towards commodities produced by both capitalist and articulated forms.

However, if RwG policies had been applied in a systematic and total way they would have represented a serious obstacle to the further development of capitalist relations and forces of production; they would have increased the share of absolute surplus value in relation to that of relative surplus value in the capitalist 'sector', and would have resulted in what Emmanuel (1982) has called a pattern of 'underdeveloped' technology. However, this was neither the intention nor the achievement of the strategy.

First, the basic policy goal of RwG was not the redistribution of existing assets or income but only the progressive redistribution of new increments in growth to the poor. In other words the basic structures determining supply and
demand forces in the capitalist sector were to remain intact. Second, in practice it proved very difficult to cut the capital subsidies, lower the exchange rates and raise the tariffs that had kept capital prices 'artificially low', because of the intense international competition in global capital markets that developed in the Seventies as a result of the trend towards export-oriented industrialization. Rates of capital intensity in the export sector therefore remained high. More success was achieved in moving wage rates towards their 'shadow-price' by deregulating wage and salary scales; by subcontracting production to small scale enterprises; by increasing casual employment, and by cheapening wage goods (labour reproduction costs) through the promotion of 'small scale enterprises' and the 'informal sector'. Third, it was also maintained that capital-intensive units of production were mandatory in the intermediate and capital goods sectors, and that labour substitution was feasible only in certain areas of the consumer and wage goods sectors.

Stimulation of 'Small-Scale Enterprises' and the Deregulation of the Informal Sector

The key element in the neo-modernization strategy was its recognition, albeit in an ideological form, of the need for state intervention in the articulation process, through the stimulation of small scale enterprises and the deregulation of the informal sector. As the Seventies progressed, the ILO analysis that the small enterprise sector could be transformed from a stagnant and 'involutive' complex of 'coping mechanisms' of the poor into a genuine motor of economic growth, was widely accepted.

Small scale enterprises both in and outside the informal sector would get improved access to raw materials, capital, foreign exchange, markets, technical,
and managerial assistance and on-the-job acquisition of skills. Special
consideration would be given to these enterprises in selected sectors (including
construction and housing-related goods). 'Mutually beneficial' sub-contracting
and marketing links would be encouraged between small scale enterprises and
large firms. The urban informal sector would be deregulated by removing
licensing and registration restrictions, and by removing discriminatory taxes, public
utility pricing, and planning regulations.

These state interventions represented a further attempt to turn the
articulated forms towards the logic of capital accumulation. On the other hand a
number of observers (Gerry, 1979; Gerry and Birkbeck, 1981; Gerry, 1985, et al.)
argued that the obstacle to growth and poverty alleviation was rather this very
articulation process: state measures were designed to increase the flow of surplus
to larger firms and therefore would be incapable of generating a substantial
growth in incomes and investment in the articulated forms.

A tendency towards the embryonic development of capitalist relations of
production was also identified in the transformation of artisans into a class of
proto-capitalists and a mass of 'disguised wage workers'. State interventions were
generally accompanied by the increased use of paid casual labour; more
'sophisticated' means of production; and an increased reliance on commodities.

The introduction of policies that articulated 'small scale enterprises' and
the 'urban informal sector' with the process of capital accumulation was however
beneficial to the capitalist mode: labour and labour-associated costs could be
externalized by subcontracting, and goods and services from the deregulated
informal sector would help to hold down reproduction costs.
Appropriate and Labour-Intensive Technologies

A third area where neo-modernization policies were closely related to the articulation process was through the promotion of appropriate and labour-saving technologies. These policies attempted to improve efficiency and productivity through the modification of artisanal techniques, labour processes and materials. The modifications were geared towards achieving economies through assembly, prefabrication, standardization and transportability; through the development of alternative technologies for construction, power, heating, lighting and public services; through the simplification of product design; and through the increased use of powered hand tools and equipment.

These measures were aimed at improving the productive forces and expanding surplus extraction in the articulated forms, and increasing their reliance on commodity markets, whilst at the same time avoiding the full transformation to capitalist relations of production. There is thus clearly a possibility for examining the question of appropriate technology in the context of articulated ‘intermediate hybrid forms’.

RESEARCH AIMS AND METHODS

In the preceding chapters articulation theory was used to identify the relationship between broader development strategies and urban housing policies in Latin America in the post-war period and to provide an analytical framework for studying housing issues.

Three specific forms of housing production (industrial, manufactured and artisanal) were identified. In its pure form artisanal production was recognized as being non-capitalist, and was characterized by the fullest expression of the
self-help principle. At the same time, it was argued, that in capitalist social formations the artisanal form no longer appeared in its 'pure form' but only in its 'real' articulated variant. The articulation took place at the three moments of production, consumption and exchange and was achieved through a gradual and uneven process of commodification of non-capitalist activities, and the slow transformation of the relations and forces of production within the form. Thus the articulation process involved the increased use of tools and raw materials that were purchased as commodities, the introduction of skilled paid labour; and the development of commodity markets in land, housing and finance.

However, the artisanal form was also reproduced under these conditions because of the high costs of industrial and manufactured housing and the ineluctable necessity of low income groups some form of shelter. The particular combination of non-capitalist conditions (seizure of land, self-help labour, non-commodified use-values etc.), and the limited degree of capitalist penetration meant that housing from the 'real' artisanal form remained accessible to low income groups.

The state was identified as having a key role to play in the articulation process, through policies that were aimed at securing the articulated reproduction of the non-capitalist forms in order to guarantee markets, means of production and labour power for the capitalist mode, particularly in those areas concerned with reproduction costs. State housing programmes had as their goal the production and exchange of housing through capitalist market and production mechanisms, and were also addressed to class domination and the resolution of class-based struggles around housing. All of these considerations were also true for state interventions into the self-help housing process.
It now remains to be demonstrated how the state self-help housing projects that emerged at this time were related to the articulation process. Very little work has been carried out in this area. Most accounts (Molina, 1976; Pradilla, 1976; Portes and Walton, 1981; et al.) have focused on the nature of self-help housing as a necessary good and its role in the reproduction costs of labour power. The approach in this thesis is somewhat different. Our aim rather is to use articulation theory to focus primarily on the nature of self-help housing as a commodity and fixed good, and to examine the viability of self-help housing projects in the context of an empirical investigation, conducted in the city of Pereira, Colombia over the period July 1975 - September, 1976.

The Self-Help School had noted the ability many shantytown dwellers to build substantial housing at significantly below the costs of their government agency 'alternatives'. This alerted them to the possibility of incorporating the principles of self-help building into an institutional framework backed by state organization, finance, resources and legislation. Amongst the principles identified for incorporation were a self-help labour contribution; reductions in standards; progressive development procedures, and the encouragement of non-commodified or petty commodity modes of housing consumption. These principles were to be introduced in a context of a more marked capitalist division of labour; developed commodity and financial markets; more sophisticated technology and construction methods, and prefabricated and standardized materials. By reorienting housing policies in this way, it was argued, the resulting productivity and efficiency gains would result in cost reductions allowing low income access to state projects, and the expansion of total output.

Thus the Self-Help School argued that the state could repeat in its projects
those economies achieved in the shantytowns through the use of self-help principles. The substitution of unpaid self-help labour for wage labour would reduce wage costs; the reduction in standards would reduce the quantity of goods and services that the resident would receive for a fixed proportion of his income; the principle of progressive development would stage the delivery of housing goods and services over a longer period of time and separate initial and final costs. The extension of security of tenure and concessional financing would stimulate a faster rate of construction, and the development of appropriate technologies, materials, and construction methods would introduce labour and resource productivity gains that would reduce costs. Designs and settlement plans could be evolved to allow the free development of reproduction-based household activities. These arguments and measures were largely accepted and gave rise to two forms of state intervention into self-help housing activities - self-help housing projects (sites and services, core housing, mutual aid etc.) and slum and squatter upgrading projects.

However, seen from the perspective of articulation theory the fundamental argument of self-help theory was that the further articulation of the artisanal form by the capitalist mode, which was both the aim and consequence of state interventions into self-help housing, resulted in a relative cheapening of these goods and services, and thus made them more accessible to wide segments of the population.

Against this position, articulation theory argued that the articulation process involved in state interventions did not and could not provide goods and services at prices that were cheaper or even the same as those involved in the only alternative available to low income groups outside of renting - artisanal building.
It was true that the practices identified by self-help theorists did keep housing costs low given the limited levels of articulation operating in the artisanal form. But once they were propelled by state intervention into further subsumption by capitalist structures, these measures acted as limits to low income access to these goods, and to the further development of the productive forces on the scale necessary to deal adequately with the housing problem. The consequence was that although state self-help housing was cheaper than the 'conventional' predecessor (which was never a real alternative for low income groups), it was more expensive than the artisanal alternative. The costs to the consumer associated directly with the accelerated subsumption of artisanal labour processes within a broader capitalist division of labour; within commodity markets for land, building materials, finance, housing and labour power; from the further separation of the producer agent from the consumer agent; and indirectly from the consequences of political and ideological articulation, all served to put state self-help housing projects beyond the access of the majority of those housed in artisanal and other forms of low income housing.

The central issue to which this thesis is addressed is therefore an examination of the potential of state self-help housing projects as a solution to the low income housing problem in Latin America. The fundamental economic question that arises out of the scrutiny of self-help housing theory and practice by articulation theory is: can the economies which are achieved by the use of self-help practices in the artisanal form be repeated or improved upon in state self-help housing projects and if so are they sufficiently large to bridge the gap between housing needs and supply?
We are now in a position to state our research aims.

1. The basic aim of the thesis is to use articulation theory in order to examine the ability of state self-help housing projects to provide low income housing solutions.

2. The central issue at stake in discussing the viability of state self-help housing projects is the question of articulation and the role of the state in this process.

3. Clarity on this matter can only come about from a comparison of state self-help housing and artisanal building, and from the identification of the articulation processes specific to each.

4. Our basic research goal in Part Two of the thesis is to provide an empirical description and analysis of self-help building in its artisanal and state forms in Pereira. Our aim is to identify empirically the economic, political and ideological structures governing these activities at discrete spatial scales. In Chapter 5 and 6 the phenomena are studied at the urban level (Pereira), our primary spatial frame of reference, and in Chapters 7 and 8 at the barrio level when two case studies of artisanal and state self-help building are presented. The synthesis of the theoretical and empirical materials occurs in Part 3. Further details of the relationship between theory and methods, and of the research methodology can be found in Appendix Two.

5. It has been argued that the key element in assessing the viability of state self-help housing projects relative to artisanal settlements is the articulation process and the state's role in this process. The articulation takes place in both the artisanal and state self-help forms at the economic, political and ideological levels and it is the different level and kind of articulation within the two forms
that is the key element in determining their relative viability as low income housing ‘solutions’. Accordingly a central aim of this thesis is to identify the structural and conjunctural limits of state self-help housing projects as solutions to the housing problem by comparing the different conditions of articulation existing in the two forms.

It is therefore necessary that we state clearly the nature of the articulation process that results from the state organization of self-help activities.

**Economic Articulation**

- State interventions into the self-help housing process involve the penetration and consolidation, of commodity markets for land and housing.
- State interventions into self-help housing expose the residents to commodity markets for building materials from capitalist sources (industrial and manufactured forms).
- State interventions into the self-help housing process permit the further expansion and integration of capitalist financial markets.
- The commodity nature of state self-help housing and the régime of reduced standards results in serious material constraints on the use-value of the housing goods and services produced.

**Ideological Articulation**

- State interventions into self-help housing have as their goal the generalization of the principle of private property in land and housing.
- The separation of the planning and design functions from the state self-help builder leads to the imposition of a design and planning ideology that can
seriously restrict the use-value of what is produced and the preferred mode of consumption of the user.

- State interventions into the self-help housing process through their adherence to planning and building codes and tight selection criteria respond to and reinforce the system of urban social segregation.

**Political Articulation**

- State interventions into the self-help housing process are aimed at realizing the domination-integration functions of the state, and the institutional satisfaction of urban demands.
- State interventions into the self-help housing process aim at integrating the communities involved into the political structures of the state and political party system, and articulate 'pre-capitalist' mechanisms of access to public resources as a means of political mobilization.

6. In pursuing the comparison between state self-help and artisanal building we shall employ the theoretical framework used in Chapter 3. At the economic level, the characteristics of both, and their conditions of articulation will be identified for the three moments in the commodity cycle (production, exchange and consumption) and the three phases of the housing production process - the acquisition and development of land; the provision of building materials; and the organization of the construction process. At the ideological level attention will be focused on standards; housing designs and settlement plans; urban social segregation, and the principle of private property. At the political level, interest will focus on the issue of institutional demand-making and the domination-
integration functions of the state as outlined in the political model presented in Chapter 3.

State interventions into the self-help building process are of two basic types: state self-help housing projects that are concerned with the creation of new housing stock (sites and services, core housing, mutual aid); and state self-help upgrading projects which are aimed at improving the existing housing stock. In our empirical investigation we shall be largely concerned with state self-help housing projects. The reason for this narrower focus is that up to the mid-Seventies, when empirical research was conducted, the state had concentrated its interest on attempts at creating new rather than improving existing housing stock. In this respect Pereira reflected the general situation in Latin America, where this emphasis was maintained by multilateral lending agencies during the early Seventies. Throughout the recent history of the self-help housing movement there has been a constant debate concerning the degree of emphasis that should be placed on building new or improving existing housing stock. By the late Seventies the pendulum had swung more towards emphasis on upgrading than to self-help housing projects, and by the mid-Eighties there was an overwhelming concentration of effort on upgrading and servicing activities.

Although there are clearly important differences between self-help housing projects and upgrading projects, it has to be stressed that both types of project are equally articulated by the same economic, political and ideological structures of the dominant capitalist mode. Indeed if anything the transformations involved in these articulations are more clearly demonstrated in upgrading than in state self-help housing projects.

Finally, the question emerges of the theoretical status of state self-help
projects and their relationship with the schema of housing forms presented in Chapter 3. A number of theoretical difficulties are involved which cannot be entered into here in any detail. They relate essentially to the question of whether the 'specificity' of the articulation process exhibited by the state form is primarily attributable to the global accumulation process; to the structural characteristics of peripheral capitalist development, or to the nature of the capitalist state in the periphery. It is clear, nonetheless, that these projects can be analyzed as an articulated form because they exhibit their 'intermediate hybrid' character; they are the product of an uneven and contradictory process of conservation and dissolution of non-capitalist forms; and their conditions of reproduction are determined by their subordinate relationship to the capitalist mode.
1. ‘When we analyze the real determinants of the highly unequal distribution of income, it is the very unequal distribution of the ownership of productive assets such as land and capital between the different segments of Third World populations that largely accounts for the wide income divergence between rich and poor’ (Todaro; 1985:166).

2. ‘In many Third World cities land prices are rising much faster than wages. In Lima, Peru, for example land prices are reported to have risen twice as fast as wages. In Belo Horizonte, Brazil the average price of land in 'popular subdivisions' was more than x 57 the minimum annual salary as against x 8 in 1960’ (Urban Edge:Jan., 1984).

3. The ‘Go for Growth’ school tended to espouse theories that gave a low priority to public housing investments. Some argued that housing investments competed for resources with other investments that were more directly productive than housing. Thus in the USA it took $7.00 of investment in the late Fifties to produce a $1.00 increase in the value of additional housing services per year, yet only $1.80 of added investment in a steel plant to yield a $1.00 increase in the value of the steel produced per year. As the principal goal of modernization strategy was to maximize the rate of growth of output, it was argued that housing investments should be kept to a minimum (Abrams, 1964:107). Other economists whilst admitting the general logic of this condition, argued for some housing investments placing returns on housing investment between high rates of return in industry and agriculture and slow returns in education, health and infrastructure. Modernization economics was also highly influenced by ‘input-output ratio’ theory. In these terms housing was an investment requiring considerable outlay but yielding little per year. It generated little foreign exchange, attracted labour and materials away from agriculture and industry and was probably inflationary.

Other economists arrived at the low priority position by arguing that housing was basically a consumption expenditure and that investments had to be directed towards directly productive projects that advanced productivity (eg. factories, machines, better seeds, railways and roads, energy installation etc.). Expenditures on housing should be delayed until there had been an increase in general productivity, or should be considered only as an integral part of a directly productive project (e.g. housing for workers in a new factory). This was the official position of the World Bank and USAID throughout the Fifties and Sixties - they feared that housing expenditures would be poured down a 'bottomless pit.'
Part II

EMPIRICAL ANALYSIS
Chapter Five

HOUSING AND URBAN DEVELOPMENT IN PEREIRA

PHYSICAL ASPECTS

Location

Pereira, the capital of the Department of Risaralda is located on the eastern slope of the central Cauca valley at an altitude of 1460m and a latitude of 4° 49' north of the equator. The city lies at the centre of Colombia's 'golden triangle' - the region lying between Bogota, Cali and Medellin which constitutes the country's principal area of production and consumption (Map 1).

Topography

Pereira lies on the piedmont that stretches between the high Cordillera Central to the east, and the wide structural trench of the Cauca valley to the west (Map 2 and Diagram 2). A system of parallel rivers that drains westwards into the Cauca has incised deep and frequently rejuvenated ravines (quebradas) into the piedmont. The city is constructed on an undulating meseta that is sharply defined by two such rivers - to the north Rio Otun, and to the south Rio Consota which flow separately into the Cauca, although at one point in the Pereira area they are scarcely a kilometre apart.

The Otun valley constitutes the northern boundary separating the city from the municipality of Dosquebradas lying on a slightly higher meseta. Its deep ravine is bordered in part by two belts of parallel river terraces, offering only a
DIAGRAM 2 TOPOGRAPHICAL CROSS SECTION OF THE CAUCA VALLEY IN THE PEREIRA REGION.

See Map 2 for location of the Section.
limited area of flat land suitable for urbanization. The Consota valley, however, is wider and contains more land with urban potential.

Between the two valleys lies the meseta on which most of the city has been built. Here too the surface has been broken by the ravines of tributaries of the two rivers. Since the Sixties growth has been concentrated on relatively flat land to the north-east (the Dosquebradas meseta) and to the south-west.

Climate

Pereira does not experience strong seasonal variations in monthly temperature, and is clearly located in the 'tierra templada'. The average annual temperature is 22°C and the difference between the warmest and the coldest month is only 2°C. The city has the high annual rainfall (80" p.a.), and the two seasonal maxima (March-June and September-November) characteristic of an equatorial rainfall regime (I.G.A.C., 1972).

Ecological Constraints and Problems

The relief has generated an East/West longitudinal growth along the interfluvial meseta with an emerging North East/South West axis some 13 kms. long and a North West/South East axis of only one to two kilometres (Map 3). This has repercussions on the distribution of roads and traffic, the costs of infrastructure and the length of the journey to work. The Otun valley constitutes a serious physical obstacle to the integration of the Pereira-Dosquebradas urban area. Much of the city's growth has been on steep slopes, where low income groups have developed local techniques for constructing multi-storeyed dwellings on bamboo piles. With age these structures can become unstable, a hazard
exacerbated by periodic earthquakes. High rainfall, loose soils, steep slopes, and narrow valley bottoms have rendered substantial areas prone to landslides, erosion or flooding - areas in which there is a high concentration of low-income settlement. High concentrations of untreated sewage and industrial discharge have also given rise to growing health hazards.

POPULATION

Population Growth

Table 9 shows the rapid growth of the municipal population since the late nineteenth century. Between 1918-73 the municipal population grew from 24,500 to 210,543 with very rapid growth in the 1938-51 period. Table 10 shows the high but declining rates of growth of the municipal population over the period: 5.1% p.a. between 1938-51, 3.8% p.a. between 1951-64 and 1.2% between 1964-73.

Table 11, however, reveals a pattern of higher rates of urban, and lower rates of rural population growth. Between 1938-73 the urban population of the municipality increased five and a half times and the rural population only 1.2 times. The same pattern of declining urban population growth rates can be detected: 7.2% p.a. 1938-51; 5.2% p.a. 1951-64 and 1.9% p.a. 1964-73 (Table 10). Between 1964-73 the rural population of the municipality for the first time declined in absolute terms, and its negative growth rate was substantially below the national average.

Since the late Fifties a large part of the city's growth has occurred in Dosquebradas. The combined population of urban Dosquebradas and urban Pereira in 1973 was 211,916 (Table 12). Lack of data on Dosquebradas generally limits statistical analysis to Pereira's cabecera and municipal area.
MAP 3  THE PEREIRA/ DOSQUEBRADAS METROPOLITAN AREA IN 1976.

Source: Author, DAPM.
Natural Increase

Table 13 shows the evolution of average birth and death rates for municipal Pereira over the periods 1954-61 and 1962-69, and the resulting rates of natural increase. Between the two periods the birth rate fell by 7.52, the death rate by 6.30, and the rate of natural increase by 1.24 reflecting the general demographic situation in Colombia over the period. Quite clearly the contribution of natural increase to Pereira’s population growth during this period diminished, and that of migration became more important.

Rural to Urban Migration

Unfortunately census migration data are highly inadequate - no data were collected in 1938 and 1951 and that collected in 1964 and 1973 was of limited utility. The 1964 census data (Table 14) indicated that 54.6% of the urban population was born outside of the municipality and thus classified as natives those migrants born in rural Pereira. The 1973 census (Table 15) confined place of birth data to the Department of birth and on this basis 77.7% of the city’s population was born in Old Caldas (Risaralda, Quindio, Caldas).

Supplementary migration data can be found in settlement-level studies. The survey of Barrios El Plumon and Hernando Velez Marulanda indicated that 56.6% and 55.0% of the sample populations were migrants, and a study of four settlements (SENA, 1976) arrived at similar orders of magnitude. Shifter’s study (1976) of the squatter settlement Cuba Carrilera indicated that the overwhelming majority of migrants migrated as part of a family, a pattern also established in the Manizales study (C.I.D., 1970:215). Research findings (Appendices 5 and 6) confirmed the significance of stage migration.
Various studies indicated that a majority of migrants on arrival established contact with relatives already in the city. 60% of migrants in Schifter's (1976) sample in Barrio Cuba Carrilera, 57.2% in El Plunon and 58.6% in Barrio Hernando Velez Marulanda received assistance from relatives on arrival.

Various studies in Pereira’s peripheral settlements (ICT, 1976; Schifter, 1976; Londoño, 1975) indicated that the *inquilinato* zones were the principal reception areas for migrants; and that most migrants had lived prolonged periods elsewhere in the city, often in a large number of settlements.

**Demographic Structure**

Tables 16 and 17 give data on the sexual composition and age distribution of the population of urban Pereira between 1951-73. They show an increasing preponderance of women over men; and a progressive increase in the share of total population occupied by those below 15 years old. Data from 18 settlements in 1975 and 1976 revealed an average family size of 6.5 persons.

**EMPLOYMENT**

Employment data for Pereira are derived from various sources, all of which have their limitations.4

**The Economically Active Population**

Table 18 shows that although the municipal EAP more than tripled in absolute terms between 1938 and 1973, in relative terms it declined from roughly half (47.8%) to a third (32.6%) of the total population.5 The 1974 Household Survey indicated a higher participation rate of the EAP in the total urban
population (38.4%), and a relatively high rate of female participation (27%) reflecting the employment opportunities available to women in commerce, the clothing industries and domestic service.

Rates of Unemployment and Underemployment

The 1973 census registered a general rate of municipal unemployment of 13.1% and revealed that 17.2% of the employed EAP worked six months or less in the year prior to the census. The 1974 Household Survey, however, estimated an urban unemployment rate of 16.8% (6.3% higher than the national urban average), and an underemployment rate of 17.7%. Thus over a third of the city's EAP (34.5%) was either unemployed or underemployed in 1974.

The Nature of Employment Activities in the City

Data on the EAP organized according to branches of production and economic sectors were derived from the 1973 census, and ICSS yearly data for the period 1960-73.

Primary Sector Employment

In 1973 17.5% of the municipal EAP was engaged in primary sector employment (Table 19). The phenomenon of rural employment and urban residence was common in Pereira with agricultural workers shifting from seasonal work on the coffee and sugar farms to urban tertiary sector employment in the intervening periods.

Secondary Sector Employment

The 1973 census indicated that 28.2% of the municipal EAP was employed in the secondary sector - 23.1% in manufacturing and 4.9% in construction (Table
19). There was significant growth in the manufacturing sector in the Sixties and Seventies. The share of ICSS affiliates in manufacturing employment increased from 37.7% to 48.1% between 1964-1973 (DAPM, 1970; 1973; 1974), whilst in the Pereira metropolitan region (including Santa Rosa and Dosquebradas) manufacturing employment increased by 51.6% between 1970-74 compared to a national increase of 35.3 % (Dane, 1974b). However the growth in manufacturing employment was not able to meet the annual demand for new jobs derived from population growth. Table 20 shows that on average 902 new manufacturing jobs a year were created in the metropolitan region between 1970-74, whilst during the period 1964-73 the EAP of the municipality of Pereira alone was increasing by 951 persons p.a.

Several reasons have been suggested for this limited capacity for growth in manufacturing employment. The restricted employment opportunities created by capital-intensive technology is suggested by the high and growing proportion of the manufacturing labour force employed in larger units of production. In 1970 in the Pereira metropolitan region 56.5% of all manufacturing jobs were in establishments employing over 100 employees, and in 1974 62.0%. Londono Marulanda et al., (1977:24) point to local investment opportunities foregone as a result of Bogotano domination of the coffee trade and its foreign exchange earnings. Arango (1977) points to profit repatriation by foreign capital whose share of total manufacturing value-added in 1973 was 56.0% (Londoño Marulanda et al., 1977:26). Others point to structural limitations which are variously seen as a crisis in the strategy of import-substitution industrialization, or as an inherent condition of dependent capitalist development.
The post-war import-substitution model pursued in the region resulted in a specialized structure dominated by consumer industries where intermediate and capital goods industries experienced only limited development, and where future expansion of the 'consumer goods' sector faced serious problems. In 1974 70.3% of manufacturing employment in the Pereira metropolitan region was in the consumer goods industries (textiles, clothing, food and drinks); 10.5% in 'intermediate goods' industries (paper and glass), and 10.2% in the 'capital goods' industries (metallic products, electrical equipment and machinery) (Table 20). Over the period 1970-74, three quarters (75.8%) of all new manufacturing jobs were created in the consumer goods sector.

Given this failure to diversify its industrial structure Pereira's consumer goods industry continued to rely on imported intermediate and capital goods. Moreover the fact that Pereira had to share its regional market for consumer goods with Manizales and Armenia meant that its industries had to look to national markets for further expansion (ANDI, 1974). These markets were highly competitive and dominated by Bogota, Medellin, and Cali whose industries had distinct advantages in terms of proximity to markets, economies of scale, and greater administrative and political clout. In response Pereira increasingly specialized in those activities where its competitive edge was greatest (food, textiles, clothing) through capital-intensive techniques creating few jobs.

**Tertiary Sector Employment**

In 1973 the tertiary sector constituted 36.4% of total municipal employment and 'non-specific activities' (i.e. the informal sector) 17.9% (Table 19). It is therefore likely that the tertiary and informal sectors provided employment for over a half of the city's EAP in 1973. The greater part of tertiary sector employment...
employment was concerned with personal, public sector and professional services, and with commercial and financial activities.

**INCOME AND ITS DISTRIBUTION**

**Personal Income**

Despite disputes over trends, there is little doubt that Colombia's low absolute incomes and massive income inequalities were a major determinant of the national housing problem. In 1970 the income shares of the top and bottom 20% of Colombia's EAP were 59% and 4% respectively (World Bank, 1977b:1). In 1974 national GNP per capita stood at $12,500 (US $438) p.a. (World Bank, 1977b).

Although urban low income groups were better-off than their rural counterparts, nonetheless in 1970 in Old Caldas the bottom 40% of the urban population still only received 7.0% of total urban income, whilst the top 20% received a massive 68.0% (Londoño Marulanda et al., 1977:34). The 1973 census revealed that over a quarter (26.3%) of the EAP in municipal Pereira were earning $500 (US $20) or less a month, and almost three quarters (72.4%) were earning less than $1,500 (US $60). Less than one in ten of the EAP (9.4%) were earning more than $3,000 (US $120) a month.

**Family Income**

Unfortunately data on the levels and distribution of family incomes were not collected in Colombia in this period, and estimates are therefore tentative.

Table 21 shows that in 1970 over one-half (55.5%) of applicants for ICT housing in Pereira had monthly family incomes of $500 (US $26) or below, and a
further 1/3rd (35.3%) monthly incomes of between $501 - $1000 (US $26-52). A massive 97.7% declared that their family incomes were below $1,501 (US $78), and a mere 0.4% were earning more than $2,501 (US $131).

The 1973 census data enumerated households according to levels of per capita income (DAPM, 1974:114), and also revealed that there were 1.55 employed EAP per household in the municipal area. A rough estimate can therefore be made of the levels and distribution of household income in municipal Pereira in 1973. Table 22 shows that over three quarters (76.5%) of households were earning incomes below $1,860 (US $75) a month, and that only 6.7% had monthly incomes over $2,790 (US $113).8

THE NATURE AND SCALE OF THE HOUSING PROBLEM

The principal data sources on the qualitative and quantitative dimensions of the city's housing problem were the three DANE national censuses, and the 1972 ICT census.9

Qualitative Analysis of Pereira's Housing Problem

Physical Characteristics of the Housing Stock

Table 23 presents census data on the different materials used in the city’s housing stock.10 The table shows that there was a small decline in the proportion with ‘transitory’ floors over the period 1951-73 from 3.3% to 1.3%, though absolute numbers remained roughly constant. It also shows a dramatic decline in the proportion of total housing with ‘transitory’ walls, from 87% in 1951, 58.9% in 1964, to a mere 1.6% in 1973 - a figure that seriously undermines the credibility of the 1973 census. Third, the data show a significant increase in
the proportion of the housing stock with ‘transitory’ roofing materials (0.8% in 1951 to 3.8% in 1973), and a significant increase in absolute terms. Little can be deduced from the data given the serious underestimate of those houses with transitory floors and walls.

The ICT 1972 census showed that 12.4% of all houses in Pereira were in ‘bad condition’; 2.3% were ‘liable to flooding’; 4.3% were on land that was being eroded, and a further 6.2% were built on ‘steeply sloping land’. 16.4% of the housing stock (1998 houses) needed total eradication and 18.7% (5857 houses) needed ‘urban renewal’.

**Housing Types**

The 1964 census (Table 24) revealed that a third (32.9%) of the city’s housing was classified as ‘chozas, carpas y similares’ defined as ‘housing with unacceptable material standards and levels of service provision’. The category clearly refers to the city’s tugurios. The census failed to separately enumerate the large number of *inquilinatos* in the city.11

The 1973 data (Table 25) show changes of such a magnitude that serious doubt must be cast on their accuracy. ‘*Chozas y similares*’ now made up only 3.3% of the housing stock (882 houses) and no ‘houses built of throwaways’ were found. *Inquilinatos* made up 3.9% of the housing stock (1029 houses). Given the high rate of growth of squatter settlements during this period it was clearly impossible that the number of ‘*chozas y similares*’ dropped from 6570 to 882 houses and its relative proportion of the housing stock from 32.9% to a mere 3.8%.12

**Levels of Overcrowding**

Census data (Table 26) reveal that since the early Sixties roughly a quarter of the city’s housing stock has been overcrowded, defined as those houses with
three or more persons per room (Rodriguez: 1974).

Conditions of Tenancy

Table 27 shows the conditions of tenancy of Pereira's housing stock for the three censal years. Several important features stand out. First, owner occupation remained a minority form of tenancy that in relative terms has declined over the period 1951-1973 (from 44.8% to 39.0%) though it increased in absolute terms. Second, renting maintained its predominance in relative terms over the period 1951-73 (from 53.0% to 54.0%), and increased in absolute terms. Third, there was a persistent increase in both absolute and relative terms of housing in 'other forms' of tenancy (i.e. illegality) from 2.1% (219 houses) to 7.0% (2215 households) between 1951-73. The ICT census identified 2402 houses (7.0%) in this condition in the city in 1972.

Housing and Services

Census data (Table 28) show that between 1951-73 overall levels of service provision improved in relative terms. By 1973 3% of households were without electricity; 3.5% without water, and 6.4% without sewerage connections. ICT 1972 data indicated higher levels of provision of water and electricity, but lower levels of sewerage provision - one in ten houses (9.9%) being without connections.

Housing Deficits

Quantitative Housing Deficits in Pereira

The quantitative housing deficit can be defined as those houses required to eliminate the difference between the total number of houses available and the total number of families in a city in a determined year. Table 29 shows that the quantitative housing deficit for Pereira grew from 5353 to 8868 between 1964-
In 1964 a fifth of the population of the city (30,810) was affected by the deficit and in 1973 a quarter (43,496). ICT estimates (Table 30) show the city's quantitative deficit grew by a factor of ten over the period 1951-74. The deficit was projected to increase from 9592 to 11,292 houses between 1973-80.

**Qualitative Housing Deficits in Pereira**

Quantitative deficits, however, fail to accurately reflect real housing deficits because they do not take account of that substantial part of housing demand that can be adequately met by rental of rooms, and because they erroneously assume that all of the existing housing stock adequately houses those living in it. Attempts to introduce a concept of housing quality into the definition are made difficult by different value judgements of 'adequate' housing and inadequate data on housing quality. Nevertheless two alternative estimates of the total housing deficit can be calculated that take into account the qualitative dimension.

Alternative I (Table 31) aggregates the quantitative deficit with that part of the housing stock which can be considered unfit for human occupation (i.e. ranchos, chozas, inquilinatos and cuartos). On this basis the housing deficit stood at 12,036 in 1964, and 11,453 houses in 1973. Thus 59.4% of Pereira's population was affected by the deficit in 1964 and 43.0% in 1973.

Alternative 2 (Table 32) aggregates the quantitative deficit with all those houses that can be considered overcrowded. By this measure 45.2% of the city's population was affected by the total deficit in 1964 (9158 houses) increasing to 47% (12,508) houses) in 1973.

These estimates must be regarded as tentative, but in the mid-Seventies Pereira's housing deficit was between 9000 to 10,000 units and affected 20-40% of the population.
The Housing Deficit and Levels of Income in Pereira

Table 33 gives ICT data on the distribution of the housing deficit in Pereira in 1970 according to levels of income. In 1970 a half of the housing deficit (50.9%) occurred amongst those earning less than $479 (US $25) a month, and almost three quarters (72.9%) by those earning less than $800 (US $42) a month. These proportions corresponded rather closely with the income levels of applicants for ICT housing. In 1970 55.5% earned less than $500 (US $26) a month, and an overwhelming 90.8%, $1000 or less a month (US $52).

THE NATURE OF THE LAND MARKET

A Brief History of the Land Market

Before 1880 the landownership pattern in Pereira reflected the egalitarian class structure associated with the initial stages of a frontier economy. A small and middle peasantry cleared and lived off small plots of land. This pattern owed much to the minimum and maximum limits to concessions (32-100 has.) established by national *baldio* legislation. The first land adjudication in 1865 distributed 96 plots, the smallest 4 has. and the largest 16 has. In 1871 Guillermo Fletcher, a local citizen, designed a city of *calles* and *carreras* in the typical Spanish grid system. Fletcher's design remained largely intact over the years - the basic reticula and the centrality of the Plaza Bolivar were maintained and the East/West longitudinal lay-out was adhered to closely. In the same year Law 21 granted 12,000 has. of *baldios* for distribution to the Villa de Pereira.

Three distinct cadastral zones emerged in relation to this reticula:

- First, in the central area Fletcher's blocks were subdivided into 10 lots (20 x 50 yds) giving lot areas of 1000 sq. yards (722.5m²).
A second cadastral zone outside of the built-up area but within Fletcher's grid developed as plots were sold to newcomers.\textsuperscript{16} They rarely exceeded 3 has. (10,800m\textsuperscript{2}) and more often were the size of a city block (7225m\textsuperscript{2}). This area rapidly became a \textit{minifundio} zone of crops and pastures (Peterson, 1977).

In a third zone, outside of the reticula, \textit{baldios} were distributed for cultivation. Between 1871-73 436 adjudications were made by the Agricultural Commission, the smallest 32 has. and the largest 57 has. The price per hectare was around $3 gold pesos - the same price as a pig and one fifth the price of a horse.\textsuperscript{17}

The pattern of rural and urban landownership was drastically altered by the arrival of the \textit{Antioqueño} agro-capitalists in 1876 and bourgeois and professionals in 1885. In the west and south west forests were cleared for cattle \textit{hacienda} adding another cadastral zone to the structure of landownership.\textsuperscript{18} The abandonment of maximum property limits led to the growth of numerous coffee \textit{fincas} and sugar \textit{estancias} to the north, west and south-west of the city.\textsuperscript{19} The now dominant classes of landowners, merchants and professionals also began to construct substantial properties (often in excess of 400m\textsuperscript{2}) around and beyond the Plaza Bolívar, and the second zone of rectangular blocks was gradually converted to urban use by the city's poorer classes.\textsuperscript{20}

Between 1905 and 1938 Pereira tripled its population, which along with the expansion of urban services and infrastructure brought on a change in the pattern of landownership. Plots around the city centre were further subdivided through inheritance and sale; and in the zone of rectangular plots, which now extended down the slopes of the Otun and the Consota, landowners sold off poorly-serviced
subdivisions in a piecemeal manner. Most extensions of the urban perimeter at this time came through unimproved subdivisions, municipal installations (e.g. market place, asylum, abattoir, cemetery, military base) and industrial plants. After the War, with further rapid urban growth the larger rural properties in the third zone were marketed by landowners and subdividers now constituted as property development and construction companies. By the mid-Seventies the central area of Pereira was almost completely surrounded by a ring of unimproved subdivisions.

The south-eastern periphery, however, became almost exclusively a zone of private improved subdivisions for Pereira's upper and middle class families. Individual properties were urbanized in stages and separate improved subdivisions were carved out of individual holdings. In the Sixties and the Seventies these subdivisions became larger (10-50 has.). Some landowners extended their activities to housing construction, and some construction companies began to engage in land speculation.

In the post-war period state interventions also drastically changed the structure of urban landownership: by extending finance to the private sector (e.g. BCH, ICT, CAVS); through the construction of municipal facilities and roads; through the implementation of the master plans for water, sewerage and electricity; through municipal zoning policies, and through the direct purchase of rural land for state housing projects. After the early Sixties the ICT built increasingly larger settlements (generally in stages) on ever-more peripheral sites, particularly in the west and south west. On the periphery, property markets were transformed by the construction of large municipal installations (e.g. Airport, Olympic Village, Industrial Park and Technological University).
In the inner city, the local state was also involved in expelling low income families to accommodate road expansion and widening programmes (Avenida Circumvalar, Avenida del Norte, Avenida del Sur), and urban renewal projects. It also maintained a strong regulatory influence throughout the city through municipal zoning, building and subdivision codes.

Finally, in the post-war period, squatter settlements developed on land which because of its unfavourable physical conditions was poorly integrated into the land market (e.g. river banks, roadside and railway verges, steep slopes). In most cases the land occupied was national or municipal property and was incorporated into the urban land market through the development of informal markets, and through state attempts to regularize tenure.

Land Concentration and Patterns of Land Ownership

Data on land concentration and ownership are scarce and of limited utility. Cadastral data (Londoño Bolivar: 1972) for the period 1960-1974 show an annual average increase of 3.4% in the number of plots in urban Pereira and 5.2% urban Dosquebradas, indicating the impact of both rapid and differential rates of urban growth. Table 34 gives data on the cadastral structure of urban Pereira for the years 1960-71 and shows clearly the growing concentration of land-ownership. In 1971 81.7% of all owners owned property below 300m² yet the area occupied was a mere 24.2% of the total area. On the other hand 1.8% of all owners owned property in excess of 5000m² but these properties occupied 53.8% of the total urban area. Roughly a quarter of all owners were concentrated on plots below 100m² which occupied a mere 4.8% of the total urban area. Thus by the early Seventies a substantial proportion of owners were concentrated on a
relatively small area whilst over a half of the city’s land was controlled by a very small proportion of owners.

The pattern is consistent with an increased subdivision of inner city land and the extension of urban growth into the zone of medium and large agricultural holdings traditionally in the hands of some of the city’s wealthiest and most powerful families. On the south-eastern periphery, large properties were owned by the Jaramillo, Velez and Vega families; in the south the Prefabricados Tecnicos Company and the Gonzalez family owned large tracts around Barrio Providencia; in the south-west large holdings were in the hands of the Villegas, Angel, Arenas, Carrillo, Montoya and Gaviria families. In the north-west the Carillo, Ospina and Jaramillo families had important landholdings. To the east, large tracts were owned by the Mejia, Zapata and Hoyos families. The city’s largest pirate developer, Jaime Giraldo Garcia had extensive holdings on the upper Dosquebradas plain, along with the Valher textile company and the Botero family. Large landowners also existed in the inner city. Bernado Angel and Gabriel Trujillo originally, both coffee growers and merchants, had substantial land holdings as did the Illian, Arcila and Castaño families.

Land Values

Official land values were determined by IGAC cadastral surveys of all registered properties. Despite compelling reasons for frequent cadastral valuations only three had been carried out (1960, 1968, and 1973). The maps and cadastral points for the 1968 and 1973 surveys were virtually the only data on land values available for Pereira in the mid-Seventies. The data were also limited by the omission of large numbers of unregistered plots, and often significant and
spatially variable discrepancies between 'official' and 'actual' land values. In 1976 for example land in the Plaza Bolivar had an official land value of $3300m^2$, but was selling for $6000m^2.

Table 35 gives data on the 44 cadastral points used in the matrix to plot the maps accompanying the valuations (Maps 4 and 5). The 1968 and 1973 nominal values are shown, and we have also calculated the 1973 values in terms of constant 1968 pesos. The Table reveals that in terms of constant 1968 pesos, the total value of the cadastral points increased from $11,270 to $17,596 over the period. This represented a 56.1% increase - an average increase in land values of 9.4% p.a. However, the data also reveal considerable variations - three points showed a decrease in real terms, one of them by as much as -23.6% over the period. Many points showed substantially higher than average increases, and at one point (the converted railway station) land values had increased by a massive 592.0%.

A more detailed spatial analysis of land values is provided in Maps 4 and 5 which show land value isolines for the years 1968 and 1973. Several interesting features emerge from the maps. First, the centre of the land market shifted from the area immediately to the east of the Plaza Bolivar in 1968, to the Plaza Bolivar itself in 1973. Second the morphology of the land market in the west of the city was dramatically affected by the valorizing effect of the Av. de 30 de Agosto on neighbouring properties, pushing a tongue of higher land values out from the city centre to the western periphery. Third, the influence of topography on land values was notable, particularly in the north, where the land dropped steeply into the Otun valley. Fourth, both maps revealed the effect of state housing projects,
private improved subdivisions and urban installations in attenuating the urban land market in certain directions, (particularly to the south west, south and south east), and on integrating intervening rural areas into the urban land market.

Diagrams 3 and 4 show four cross sections which have been made from the two maps. Each section passes through the Plaza Bolivar to and from the periphery: A-B from east to west, C-D from north to south, E-F from north west to south-east, and G-H south west to north east. The same cross sections were used for both years and plotted against each other in terms of constant 1968 pesos.

Several features emerge from these cross sections. There were substantial real increases in land values in most areas. These increases were significant both in the CBD, and peripheral areas, but were highest in the *inquilinato* and middle class settlements on the west and north-west edge of the CBD. At the same time there was no growth in land values and even some decreases in real terms in zones immediately to the southeast and south of the Plaza Bolivar as a result of the northwestern migration of the centre of the land market. Nonetheless increases in land values in more peripheral areas in these directions were typical. In some areas particularly to the west, north-west and south-west of the Plaza Bolivar and on the south-eastern periphery land values doubled in real terms over the 6 year period.

The widespread existence within Pereira of the *'lote de engorde*', was notable and took two forms: first, the withdrawal of land from the market until surrounding land development had greatly increased its value - a very common practice on the periphery; and second, the progressive subdivision of holdings

See Maps 4a and 5 for location of the Sections.
Land Development and the Land Market

Land development costs are made up of the cost of making the land suitable for construction, and the cost of ‘urbanizing’ it with services and infrastructure. There are three major inter-related issues that affect land development costs: the suitability of ‘raw land’ for construction; access to urban services and infrastructure; and design and planning specifications.

The Suitability of Raw Land For Construction

Often a considerable part of the difference between the cost of raw land and urbanized land can be attributed to difficulties attributable to topography, drainage, slope and soils. Construction on slopes of more than 10-15° can result in high infrastructure and service costs; whereas confining construction to site areas below this threshold reduces the amount of land and space available to residents. The alternative is extensive land movements involving expensive capital equipment, technical expertise, high transport costs of excess earth and 6 month delays in construction to permit the ground to settle. Preliminary land development of the Aeropuerto site adjacent to Barrio Cuba, with raw land costs at $27.10m² was estimated by the ICT at $96.50m² confronting the resident with a total cost of $123.70m² (US $3.4lm²) for unserviced land (ICT, 1976c). It is clear that these costs can be significant in excluding low income households from access to projects of this type.

Access to Urban Infrastructure and Services

Similarly, a major element affecting the cost of urbanized land was the
proximity of the site to service and infrastructural networks. A feasibility study (Fondo Obrero, 1975) of three plots of land considered for a worker's housing project revealed the significance of this cost factor. The San Joaquin site was the farthest from the city lying to the south west of Barrio Cuba; Villa Alicia lay in the area between Barrio Cuba and the Batallon San Mateo; and the La Palmera site lay on the north western edge the city's built area.

Table 36 shows the costs of raw land, land development and fully-urbanized land for the three sites, and demonstrates that the more peripheral the location, the cheaper the raw land but the more expensive the costs of urbanizing it. The critical factor was the high cost of installing services in areas far from primary and secondary networks. Thus the San Joaquin site required a one kilometre extension of the service networks from Barrio Cuba, but in the La Palmera location the maximum distance from these networks was only 70 metres.

Table 37 gives a breakdown of the costs of the same housing unit on the three sites. In all cases developed land costs constituted 30-40% of total housing costs and none of these solutions was accessible to families with incomes below $3000 a month (US $91). Table 38 gives data from an ICT self-help 'minimum solution' project (Barrio Otun) in 1976. Here again raw land and land development costs amounted to almost a third of total costs (30.9%).

Design and Planning Specifications and the Urban Land Market

In the Seventies the ICT identified inadequate housing designs and planning specifications as a principal element of the land problem. Costing the specific effects of inflexible designs, and costly planning and technical specifications is a difficult task.\textsuperscript{30} A major issue was the zoning of large areas of peripheral land exclusively for low or middle density use. Dramatic increases in
inner city land values and peripheral service and infrastructure costs led the state to shift from small, centrally-located projects with large plots, to large peripheral projects with small plots and multi-storey construction. In 1976 the Municipal Planning office was revising the municipal codes to permit a 50-60% increase in housing and population densities for single family housing and a 100-150% increase in multifamily housing in the various zones.

The Pastrana Borrero administration undertook a major revision of the ICT's design and planning policies for similar reasons. There was increased emphasis on large scale settlements constructed with industrialized building systems that took advantage of revised density levels. The resulting 4-6 storey prefabricated apartment blocks greatly reduced developed land costs by reducing per capita land consumption. Densities were also increased by diminishing per capita built areas through designs facilitating the multiple use of internal spaces. Reductions in servicing and infrastructure costs were to be achieved by reducing lot areas, the dimensions of secondary roads, vehicular access and parking space. The costs of providing water and sewerage were to be reduced by using smaller diameters (under pedestrianized streets) and by the separation of sewerage from drainage systems.

In the mid-Seventies all of these measures were combined in the planning ideology of 'integrated urban developments' (ICT, 1975). By 1976 plans were advanced for making Barrio Cuba a nucleus for a future ciudadela to be integrated with three projected developments - Barrios Aeropuerto, Gamma and San Joaquin (see Map 15).31

Land development also increased the value of land to those living on or near it. IGAC estimated that water and sewerage provision raised the market
value of land in intermediate cities by an average of 311% (World Bank, 1977a:4).

BUILDING MATERIALS AND LABOUR COSTS IN PEREIRA

Building Materials Costs

Data on the organization of the construction and construction materials industries in Pereira were highly limited. We were able however to obtain data on the costs of labour power, building materials, and equipment used in ICT housing programmes in the city. The data took the form of a monthly index using the base year of 1974 and covered the period January 1974 - June 1976 (Tables 39, and 40).

Table 39 shows that between January 1974 and June 1976 ICT construction costs increased by 71.5% giving an average annual rate of increase of 28.6%. Table 40 shows that over the period building materials costs for urbanization works increased at an average annual rate of 25.1%, and electrical systems at 13.9% p.a. The average annual rate of price inflation between January 1974 and June 1976 was 25.2%. Thus housing construction costs were increasing in real terms by 3.4% p.a.; urbanization costs were running at the same rate as inflation, and electrical systems costs were increasing at about half the general rate of inflation.

Fortunately the ICT data for Pereira also itemized the cost index for a wide range of building materials over the period.

Cement

Cement is a vital construction material use by all income groups for mortar, foundations, beams, floors, stairwells, kitchen/washing installations,
columns, cement blocks and asbestos-cement products.

Table 39 shows that with an average annual rate of increase of 52.1% cement experienced the highest rate of increase of the 14 materials listed. Cement prices were rising in real terms by 26.9% p.a. over the period. The reasons for these increases were not difficult to identify. Cement production was the most industrialized and capital-intensive branch of the construction materials sector, and was characterized by oligopoly in national, and monopoly in regional markets. National agreements with other producers allowed the Cemento de Caldas factory in Manizales a monopoly in cement production and distribution in Old Caldas in return for restrictions on sales outside the region. The city's construction industry was thus at the mercy of the company in relation to supplies, prices, and quality of cement. Administrative and technical deficiencies in the factory led to periodic interruptions in the city's construction activities and local complaints of a low quality product.

In the early Seventies demand for cement began to outstrip supply as a result of the middle class construction boom that accompanied the introduction of UPAC bonds and housing corporations (CAVS). The resulting rapid increases in cement prices in the city affected all income groups. Shortages of cement in Pereira also occurred as a result of local transport difficulties.

Asbestos-Cement

Asbestos-cement production was highly industrialized and its location dictated by proximity to cement factories. Prefabricated, standardized parts were produced by assembly-line production (corrugated roofing sheets, gutters, pipes, wall panels and floors) allowing on-site assembly either as individual units or as packaged building systems. The consumption of asbestos-cement products by the
Pereira ICT increased dramatically after 1967 when the Colombit factory in Manizales started production. The company had a regional monopoly; bottlenecks in the cement industry had a knock-on effect, and prices rocketed as a result of the UPAC boom. Between January 1974 and June 1976 asbestos-cement costs were rising in real terms by 23.1% p.a., the second highest rate of the 14 materials listed.

**Iron Products**

Iron products were widely used for housing construction (e.g. iron bars for reinforced foundations; beams and columns; nails, screws and clamps; metal window and door parts; roof supports; electrical and sanitary fittings). Iron produced in the Paz del Rio plant was distributed for further manufacture to foundries in Bogota (SIMESA) and Cali (SIDELPA) and then distributed to local markets. The local costs of iron products thus closely reflected national trends. Table 39 shows the index for reinforced iron was increasing at an average annual rate of 7.8% over the period (at a fraction of the rate of inflation) but that of metal frames at 31.7% p.a. (6.5% p.a. in real terms).

**Bricks and Tiles**

Clay bricks, tiles and pipes produced by the manufactured form were widely used in the city in the past, but were increasingly being replaced by industrial materials (prefabricated asbestos cement panels, cement blocks, asbestos-cement roofs, cement and plastic pipes). Demand from artisanal builders, however, remained high. Table 39 shows that over the period, the cost of bricks and tiles to the agency was increasing at average annual rates of 47.6% and 20.0% respectively. In real terms the costs of bricks to the agency were rising by 22.4% p.a., and those of tiles at 5.2% below the general rate of inflation.
Sands and Gravels

The extraction of sands and gravels in Colombia is almost exclusively confined to river deposits. The charcos of the Otun and Consota were long ago exhausted, and all of the city's materials came either from the Cauca at Cartago, or from the Risaralda at La Virginia. Transport costs thus figured significantly in the final costs to the consumer. Over the period January 1974 - June 1976 the average annual rate of increase of costs of sands and gravels was 26.7% (Table 39), slightly above the general rate of inflation (25.2% p.a.).

Wooden Products

Wooden products were widely used in Pereira as beams for walls and roofs, for floors, for window and door frames and for doors and staircases. Unfortunately no data existed on markets for bamboo, the most widely used form of 'wood' in the city. Bamboo used to grow profusely in the region and traditional construction traditions dating back to the Quimbaya developed a vast range of uses for the material (Londoño Marulanda and Aurelio Montes, 1970). Local prices in the mid-Seventies increased rapidly as a result of rising prices for timber, and supply shortfalls derived from the spread of agriculture and conservation legislation.

Table 39 reveals that costs of wood to the agency were increasing at an average annual rate of 27.3%, the sixth highest rate of increase out of the 14 materials listed, and 2.1% p.a. higher than the rate of general price inflation.

Other Materials

Table 39 also gives data on a range of other materials used in ICT housing. In general industrial products showed annual rates of increase substantially higher than the rate of price inflation; electrical installations (22.7% in real terms);
plumbing and fittings (15.8% real); paints (12.4% real), and glass (7.5% real). On the other hand manufactured products such as sanitary fittings showed a negative rate of increase (-13.1%) in real terms.

Labour Costs

Unfortunately the ICT data for labour costs do not distinguish the different kinds of labour involved in the construction process. They indicate an average annual rate of increase in labour costs of 13.3%, although all of the increase occurred in the period January 1974 to January 1975 and thereafter the index remained static. Over the period labour costs were increasing at less than half the rate of general price inflation (-11.9%) and thus increases in the agency's construction costs were largely attributable to increases in building materials costs.

A BRIEF HISTORY OF PEREIRA'S ECONOMIC AND SOCIAL DEVELOPMENT

Pereira was founded in 1863 by a group of colonizers from Cartago. Between 1860-1880 the area was dominated by a small peasantry growing cocoa and subsistence crops. According to von Schenk, a visitor in 1883 (Parsons, 1949) the city was also an important shipment point for rubber collected in the Quindio forests.

This egalitarian society was broken by the immigration of a group of agro-capitalists fleeing the Antioquian Civil War in 1876, who set up large cattle and sugar hacienda to the west of the city and who rapidly became a landowning class employing wage labour. The three Marulanda brothers alone acquired more than 25,000 has. at this time (E.E.P.P., 1974). The region now began producing cash crops for export including cocoa, rubber, sugar, hides, meat and increasingly
coffee. The diversification of the local economy offered growing opportunities for commerce and a commercial bourgeoisie. This class arrived ‘readymade’ in Pereira after the 1886 Civil War in Medellin, which brought a wave of professionals (doctors, lawyers, surveyors), merchants and investors to the town with an interest in the lucrative export trade. These two classes, linked through marriage and ‘cross-capital’ investments, soon came to constitute an oligarchy that continues to dominate the local economy and polity today (Lopez, 1970; Ocampo, 1972).

Thus, in the late 19th century, a rural class structure began to develop consisting of large landowners (often residing in Pereira), a middle and small peasantry and a growing number of wage labourers; and in the city a commercial bourgeoisie and a middle class of professionals dominated a nascent working class developing in the city’s sugar and coffee processing plants (trapiches and trilladoras) and the host of small workshops producing ancillary goods. By 1905 with a municipal population of 19,036 Pereira was the second largest city in Old Caldas.

Between 1900 and 1920 the rapid development of the coffee, sugar and cattle economy greatly encouraged the city’s commercial and industrial development. Stimulated by the protectionist policies of the Rafael Reyes administration (Ospina Vasquez, 1955), small factories and workshops developed, producing candles, soap, beer, soft drinks and agricultural implements, which complemented the existing coffee, sugar and leather processing, printing and metal working industries.

After the First World War, capital from Medellin and Bogota began to invest profits from the coffee trade in clothing, textiles, glass, food - processing,
brewing and construction industries in the city. Between 1925-28 six major industrial companies were established in Pereira (Duque et al., 1973). The need to modernize the region’s infrastructure now became urgent. Road communications were improved and rail connections were made with Cartago, Manizales and Armenia in 1921, 1928 and 1929 respectively. Between 1918-28 the population of the municipality doubled (from 24,500 to 50,060).

In the Thirties and Forties capitalist development of agriculture and the coffee sector resulted in an increasing concentration of land ownership, and a quickened rate of rural to urban migration. By 1943 Old Caldas was producing 34% of national coffee output and thereafter the city’s economic fortunes became overwhelmingly dependent of the size and value of the coffee harvest. By 1960 there were 3.6 million coffee trees in the municipality, and even more in neighbouring Santa Rosa de Cabal. By 1971 coffee accounted for two thirds of the gross value of agricultural output in Risaralda (DANE:1971).

The post-war years saw substantial improvements in the urban and regional infrastructure including a network of primary and secondary roads; the development of hydroelectric power and rural electrification programmes, although the railway system fell into disuse (Appendix 3). However, the development of an export-oriented monoculture also placed growing strains on regional development. Between 1938-73 the urban population of Pereira increased 5.5 times from 30,762 to 174,128 through natural increase and very rapid migration. The reasons for this migration process included: the neglect of basic food crops resulting from excessive specialization in coffee; the underutilization of land with a potential for intensive methods (particularly the cattle-grazing latifundia of the Risaralda valley); and the acute and growing problem of
minifundismo. In the latter case, excessive land subdivision as a result of population growth and the absence of land reform, led to the impoverishment of the small coffee grower and his inability to carry the burden of taxes, increased costs of agricultural inputs, and high interest rates on credit. This in turn led to the concentration of land and income into fewer hands, and the creation of a landless or sharecropping peasantry working a mere four month annual cycle on increasingly mechanized properties demanding less labour power. These problems intensified in the Sixties, when the traditional arriago coffee plant which required shade, was replaced by the caturra variety which could be grown without shade under conditions facilitating mechanization. These larger coffee plantations began replacing the small scale cultivation of coffee and food crops (e.g. bananas, yuca, beans, fruits) giving high yields but requiring expensive machinery, pesticides and fertilizers, access to which was beyond the credit capacity of the minifundista and small coffee farmer.

Most observers agree that Pereira’s urban growth was also stimulated by La Violencia during the late Forties and Fifties. Guzman (1968) has recorded that 26 out of Old Caldas’ 50 municipalities, and 10 out of Risaralda’s 14 were affected by La Violencia, which in this area had as its goal the displacement of the minifundista. A survey of 1914 migrant heads of family interviewed in the city in 1963 revealed that 73.3% gave La Violencia as their principal reason for moving to Pereira (Calle Restrepo, 1964).

After the Second World War, Pereira adopted modernization policies on the import-substitution model and rapidly built up an industrial structure based on the manufacture of textiles, clothing, foodstuffs, beverages, paper, metalwork, construction materials and furniture (Rodriguez Becerra, 1976). Despite a
recession associated with the disruption of regional markets during *La Violencia*, by 1965 Pereira ranked 7th nationally in terms of its industrial value-added, and 6th in terms of the proportion of its EAP in manufacturing. Between 1965-1974 the Pereira-Dosquebradas metropolitan area was achieving rates of real value-added growth in manufacturing of over 5% p.a. (Londoño Marulanda *et al.*, 1977:26). Several reasons for this rapid post-war growth have been suggested: the abundance of cheap electricity; low labour costs; a central national location (Duque *et al.*, 1963); the entrepreneurial experience of local elites; availability of local agro-industrial raw materials; and the development of local financial institutions interested in regional development (Londoño Marulanda *et al.*, 1977). Particularly important was the attractiveness of local investments for foreign capital. In 1948 the Paños Omnes clothing factory was set up with joint French and local capital; in 1949 the U.S. multinational food corporation Grace Company set up the Comestibles La Rosa factory in Dosquebradas and in 1952 the large Hilos Cadena thread factory was set up with British capital. *Bogotano* and *Antioqueño* capital was also attracted to the food and drinks industries (Postobon and Ceveceria Bavaria), whilst local capital dominated the clothing industry (Industria Charles and Valher) through small workshops and the putting-out system.

By the mid-Seventies, however, structural difficulties with the capital-intensive import-substitution model already discussed contributed to high and growing unemployment rates, and a rapid expansion of tertiary and informal sector activities.

The city’s social structure was by now far more complex than at the beginning of the century. At the top stood a relatively small oligarchy of
landowners and a commercial bourgeoisie with developing industrial, financial and property interests (Ogliastri and Davila, 1974). Next there was a growing middle class tied to lower and middle commerce, finance, the professions and state employment. Below there was a large working class based on a small number of large factories, and a large number of small workshops. At the bottom there stood a burgeoning mass of semi-skilled and unskilled migrants and natives, eking out a living in the tertiary and informal sectors through casual work, self-employment, contract labour and outwork.

THE URBAN RESIDENTIAL STRUCTURE

The following account of the urban residential structure will be made with reference to Maps 6 and 7 (pocket). Full details of the classification system employed in this account are to be found in Burgess (1985).

The CBD and the Transitional Zone

In the mid Seventies Pereira's CBD consisted of a compact area of 18 blocks stretching between calles 12 and 30, and carreras 7 and 10. It's three principal axes were the Parque de Libertad, the Plaza Bolivar and Lago Uribe. Within this area were concentrated, in a functionally specialized manner, most of the city's employment opportunities in commerce, finance, the public sector and the informal sector. The area around Plaza Bolivar was dominated by public administration, financial and office functions; Carrera 8 between Libertad and Uribe by commercial and retail activities, and the area around the market by retail and wholesale commerce.

In the Transitional Zone surrounding the CBD these specialized functions
were dispersed amongst middle and upper income housing to the north, low and middle income housing to the west, and inquilinato housing to the south and southeast.

Planning problems associated with the growth of the CDB included: shortages of commercial space; health and fire problems from increasing densification, pollution and congestion; and the deleterious effect of land speculation on the maintenance of the housing stock. The city's development plan proposed a strategy of decentralization of urban functions to deal with these problems.

The Inner City Inquilinato Zone

A large area to the south, southeast and east of the CBD developed after the Twenties as the city's largest inquilinato zone. The completion of the new market in 1923 rapidly led to the conversion of middle-class housing in Barrio La Paz into inquilinato housing, whilst further east multi-storey bamboo and bahareque inquilinatos developed on the slopes of the Corocito and Egoya (Barrios Corocito, Berlin and Villavicencio).

Despite data difficulties, the 1973 barrio census returns give an idea of conditions in this inquilinato zone. In 1973 Barrios Olaya Herrera, La Paz, Corocito, Berlin and Villavicencio housed a total population of 22,060 in 3316 houses - 12.7% of the city's population and 12.5% of its housing stock. The incidence of inquilinatos was two to three times higher than the city average (3.8%); between two thirds and three quarters of all households were renting (compared to a city average of 54%) and population and housing densities were three or four times higher than the city average. The census found high illiteracy
levels, low levels of educational achievement and between 60-70% of households earning *per capita* incomes of $599 (US $24) or less a month. Rents were estimated to be around $400 a month (US $16) in 1975.

The Inner City Zone of Middle and Upper Income Housing

The area north of the CBD and south of Carrera 4 was a zone of upper class residence with fully-serviced, low density housing and a full range of urban facilities. Middle class housing was common to the north-west in the area between El Lago and the cemetery. The area to the east and south of the cemetery was characterized by small workshops, factories and commerce, low income rental housing and squatter settlements. The area to the south west of the CBD developed between 1910-40 with middle class housing on the flat interfluvials of the Egoya and Arenosa, and unimproved subdivisions (now rented housing) on the lower slopes.

Unimproved Subdivisions (*Barrios Piratas*).

Unimproved subdivisions proliferated in the Thirties and Forties. Landowners illegally subdivided vacant lots in the built-up area, or on the Otun and Consota valley slopes. Barrios San Juan, San Jorge, Sta. Teresita and America on the northern periphery, and La Victoria, Venecia and Mejia Robledo in the south have developed incrementally downslope since this period.

In the Fifties and early Sixties landowners formed family-based property development companies complete with legal advisers, which marketed larger areas of illegally-serviced land on the urban periphery. Barrio Ciudad Jardin (1948) was the first of these developments, followed by Barrio San Judas (1952),
Barrio Cañarte (1953), Barrio Camilo Mejia Duque (early Sixties) and Barrio Alfonso Lopez (1961-4). The most important of these new pirate urbanizers was Jaime Giraldo Garcia who between 1963 and 1966 laid out 4000 plots in five barrios on the upper Dosquebradas plain. By the mid-Seventies central Pereira was surrounded on three sides by unimproved subdivisions.

The 1973 barrio census returns and the 1972 ICT census indicated that roughly a quarter of the population and housing stock of the city and a third of the metropolitan area were found in unimproved subdivisions. The data permit some general conclusions about settlement conditions.

1. Unimproved subdivisions developed on land that was difficult to build on (valley slopes and bottoms) or near socially-undesirable sites such as cemeteries, and slaughterhouses. Problems of erosion, landslides and floods were serious in many settlements.

2. Unimproved subdivisions grew through small scale subdivisions and accretion around the old city, and were particularly numerous in Pereira in the Forties and Fifties. Since the Sixties, however, a limited number of large scale subdivisions on the periphery has been the pattern, with the upper Dosquebradas plain as the main location.

3. Housing conditions in unimproved subdivisions vary significantly from very high density zones of renters and inquilinatos (e.g. in the Otun and Consota valleys); high density settlements with single family housing (e.g. Alfonso Lopez; La Victoria; Cañarte) to low density, single-family housing (upper Dosquebradas). Older and more central settlements tended to be fully-serviced, the more recent and peripheral to have serious deficiencies.

4. Most unimproved subdivisions were long-established zones of
permanent residence for low and middle income groups with large families and a relatively low proportion of migrants. The renting and inquilinato zones however showed higher proportions of migrants, smaller family sizes and high levels of illiteracy.

5. The 1973 barrio census returns tended to confirm Peterson’s (1977) statement that ‘unimproved subdivisions span all classes but are now becoming uncommon except for the lower class’.

Private Improved Subdivisions

According to Peterson (1977) the prior installation of a water system and either sewers or septic tanks are the minimum criteria for a development to be labelled as an improved subdivision. Two types can be identified: the lotificación where the developer sells off subdivisions installed with basic services, roads, and public lighting and the urbanización where the developer sells conventional houses on these plots.50

Pereira’s improved subdivisions date from the late Forties, when middle and upper class demand for peripheral housing was made possible by access to state funds, new construction techniques, road improvements and the extension of infrastructure and service networks. In the Fifties numerous small scale conventional housing projects were built by small local companies. In the Sixties they generally became larger (e.g. El Jardin), and the early Seventies saw a spate of large and small developments, particularly on the south eastern periphery.51

Pereira’s improved subdivisions developed on land that was easy to build on, near socially-desirable institutions, (e.g. hospitals, university, colleges) with easy access to the centre. In some cases settlements for company employees were
built adjacent to factories (e.g. Valher, Bavaria).

The concentration of improved subdivisions for the upper and middle classes on the south-east and southern periphery, generated a pattern of social segregation that was reinforced by zoning codes.\textsuperscript{52} The 1973 barrio census returns, and the ICT 1972 census indicated that housing conditions in these settlements were the best in the city. Typically the settlements consisted of low density, single-family, owner-occupied housing, fully-serviced and in good physical condition, housing middle, upper middle and upper income groups with low levels of illiteracy and unemployment.

\textbf{State Conventional Housing}

This category included all conventional housing built or financed by the ICT and the municipal authorities (Fondo Obrero).

Table 41 gives data for all conventional projects built by the ICT in Pereira and Dosquebradas over the period 1953-76.\textsuperscript{53} Between 1942 and 1952 output was negligible (287 houses) and in the Fifties only three settlements were built (Barrios Providencia, Primer de Mayo and Popular Modelo). The Sixties saw a marked increase in the volume of ICT output and a diversification of its lending programmes. Relatively small scale projects on central sites were the rule (e.g Barrios Alfonso Lopez (1961), Bavaria (1964), 1 de Febrero (1968-73), and El Vergel). In the Seventies the ICT overwhelmingly concentrated on large scale middle class housing projects on the periphery built in stages using modular and industrialized systems. Developments included three extensions to Barrio Cuba (4, 5 and 6); three planned settlements to the west of Cuba (Barrios Aeropuerto, San Joaquin, Gamma); Barrio Jardin (four stages), Barrio Otun, and several
projects in Dosquebradas.

Table 41 indicates that the total number of conventional houses produced by the ICT between 1942-1976 was 3919 in Pereira and 300 in Dosquebradas. By 1976 state conventional housing made up about 10% of the housing stock of the metropolitan region.

The 1973 barrio census returns and the ICT 1972 census revealed that population and housing densities were not excessive; there were few ecological difficulties; housing was owner-occupied; physical housing conditions were good, and the settlements fully-serviced. There was little evidence of overcrowding, though over the years land consumption dropped quite dramatically (Table 42). The settlements largely housed lower middle and middle income groups. Pereira's state housing projects were developed on land that was easy to build on, and on sites near to socially-desirable institutions. Projects were heavily concentrated in the south-west and south of the city.

State Self-Help Housing

Three types of state self-help housing settlements can be recognized: ICT self-help housing projects; municipal self-help housing plans, and ICT and municipal self-help projects for resettling eradicated squatter settlements (Table 43).^54

1. The first major settlement constructed by the ICT through self-help was Barrio Boston (1960) on the southern periphery. 339 houses were built on 140m² plots using the family-based progressive development system.

In 1961 work began on the largest self-help settlement in the city, Barrio Cuba, 7 kms. from the city centre. Between 1961-1963 1215 houses were built in
two stages housing 6000 people (Calle Restrepo, 1964). Residents were given 140m² plots and building materials loans to build houses with designs provided by the agency using family-based progressive development. In 1968 a further 381 houses were built using the same system but with smaller lot areas (112m²) and a more complex two-storey design. By 1968 12,768 people were living in these three stages (ICT, 1976b).

In 1962 the Cuba designs, and construction methods were also used to build 327 houses in Barrio Kennedy adjacent to the Hilos Cadena factory. In 1967 work started on Barrio San Luis Gonzaga on the southern periphery. Here 118 core houses on serviced lots were provided through contract labour for residents to finish through family-based self-help. In 1975 in the third stage of Barrio Otun, the agency built 178 serviced lots (59.4m²) with an optional sanitary core, for completion to a two-storey design through self-help labour.

2. The second type of state self-help housing consisted of projects to replace eradicated squatter settlements. In 1968 Barrio San Camilo, a long-established shantytown near the cemetery was eradicated and rebuilt as a settlement of 206 houses. The ICT provided designs, plans and supervision and the municipality, land title and finance. The mutual aid system was used to build a core unit of 25m² on a serviced lot of 81.2m² to be completed by progressive development into a three bedroom house. By 1973 1170 people were living in the settlement.

In the Seventies the Planning Department and the ICT became involved in a number of projects involving the conversion of squatter settlements into self-help housing projects. Land regularization by purchase, and family-based self-help housing plans and designs were proposed for Barrios El Triunfo and
Gaitan in 1972, and Barrios Salvador Allende and La Dulcera in 1975.

3. The third type of state self-help housing was the municipal self-help housing plan. Initiated in the early Seventies the Planning Department extended legal technical, and financial assistance for land purchase, housing designs, and settlement plans. A wide range of municipal agencies were encouraged to participate and self-help activities were organized within the Acción Comunal structure. The most important of these housing plans in the mid-Seventies was Barrio Hernando Velez Marulanda on the eastern Otun terrace (217 houses). The Salvador Allende and La Dulcera rehabilitations in 1975 were also organized as municipal housing plans and affected 1250 people. In 1976 two smaller projects were initiated - Chico Restrepo (30 houses) and Jose Hilaire Lopez (50 houses). Three other projects were under consideration in 1976 (Nader, La Rivera and La Churria) and in the late Seventies housing plans rapidly proliferated.

The data (Table 43) allow only rough estimates to be made of the contribution of state self-help housing settlements to the city's housing stock. Between 1960-76 3281 houses were produced through state sponsored self-help housing in the city - 2618 (79.9%) by the ICT as self-help housing projects, 212 (6.5%) as squatter eradication projects, and 451 (13.7%) through municipal self-help housing plans. In 1973 the state self-help housing stock constituted 10.6% of the city's total stock housing 21,411 persons, 12.3% of the city's population.

ICT self-help housing projects were generally located on flat land free from problems of erosion and flooding. The Otun valley terraces (e.g. Kennedy, Otun 3, and Carreros) and the flat interfluvial meseta were the preferred locations.
Municipal housing plans and squatter eradication projects were built on land with
greater topographical difficulties.

The majority of projects were in peripheral locations (Map 5). The 1973
barrio census returns revealed medium to high population (100-500 per ha.) and
housing densities (15-50 per ha.); an EAP participation rate around the city
average (38.3%); income levels consistent with a predominance of blue and white
collar occupations; and illiteracy levels below the city average. Between one third
and one half of settlement populations were migrants, and between one quarter
and one half of households were renting their accommodation.56

In general physical housing conditions were good given the obligatory use
of industrial or manufactured building materials in ICT projects. Similarly most
settlements were characterized by high service levels though paved roads,
sidewalks and public lighting were often absent.

Squatter Settlements

Location

The city's squatter settlements occupied three distinct types of location.57

1. River Valley Locations

The largest concentration of squatter settlements in the city was found in
the Otun valley. By the mid-Seventies almost the entire south side of the valley
floor (40 blocks) was occupied by squatters. Although squatting in the valley
dated back to the early Twenties it was not until the late Forties, with the
migration process and La Violencia in full swing that the pace of squatting in the
valley began to increase. Barrios Ormaza, San Francisco and America were
formed in the late Forties, and San Juan de Dios in 1956. The Fifties also saw
the rapid development of unimproved subdivisions on the north bank of the Otun (e.g. Barrio El Balso and San Judas). In the Sixties squatting in the Otun Valley reached unprecedented levels (Barrios Risaralda, Salazar Robledo and Charco Negro) and thereafter valley bottom land became scarce. In the early Seventies further squatting could occur only on the steep northern slope (Barrio Granada) and relatively inaccessible riverside locations to the north-west of the city (Barrios El Triunfo and Gaitan). By the mid-Seventies around 11,500 people were living in the Otun valley squatter settlements.

Flooding of the valley bottom during the two wet seasons frequently caused loss of life and damage to property. Even more serious was the problem of landslides. The combination of vertical erosion, frequent earthquakes, saturation of soils during the wet seasons, deforestation in the upper reaches of the river and the existence of numerous convex slopes made the area the scene of frequent destruction and loss of life. There were also growing health hazards from industrial pollution and untreated sewage in the dry season.

Squatter settlements have also occurred on the valley slopes and bottom of the Consota river and its tributaries the Oso, Arenosa and Dulcera, on a much smaller scale but over a longer period of time. The city’s oldest squatter settlement, Barrio La Churria was formed in the Twenties on the slopes of the Dulcera south of the city’s asylum, whilst Barrios Consota, Arenosa and La Dulcera developed by accretion after the Forties. The Consota valley settlements also experienced serious problems of flooding, erosion and pollution.

2. **Railway Locations**

The second principal location for Pereira’s squatter settlements was along the city’s two main railway lines (see Appendix 3). Barrio El Infierno and Turin
on the western approaches to the station date from the Twenties and Thirties. The pace of squatting intensified after the late Fifties with the decline of the service and the nationalization of the company. The lines between the Pereira station and the Otun bridge were taken up in 1958, and a large section of railway land in lower Dosquebradas was invaded at this time (Barrio Alto Bonito).

Squatting on the Armenia-Pereira line started in the San Joaquin--Nacederos section in the Fifties, and in the early Sixties the entire section between the Oso and Consota bridges was occupied (Barrio Cuba Carrilera). Further squatting occurred in 1971 (Barrio Cuba Carrilera Sur) and in 1974 a large invasion Barrio El Plumon was formed. Elsewhere sporadic colonization has occurred on all railway land. By the mid-Seventies approximately 4,500-5,000 people were squatting on railway land.

A number of ecological problems existed in these settlements. In the cuttings landslides were common; drainage and sewage disposal were often a serious problem, and embankments and steep down-slopes often demanded multi-storey construction.

3. **Roadside and Other Locations**

Pereira also had numerous small squatter settlements lining its major and minor roads. El Hoyo on the southern approaches of the Armenia road dated back to the late Forties. Many of the small roads in the Cuba, Naranjitos and La Churria area were lined by small squatter settlements. Several small but very high density squatter settlements were also formed in central locations on land left vacant by developers because of ecological difficulties. By the mid-Seventies approximately 4000 people were living in these various settlements.

In 1972 the ICT estimated that Pereira had 28 squatter settlements
accommodating 15,486 people in 2325 houses. This represented 6.9% of the city's population and 6.6% of the housing stock. Between 1972 and 1976 five other squatter settlements were formed (El Plumon, El Triunfo, Gaitan, Salvador Allende, La Isla de Cuba) housing approximately 4000 people in 600 houses. Thus by 1976 Pereira had 33 squatter settlements housing around 23,000 people. About two thirds of squatters lived in riverside locations, about one sixth on railway land, and a further one sixth in other locations. In 1972 the ICT also identified four squatter settlements in Dosquebradas housing a total population of 3313 in 510 houses - 10.8% of the municipality's total population and 10.9% of its housing stock.

Mode of Land Acquisition

Most squatter settlements in Pereira were not formed by organized mass seizures of land but rather by colonization - a gradual process of family-by-family occupation of vacant land. Although a distinction can be made between barrios de \textit{invasión} and barrios de colonos it must remain imprecise, because many settlements were formed over a prolonged period of time and through both processes. A settlement thus could be formed either through family-by-family accretion around an invaded nucleus, or by invasion around a nucleus of colonos. Again the distinction deals inadequately with a very common type of squatter settlement in Pereira - the progressive or professional invasion. The progressive invasion occurred when a group of invaders seize enough land both to solve their own housing need and to engage in land sales to newcomers. Often the ability to market land was the primary motive for settlement formation, the so-called \textit{invasión profesional}.

Despite these difficulties, Pereira's squatter settlements can be usefully
classified on the basis of the distinction between mass invasions, progressive and professional invasions, and colono settlements (Table 44).

1. **Colono Settlements**

Most of Pereira’s squatter settlements were formed by colonization for two reasons. First, the land available for squatting was largely public land alongside rivers, railways and roads and this encouraged linear growth through accretion and densification. Second, colonization was widespread when urban administrative controls were restricted by low budgets, inadequate legislation and lack of coordination. With administrative reorganization, the introduction of new municipal codes and the implementation of the Development Plan in 1968, potential squatters increasingly sought protection in numbers and mass and professional invasions consequently became more important. However the Municipal Correspondence revealed the continued significance of the colonization process.\(^{50}\)

2. **Progressive and Professional Invasions**

Progressive or professional invasions were hybrid forms. They started life as small scale invasions of public land, (5 - 10 families) and then expanded by family-by-family accretion. The original invaders were usually a group of tightly-organized families seeking enrichment through land and property sales. Profits were used to improve housing, though often the professional invaders owned housing elsewhere in the city. In these settlements there was the widespread use of the *compra de mejora* - the legal transfer of rights to land improvements but not to the land itself. Some observers (Londoño 1975, Peterson 1977) have suggested that this practice was also widespread in the older Otun settlements. In the Sixties and Seventies railway land on the western periphery became the
Barrio Cuba Carrilera was formed in three stages - the first and largest stage as a professional invasion and the other two by mass invasion. In the late Fifties a group of colonos seized 150m² plots to grow coffee and foodcrops. With the development of Barrio Cuba they subdivided their plots or seized new plots for sale as compras de mejora. Although further development occurred by mass invasion even here subdivision and sale of land was common. An ICT survey of 100 households in the settlement (ICT, 1976b) found that 73% had purchased their plots through the compra de mejora system. Schifter's (1975) study found that 90% of the original invaders had left the settlement; 35% of households were renting and a half of these were paying rent to an absentee landlord.

The author's study of El Plumon (Chapter 7) revealed that over a half of sample households had purchased their plots through compra de mejora. Reports of widespread land sales in the 2nd stage of Cuba Carrilera, La Isla de Cuba, El Triunfo and La Gaitan peppered the Municipal Correspondence. Political forces were important in professional invasions because they involved a potential source of party funds, and activities in a 'grey area' of legality.

3. **Mass Invasions**

Mass invasions were the result of prior organization by a large number of families which often produced greater uniformity in lot areas and more planned settlement structures. Mass invasions in Pereira were fundamentally political phenomena. Political parties were often involved in the organization of invasion movements; their timing was often linked to important political conjunctures (e.g. local elections); and party 'levers' (palancas) were often vital for their success.

Table 44 shows that although limited in number some of the city's largest
squatter settlements were formed in this way. Mass invasions were also a relatively recent phenomenon. The earliest was Barrio Risaralda in 1966, and the pace of their formation increased thereafter. Although public land was the preferred location, in the early Seventies four mass invasions of privately-owned land occurred - El Triunfo and La Gaitan in 1972; Salvador Allende in 1973 and La Isla de Cuba in 1974. In every case a compromise was reached between landowners and invaders, negotiated by the municipal authorities.

Four major squatter settlements were formed by mass invasion along the Otun valley. Barrio Risaralda was organized by the Oscar Velez Marulanda faction of the Liberal Party but subsequently split into two juntas - Barrio Risaralda and Barrio Salazar Robledo - the latter affiliated to the Conservative Party cacique of the same name. In 1972 a mass invasion of municipal and private land alongside the Otun created Barrios El Triunfo and Gaitan. After the initial use of the police and the army, an agreement was reached with the landowners selling the land to the settlers. Again the evidence indicates that the Oscar Velez Marulanda and Gaitanista factions of the Liberal Party were involved in organizing the squatter movement in the inquilinato areas around the cemetery. Speculation in land and property was also reported in these settlements.

Mass invasion of railway land was largely through extension of established professional or colono settlements rather than the formation of new ones. In 1967 a highly-organized mass invasion movement led by Oscar Velez Marulanda forces from Barrio Cuba established the second stage of Barrio Cuba Carrilera after violent confrontations with the police. The compra de mejora system rapidly set in after foundation (Peterson 1977, Shifter 1976). In 1974 the third stage was
formed by a mass invasion of 50 families led by the left-wing populist party MOIR. By 1976 the settlement housed around 3000 people (Shifter, 1976). The formation of the second stage of Barrio El Plumon in 1975 reflected a similar combination of political and settlement processes.

Barrio Salvador Allende developed in 1974 as a result of a mass invasion of a vacant plot by renters from an adjacent settlement. After violent confrontations with the police and the intervention of MOIR, land rights were ceded to the squatters, a self-help housing plan was organized by the Planning Department, and basic services were promised.

Barrio La Isla de Cuba was formed in late 1974 by a mass invasion organized by the Central Nacional Provivienda (CNP), a national housing action agency associated with the Colombian Communist Party. Despite opposition from the authorities by July 1976 over 1500 people were living there.

**Socio-Economic Characteristics**

The 1973 barrio census returns indicated that settlement populations were younger, and average household size was larger than the city average. Between 40-50% of the population were migrants with higher proportions in the more recent settlements. The census returns (1973) indicated illiteracy rates at least twice as high as the city average, and a smaller EAP than in other settlement types. In the six squatter settlements surveyed in 1976 (SENA, Shifter, El Plumon) between 70-80% of the population were either economically inactive or unemployed; between a third and a half of the EAP was working in industrial, artisanal or construction activities and between 25-40% in the informal sector or agriculture.
These data indicated low income levels combined with significant income inequalities. In five out of the six settlements between a half and three quarters of households had a monthly income of below $1500 (US$41.31). On the other hand in four of the settlements, 10-17% had incomes in excess of $3000 a month.

**Physical Conditions**

Data from a variety of sources indicated that housing conditions were some of the worst in the city. ICT (1972) data indicated that 19 out of 28 squatter settlements had population densities in excess of 500 per ha., and 9 had densities of between 250-500 per ha. The SENA (1976) survey of four Otun squatter settlements revealed between two thirds and three quarters of families were overcrowded. DANE (1973) data showed that between a quarter and a half of households in the settlements were renting space, whilst Shifter's (1976) study of Cuba Carrilera showed that 68% of households were either renters or arrimados.

Whilst the data indicated widespread use of traditional materials such as bamboo, split cane, bahareque, clay tile and wood (Diagram 5), they also indicated a significant proportion of housing built with cement block, brick and asbestos cement roofing materials, particularly in older settlements. The data therefore clearly reflected the impact of the progressive development process (Diagram 6).

ICT (1972) data showed that 22 out of 28 squatter settlements in Pereira completely lacked sewage connections, with 100% coverage only in two settlements. 10 of the 28 settlements had 100% provision of piped water and in six there was no water supply. Only one half of the city's squatter settlements had full provision of electricity.

In this chapter a full account has been given of the demographic, social, historical, economic and spatial context of artisanal and state self-help building in
Pereira in the mid-Seventies. We shall now turn to an empirical analysis of state interventions into the self-help building process at the urban level.
Diagram 5: A Typical 'Rancho' in Pereira's Squatter Settlements

Source: Francisco Londoño Marulanda
Source: Further from original drawings by Lindsay MacInnes.
1. The principal sources of population data are the national censuses which have been held at irregular intervals since the turn of the century: 1905, 1912, 1918, 1928, 1938, 1951, 1964 and 1973. Unfortunately all of the censuses prior to that of 1938 failed to make a distinction between rural and urban populations within municipalities. The attempt to employ municipal populations as surrogates for city population is inadequate, because given the lower rates of migration during this period, it leads to a gross overestimate of the size of the urban population. Although all the post-1938 censuses do make a distinction between urban and rural populations within the municipality only the 1938 census disaggregated the population of the *cabecera* from other urban places within the municipality (i.e. settlements of over 1500 people). In general this is not a problem within the municipality of Pereira, because of the absence of a large number of other settlements exceeding 1500 within the municipal boundaries.

It is widely believed that the 1938 census was the best organized and most accurate of all. All subsequent censuses for a variety of reasons seem to have underenumerated the population. The 1951 census suffered from organizational difficulties and problems of access associated with La Violencia, which was particularly disruptive in Old Caldas.

Serious doubt has also been cast on the accuracy of the 1964 census data for Pereira (CEDE, 1967). There were persistent claims that 1964 census returns were manipulated by the Manizales DANE office for political ends.

The 1973 census was something of a national embarrassment, and the full results have never been published. The exercise was an organizational disaster, and DANE estimated that in general there was a 6-8% underenumeration nationally. However, a study (Ofisel, 1975) which collected population data in a number of 'marginal' areas in the city was somewhat surprised to confirm the accuracy of the 1973 census returns for these areas.

2. The basic unit of local government and census returns is the *municipio* - which combines an urban *cabecera* with rural areas. The municipal government covers both the urban and the rural areas of the *municipio*, and the limits of the *cabecera*, the *perímetro urbano*, have no significant political meaning, but only a fiscal importance (defining the rural and urban property tax rates). This presents some problems in the assessment of per capita figures for municipal expenditures within the urban area, but this is of minor significance compared to the difficulties derived from urban sprawl across municipal boundaries. Pereira is about one of a dozen cities in Colombia that are characterized by this problem. The northern boundary of the municipio is a median line that follows the Rio Otun and up to the early Seventies the neighbouring area of Dosquebradas constituted a *corregimiento* of the Municipio of Santa Rosa de Cabal. The urban spread of Pereira over the municipal boundary began in the Thirties. By the Sixties there was a large urban sprawl both along the valley bottom, and on either side of the Manizales road on the Dosquebradas plateau. As Dosquebradas rapidly challenged and outstripped its administrative capital in population, there arose the inevitable demands for municipal status. After a major political struggle in the Departmental Assembly, Dosquebradas was declared a separate *municipio* in
January 1973. This meant, however, that the Pereira urban area was divided between two municipios with the attendant planning problems.

3. It is widely believed that there is a substantial underenumeration of births and deaths in rural areas, and that urban death rates are overenumerated as a result of the concentration of health facilities in urban areas.

4. These sources include the 1938, 1951, 1964, and 1973 censuses; the DANE Household Survey of 1974; DANE Annual Manufacturing Surveys for the period 1970-74, and ICSS data for the period 1964-72.

5. Cross-census comparisons are made difficult by changes in the concept and measurement of the EAP. The 1938 census used a limit of 14 years as the lower age limit for the EAP; the 1951 and 1964 censuses a 12 year limit, and the 1973 census a 10 year limit. The 1974 Household Survey changed this limit again going back to the ‘12 years and more’ formula, but at the same time included ‘those of less than 12 years who are working’ into the EAP.

6. The DANE Household Survey of 1974 defined underemployment as ‘that proportion of the EAP which wanted to and was able to work more hours a week.’ The rate of underemployment was defined by the Survey as the proportion that the underemployed constituted of the employed EAP x 100.

7. Both data sets have their limitations. The 1964 census failed to publish figures on the breakdown of the EAP at the municipal or urban levels, and the 1973 census presented data at a municipal level but used a 10 year age threshold. The ICSS figures were collected on an annual basis by the regional offices of the ICSS. They record only those workers who are registered in the social security system by their employers. These figures cannot be used as an accurate guide to the total work force or their sectoral distribution because registration is only compulsory for firms employing more than 10 employees; short term contract labour fails to qualify for benefits and registration; and the failure to register is less common in the secondary sector.

8. The data were generally confirmed by the ANDI report to the First Seminar on Food and Nutrition in 1974 when it stated that ‘74.87% of households in all Colombian cities have incomes of between $200 (US $7.00) and $1500 (US $52.00) a month with which they are unable to satisfy minimum food requirements’.

9. Because of data inadequacies these sources can only give a rough guide to the nature and scale of the housing problem. The principal sources of these data are the national housing censuses which were carried out in 1951, 1964 and 1973. Data on housing from these sources suffers from many of the weaknesses of the census data on population - particularly a persistent underenumeration of the number of houses and of certain categories of houses (particularly the categories ranchos y chozas and inquilinatos). Other problems include the incomplete nature of the 1973 census and the persistent redefinition of censal terms which makes historical series data more difficult to analyse.

The 1973 housing census data for Pereira have not been officially published. Data used in this study were obtained from barrio returns published by
the Municipal Planning Department (DAPM, 1974). The data contain some
discrepancies with the official published figures for the number of houses and
households at the cabecera level.

A wide range of national studies on housing issues was also consulted
including: CAMACOL (1965); ANDI (1967); ANDI (1970); Valenzuela y
Kiediowski (1970); DNP (1971); CPU (1971); DANE (1973a); DANE (1976a;
1976b); Palacio et al., (1976).

10. The national housing censuses of 1951 and 1964 identified the different
materials used in the floors, walls and roofs of the city's housing stock. Data from
the 1973 housing census were not available in this form: materials were only
identified as being of two types 'durable' and 'non-durable'. Following Rodriguez
(1971) we can classify the materials used in the three structural housing elements
into two categories 'permanent' and 'transitory', and these data for 1951 and 1964
can then be compared with the 'durable' and 'non-durable' categories identified
for the 1973 census. The classification is as follows: Floors: Permanent (wood,
brick, baldosin and cement), Transitory (earth and others); Walls: Permanent
(brick, cement blocks, others), Transitory (bahareque, wood, mud brick, tapia
pisada); Roofs: Permanent (clay tile, asbestos cement, concrete slab, corrugated
iron); Transitory (throwaways).

11. The Tugurio is a 'single family dwelling unit characterized by the mixed use
of space, construction in throwaway materials and without services' (Rodriquez,
1971).

Inquilinato housing was defined by the 1973 census as 'a building adapted
or transformed to house a large number of households (5 or more) who share
services. Each household generally lives in one or two rooms. Services are
shared and in the majority of cases located in the patio and corridors. The
kitchen can be shared or non-existent'. It is highly probable that a substantial
proportion of housing classified as apartamentos consisted of inquilinato - type
housing in the 1964 census.

12. The fact that the census was unable to find one house of 'throwaways'
(desechos) was clearly quite extraordinary to those with a personal knowledge of
Pereira's housing situation in the Seventies.

13. It should be noted that in 1964 housing data was collected with reference
to the house whereas 1973 data was collected on the basis of the household. The
CENAC estimates (Tables 29, 31 and 32) attempt to resolve this difficulty by
extrapolating the relationship between familias consanguineas and houses that
existed in 1973 from that which existed in 1964.

14. The distribution was made by a junta organized by the municipality of
Cartago to distribute lands donated by Guillermo Pereira Gamba, son of a
caucano who had purchased a large expanse of land in the area from the
government in 1828. The conditions governing distribution were: single men were
to receive 4 fanegadas (2.6 has); a married couple with no children 9 fanegadas
(5.8 has), with two fanegadas (1.3 has) for each additional child. 761 fanegadas
were distributed in all (Duque et al., 1963).
15. The Plan allowed for six squares (La Paz, la Concordia, La Victoria, Fe, Esperanza, and Caridad) - however only three of the six squares (Bolivar, Uribe, and Libertad) were retained.

16. Von Schenk (Parsons, 1949) who visited the city in 1880 described the Fletcher Plan as covering an area of 200 has. divided into 300 city blocks, though the actual built area was confined to six blocks lying around the Plaza Bolivar.

17. Again the intention of the Republic's land legislation was to create a middle class of property owners with minimum land concessions of 32 has and a maximum of 100 has., thus avoiding the creation of the twin evils of minifundismo and latifundismo. Article 5 of Law 21 established that a basic lot of 32 has. must be granted to unmarried men over 25 years old, orphans over 15 years old, and widows. Married men would receive 32 has. with 5 has. for each extra child. Conditions for enclosure and clearance and continuous residence were established. Sale of properties could not take place for payments of debts until 4 years had lapsed, and the land could not be sold to anyone who held more than 50 has. in the area (Duque et al., 1963).

18. Thus up to 1906 the entire area to the west of the city between the Cauca, Otun and Cestillal consisted of three haciendas - Caquillo, San Felipe and Alsacia (EEPP, 1974).

19. In the south and south west, two large coffee estates, La Julia and Los Canceles, were established at the end of the century on the periphery of Fletcher’s grid. Further to the south a large number of coffee estancias with over 100 has. began to develop along the road to Armenia (El Rocio, Huertas, Tribunas). Immediately to the west and south west of the city a number of large properties dedicated to sugar and coffee appeared during this period, some of which were later to be incorporated into the city's urban structure. These properties included Hacienda El Naranjito, Hacienda Cuba, and Hacienda La Maraya. Large cattle hacienda and sugar plantations also developed on the north and north west of the city on the Dosquebradas plan (Hacienda Llano Grande, Hacienda La Badea).

20. A poorer zone of low income housing and a redlight district began to develop to the east of the Bolivar - Libertad axis, and around the cattle fair and abattoir to the west of Lago Uribe.

21. During the period, eight major settlements were created by unimproved subdivision and three minor developments. Amongst these were Olaya Herrera, Mejia Robledo, La Victoria, Venecia, America, San Juan, San Jorge and Corocito.

22. Examples of developments of this type are: Barrios Ciudad Jardin (1948), San Judas (1952), Canarte (1953), Alfonso Lopez (1963) and San Nicolas (early Sixties), and the massive Giraldo developments in Dosquebradas in the Sixties.

23. In the southeast, examples were Los Alpes, San Jose, Popular Modelo, Los Angeles; in the southwest, La Maraya; and on the upper Dosquebradas plain, El Hogar.
24. Most subdivisions were developed by small family-based construction firms with limited capital for land purchase (e.g. Avance Ltda.; Invico Ltda.; Sanchez y Tellez; Ubicon Ltda.; Gonzalez y Angel; Marulanda y Guzman Ltda; Hernan Ramirez Ltda.) A notable exception was Villegas y Velez Ltda. who made extensive land purchases in the Cuba area in the early Seventies. On the other hand many landowners moved into the construction sector.

25. Determination of the changes in concentration of ownership is complicated by the fact that ownership data enumerate the legal owner of each plot as being separate according to the category and they do not take into account different properties owned by the same person, or properties of a different category owned by the same person. Thus many of the owners of one category are counted several times in different or even the same categories. This creates the impression of a smaller concentration of ownership than exists in reality.

26. Five categories are recognized:
1. Plots with less than 100m² area.
2. Plots of 100-200m² which is the area generally used for the construction of middle income housing.
3. Plots of 300-750m² which is the area normally associated with upper income housing.
4. Plots of 750-5000m² which are suitable for multi-family housing projects.
5. Plots of 5000m² and more which constitute more than half a block and which can be called large urban property.

27. These valuations represent the official value of the land and all transactions in land must be based on this official value. The cadastral value of a plot is also the basis for the determination of the land tax (between 5.7% and 9.7% in 1976), and an important element in the determination of valorization taxes and tariff charges for public services. The revenue implications of failure to provide regular cadastral surveys, was a principal reason for the high priority given by aid agencies to loans for upgrading cadastral facilities in the late Seventies and early Eighties.

28. It was a very common practice for land to be transferred at the official rate but with an under-the-table cash sum also being made. The true extent of these practices was unknown but it was widely believed in the mid-Seventies in Colombia that the land market was an effective vehicle for laundering drug money, given the difficulties of regulation. The problems of general underestimation were compounded by probable spatial variations in the discrepancy between real and official values, with a higher premium being paid for commercial land in the inner city areas than for other uses.

29. The adjustment from nominal to constant pesos was made using the World Bank's national personal consumption price index for the years 1960-76. The index is based on DANE's consumer price index (World Bank, 1977b).

30. The overwhelming homogeneity of designs for example is clearly discernable in Pereira's ICT settlements. It was customary to use just one housing design within settlements with widely varying site conditions. More often than not
the designs were selected from a limited number of model designs offered to the branch by the Bogota office.

31. The Gamma project for example exhibited all the features considered necessary to achieve a restraint on the costs of land development: built areas of 10m² per person; a 20% maximum land allocation for roads and parking; a 5m² limit on per capita consumption of green space; 4-5 storey duplex apartment blocks, and net densities of 96 houses and 500 persons per hectare.

32. No systematic data were available on the organization of the construction and construction materials industries. Although the artisanal, manufactured and industrial structure was undoubtedly present in both, no studies were made of it, and the lack of data on artisanal activities was particularly acute. No data existed for the distribution system of construction materials or indeed for commodity networks in building materials in the city. Data on the organization of the labour market in the construction and construction materials industries were non-existent.

33. The data relate specifically to housing built by the agency and thus reflect the costs of materials to that agency. As the agency buys in public and at factory gate prices, the index of material costs cannot be universalized to indicate the costs of materials used by the private or 'popular' sectors where the quantities purchased are smaller and are obtained from local deposits where prices are higher. However, increases in building material costs revealed in the index, can safely be generalized into a minimum indicator of building material costs in the city. Because the costs relate specifically to the designs and plans of housing built by the agency, there is no information within the data that relates to the costs of building materials from artisanal sources.

34. Colombia's cement industry has developed since the Thirties and by the early Seventies national production came from 15 plants which were owned by only 12 firms. Four of these firms (Cemento del Caribe, Cemento Samper, Cemento El Cairo and Cemento del Valle) in 1968 alone employed 49.2% of the total workforce in the cement industry, and were responsible for over 71.3% of the industry's value-added (DANE:1973b:101). In addition the degree of monopoly was also increased by cross-control over the shares in these companies. Thus in 1970 Cemento Argos S.A. owned 53.3% of the shares of Cemento de Caribe, 23% of those of Cementos del Valle, 100% of Cementos El Cairo, 10% of those of Cementos de Caldas and 7.4% of Cemento Blanco de Colombia (DANE: 1973b:101).

These conditions led to informal arrangements between companies to fix the prices of cement at a national level, and to carve out regional monopolies in those areas surrounding their plants. Within these regional markets the cement companies in the absence of competition were able to introduce discriminatory business practices such as 3 month advance payment prior to delivery, minimum quotas for purchase, and surcharges in periods of high demand.

35. ‘The construction industry is paralyzed by the shortage of cement...which cannot be found on the local market in any quantity ’ (El Diario, Dec. 13th 1973). ‘Construction is paralyzed in Risaralda because of shortages of cement'.... ‘The problem of cement reappears in Pereira’ (El Diario, July 20th 1975).
36. By Aug. 1973 after only 11 months of functioning the UPAC system captured $2500 mills (US $ 101 mills.) - almost one half of all savings collected by the traditional savings system over the previous 50 years (El Diario, Aug. 14th 1973). Pereira also experienced a construction boom during this period particularly after the foundation of CAV Concosa in May 1973 which brought together local finance and construction capital in the region (Fedecafe, Banco Cafetero, Corporaciones Financieras del Occidente, Caldas, Oriente and Tolima).

37. These problems were effectively identified by the Association of Engineers of Risaralda in July 1975 in an open letter widely circulated in Pereira:

'The Cemento Caldas factory is so much in charge of the distribution and supply of cement for the Old Caldas market that it can prevent the delivery of this vital product to the region if it has been produced in other factories. For a long time the Cemento Caldas factory has suffered from technical and administrative failures that have prevented normal operations, and has produced a product of such variable quality that its use is discouraged in inventories for the construction of structures that require concrete with specified resistances'.

The letter went on to recommend the free movement of cement produced elsewhere in the region 'without the intervention of the Cemento Caldas factory in its transport and distribution', and the creation of competition within the region based on the exploitation of limestone outcrops in the Salento region.

38. The entire production of asbestos cement in the mid-Seventies was in the hands of foreign capital and two corporations: the Eternit/Colombit conglomerate (Swiss/Belgian), and the John Manville Company (U.S.).

39. There are three principal forms of extraction of sands and gravels. Artisanal workers (often working in cooperatives) either dredge river deposits with primitive scoops from canoes, or divert rivers through a series of narrow channels forcing the deposit of sands and gravels. A third method involves the use of drags, suction pumps and grading machines requiring considerable capital investment in equipment and storage and heavy operating costs.

40. Supplies can be drastically affected by local climatic conditions: 'Winter has brought substantial rises in the levels of the Cauca, Old Risaralda and Otun rivers causing shortages of sands and gravels' (El Diario, 13th Dec. 1973).

41. In 1970 the Municipal Planning Department estimated the area of the CBD at 80 has. (14% of the total built area of the city). It argued that the city would require at least 93 has. by 1980 to cater for developments in commerce, finance and services.

42. By the mid-Seventies plans were in effect to create an integrated transport terminal south of the station, to build a new railway terminus to the west of the city in the region of Barrio Cuba, and to create a new market on the periphery.

43. An *inquilinato* zone of course refers to an area with a high proportion of *inquilinato* housing. It would be an error to assume that such zones are
completely composed of inquilinos or that inquilinatos do not exist in other areas of the city. The term inquilinato zone is not a genetic category and refers to the existing characteristics of the area. Thus the inquilinato zone also incorporates several areas in surrounding barrios including unimproved subdivisions as in the case of Barrios Mejia Robledo, several blocks of Barrio Corocito, and a part of Barrio Villavicencio, as well as neighbouring squatter settlements such as Barrios Pereira and Ormaza (see Map 6). It should also be pointed out that the term inquilinato zone is a spatial category, that should not be conflated with the social category of renting - the phenomenon of renting is broader than the inquilinato population, and different types of rental markets exist in different settlement types in Latin American cities. Neither should the size of these rental markets be underestimated. In this context the work of Edwards (1982); Gilbert (1983); and Gilbert and Ward (1985) on the structure of rental markets in Latin America begins to fill a notable gap in the literature.

44. Peterson (1977) describes this housing well: 'Access to these on the downslope side of the longitudinal streets is typically from above; it is not uncommon to enter a four storey house from the street into the first storey and then follow a maze of stairways downwards to apartments on lower levels. Viewed from below or across the river the resulting landscape is a hodge-podge of bamboo stilts, unpainted bahareque or esterilla walls and clothes drying on balcony upon balcony.'

45. The returns are based on municipal boundaries that do not correspond exactly to the inquilinato area.

46. We have defined unimproved subdivisions following Peterson (1977) as those subdivisions which at the moment of their formation did not provide adequate levels of water, and sewerage disposal or septic tanks.

47. Conditions of legality in unimproved subdivisions can be highly complex. Thus all those unimproved subdivisions formed in Pereira in the period before 1953 and the introduction of the National Sanitary Code, (which include some of the largest settlements immediately to the north and the south of the city centre) were strictly-speaking legal because no national or municipal legislation existed at the time governing land subdivision and urban development. All those settlements formed between 1953 and 1967 were in effect illegal insofar as they were in breach of the new national legislation governing the provision of water and sewerage facilities. All those settlements formed after 1967 were illegal insofar as they were in breach of national legislation - strengthened by new laws such as Ley 66 of 1968 and Decreto 138 of 1972 - and the new municipal codes established in 1967.

In Dosquebradas the legal situation was equally as vague. Dosquebradas gained legal municipal status only in 1973 and prior to that date was a corregimiento of the municipality of Santa Rosa de Cabal. Up to 1973 Santa Rosa had no municipal codes and up to 1976 the new municipality of Dosquebradas still had not introduced legislation on land and urban development. This meant that all settlements formed by unimproved subdivisions prior to 1953 in Dosquebradas were legal; and those formed after 1953 were illegal only in relation to national legislation.
48. These five settlements in order of construction were Sta. Teresita, La Castellana, Los Naranjos, Buenos Aires and Guadalupe. Their progressive construction from north to south was designed to maximize the increase in land values in the as-yet undeveloped lands lying between the subdivisions and Pereira.

49. Dosquebradas has grown virtually without an urban structure with no zone clearly defined as a centre, and with industrial uses indiscriminately mixed up with residential, commercial and other uses. Lots were laid out at very low densities on a quadricular system of roads which had no hierarchy, and the number of vacant lots within settlements was very high. Only the intermunicipal road to Manizales was paved and most of the roads were laid out without curbstones and pavement. The sewerage system in upper Dosquebradas was deficient and not constructed according to standardized specifications. The water provided by subdividers was unsafe to drink and taken directly from rivers without any treatment. In many parts of Dosquebradas the provision of water was a business owned either by private individuals or by communities.

50. The category 'improved subdivisions' can thus include a number of situations ranging from an individual and serviced lot, to a medium size settlement where individual houses are built by one of a number of small construction companies (manufactured form), to a large settlement consisting of multi-storey blocks of apartments built by the industrial form.

51. In the Fifties and Sixties a wide range of loans was made available both to consumers and to construction companies for the construction of middle and upper income housing by the BCH and the ICT. In the early Seventies with the Pastrana Four Strategies programme which introduced inflation-indexed UPAC bonds and created CAVs, the construction of upper and middle class housing became more profitable. Most of the settlements in southeast Pereira at this time were stimulated by these new financial opportunities.

52. Most of the land lying to the southwest of the city was designated as a zone of low density separate single-family housing (RIU), and to the south of Avenida 30 de Agosto as a zone of single or multi-family medium density housing (R2U or R2M). As these codes establish high minimum standards for housing and settlement facilities and for the levels of services, in effect the 1968 zoning codes effectively reserved large areas of the southern part of the city for middle and upper income groups.

53. The projects included as conventional housing have been built through a number of operational systems including cooperatives, direct contract (CD), co-financed contract (CC or P3), loans to lot owners (PPL/CIS) Workers Plan (PT) and direct administration (AD). PPL loans were not included because the vast majority of these loans were probably directed towards the purchase of contract labour.

54. In defining state self-help housing projects we shall restrict our attention to those settlements where self-help labour was used on the state 'part' of the housing solution, differentiating them from those unfinished houses built by contract labour, which could subsequently be completed by the resident’s self-help labour without the participation of the state. We shall also exclude all houses.
built by individual supervised credits (PPL/CIS) where the recipient of the state credit undertook to build, improve or finish a house using either self-help labour or contract labour. This is because no data are available that enabled us to determine whether self-help or contract labour was used by these recipients, and because these credits were aimed at existing individual lot owners scattered throughout the city rather than at the creation of new settlements.

55. The utility of the 1973 barrio census returns is limited by the frequent discrepancy between settlement and census boundaries. The ICT 1972 inventory gives data on five settlements - Cuba, Carreros, San Camilo, Kennedy and Boston. Other studies consulted included Calle Restrepo's study of Barrio Cuba (1963), an ICT (1975) survey of Barrio Cuba and Municipal Planning Department and ICT reports.

56. The Planning Director argued that this was a widespread practice in Barrio Cuba (1 and 2), encouraged by the excessive lot areas (145m²) granted to the original self-builders. In order to block its further development the Planning Office had prevented the Public Services Corporation from installing water and electricity facilities to people with a name different to that registered as the owner of the plot. The Director claimed that some owners of houses in Cuba were receiving up to $900 a month in rents from a single property by these means.

57. In 1976 SENA surveyed four Otun Valley squatter settlements (Charco Negro, San Francisco, Ormaza and El Triunfo); fieldwork yielded data on Barrio El Plumon. Shifter's study of Cuba Carrilera (1976) and ICT socio-economic survey of Barrio Cuba (ICT, 1975) were consulted. Peterson's (1977) work was indispensable on all aspects of Pereira's urban structure.

58. Two notorious floods recorded in local history occurred in April 1921, and April 1974. The ICT survey of 1972 showed that all of the houses in Barrios Charco Negro, America and Granada; 80% of those in Barrio San Judas, and 40% of those in Barrios Ormaza and El Balso were on land that could be flooded at such times.

59. On November 2nd, 1926 a large landslide occurred in the Barrio Zea area damming the river which at that time was in flood. The river burst through this dam rising to 80 metres above its usual level: 'all was mud and the bodies of women, men and children' (Pinto). Over 100 people died in the tragedy. On October 6th 1976, after a period of very heavy rain, a huge mudslide fell onto Barrio Risaralda destroying 17 houses, killing 90 people and injuring 56, prompting the temporary evacuation of over 10,000 people from the valley bottom.

60. In 1972 a report of the Planning Department's Inspectors identified 45 ranchos dispersed on the Armenia line north and south of Barrio Cuba Carrilera, and a further 27 ranchos on the Nacederos section of the Cartago line housing a total population of 500 people. In 1973 the Correspondence was peppered with reports of colonizations taking place along the Otun valley bottom, the railway lines and on the approaches of the Cartago and Armenia roads. The 1974 Correspondence identified colono activity on railway land near Barrio Cuba; on the Cartago roadside near Villa Olimpica and around the Airport. The 1975
Correspondence reported widespread colono activity around the Consota valley squatter settlements. The 1976 Correspondence reported the demolition of 50 colono ranchos in various parts of the city which had been erected in the month of July alone.

61. Thus a police report to the Government Secretary on September 14th, 1972 (Municipal Correspondence 1972) concerning the colonization of railway land south of San Joaquin made the following inventory:

‘Post no. 7.

a. House under construction on a plot sold by Señor Jose Dolores Lopes to police agent Alberto Rubiano.

b. 2 ranchos

c. Rancho being built by Otomel Granada on a lot sold by Señor Jose Dolores Lopes

d. House on lot sold to Fernando Gateano by Jose Dolores Lopez for $2400 (US $105)

e. House on lot sold to Maria Delia Perez by Jose Dolores Lopes for $2300 (US $101)

f. House on lot sold to Jose Antonio Tabares by Jose Dolores Lopez

h. House sold to Jose Parra by Jose Lopez

j. Rancho

k. House bought by Felipe Hernandez on lot sold by Jose Dolores Lopez/

Thus in a distance of 1km the police inspector reported the existence of 12 colono houses. 7 of these 12 were built on land that had been illegally sold to the colono by Jose Dolores Lopez. The report quotes two examples of the sort of money that was passing hands for these compras de mejora: $2300-$2400. If we assume that all the lots sold by Dolores Lopez were within this range, this would mean that he had made between $16,100 and $16,800 (US $706-737) on these negotiations in railway land alone, a considerable sum in 1972.

62. On Jan 12, 1972, six days after the invasion the mayor declared, ‘It is not far fetched to say that this invasion is part of a national plan of subversion’ and linked the invasion with a wave of political invasions that had recently occurred in Ibague. On January 13th, 1972 he also announced that ‘The Government has asked the competent authorities to discover and sanction in an exemplary manner the intellectual authors of this type of subversion. Information exists that this invasion was planned and that there are intellectual authors’ (El Diario, January 12 1972).

63. ‘During the conversation it was learnt that amongst the invaders were people who had already sold plots in the invasion, and others were property owners who were trying to acquire another plot for rent or sale’ (Municipal Correspondence, 1972).
THE INSTITUTO CREDITO TERRITORIAL AND SELF-HELP HOUSING IN PEREIRA

The most important housing agency in Pereira was the Instituto Credito Territorial (ICT), a semi-autonomous body responsible to the Ministry of Economic Development. The central office in Bogota was responsible for project design and construction procedures, and the 24 regional offices for administrative procedures, loan recovery and project implementation. The Pereira branch was responsible for settlements with more than 30,000 population in Risaralda, although its activities were overwhelmingly concentrated in the city itself. The branch had two major activities: service provision and the upgrading of the existing housing stock; and the financing and construction of new housing stock.

The Provision of Services and Settlement Upgrading

Local branch activities closely reflected national policies and priorities. Significantly the impulse and finance for most programmes to improve services, infrastructure and the housing stock came from external quarters - from the Alliance for Progress in the Sixties, and the World Bank in the mid-Seventies. Between 1961-68 the ICT received US $53.8 mills directly from the Alliance for Progress for these purposes. A range of programmes was introduced:

1. In 1967 the Services Fund (Fondo de Redes) was established to grant loans amounting to 60 - 80% of project costs to municipal bodies for service and
infrastructure provision, through contract labour. Community self-help labour was
confined to road and pavement improvements.

2. Between 1942-67 a mere 142 'slums' were eradicated by the Pereira branch
(Table 51). In 1967 a national programme for slum and squatter eradication was
set up (Eradicación de Tugurios) which involved demolition, and resettlement in
mutual aid housing projects. The ICT provided 75% of the finance in loans,
building materials and technical direction; the municipal bodies 25% in finance,
land and technical direction; and the community the self-help labour. Two
projects were established in Pereira in the late Sixties, the most important of
which was Barrio San Camilo (ICT, 1970d). After 1970 interest in these
projects waned.

3. The Settlement Improvement (PMA) Programme, aimed at upgrading
services, infrastructure and housing by organizing community self-help labour.
The community provided the labour power, the municipality the materials and the
ICT paid for self-help labour with food rations made available by the FAO under
the World Food Plan. After 1971 the programme was phased out.

4. The principal instrument for upgrading between 1966-73 was the Fund for
Settlement Improvement (Fondo para Habilitación de Barrios) which combined
settlement improvement with attempts to secure conformity with municipal codes.
The projects often involved a new road plan, redistribution of lots, improvement
of services and community facilities, and home improvement loans. The ICT
provided credits covering 60-80% of costs; building materials, and technical
direction; the municipality covered 20-40% of costs through loans and service
provision, and the community its self-help labour. In 1972 the programme was
replaced by a system of Housing Improvement Loans (Programma de Mejoramiento de Viviendas).

5. The Fund for Communal Development (Fondo para Desarrollo Comunal) aimed at developing community organizations in ICT settlements in areas such as community development, labour training, cooperatives and cooking classes. In 1974 it was renamed the Fund for Social and Economic Development (DSE).

6. Most of these programmes were phased out during the Pastrana Borrero administration (1970-74). However, with World Bank loans becoming available for Integrated Urban Development in the mid-Seventies, the ICT began to renew its interest. Between 1977-1981 the World Bank loaned US $24.8 mills. to the Lopez Michelsen government to cover 40% of the costs of a national programme involving the integrated urban development of 27 zones in 23 cities. Each zone had on average 25,000 people and a high proportion of ‘target poverty groups’.

The zones were to be upgraded through the provision of water, sewerage, housing, social welfare and employment facilities by the coordinated action of national decentralized and municipal agencies (World Bank, 1977a). In 1977 two Integrated Urban Development zones were established in Pereira bordering the Rio Otun (Map 8 and Table 45). Between 1977-80 the Pereira branch of the ICT was committed through these projects to providing 2621 land regularization credits, 2065 housing improvement loans and 659 sites and services credits.

In summary the ICT’s interest in housing improvement, settlement upgrading and service provision was largely prompted by external stimuli and funds. Efforts fluctuated, but even when interest was at a peak at the beginning of the Seventies it is unlikely that the Pereira branch was allocating more than a fifth to a quarter of its direct investments to these goals.³
Projected Integrated Urban Development in 1976

MAP 8 LOCATION OF THE CASE STUDY SETTLEMENTS IN PEREIRA

MARULANZA
BARRO HERNANDO VELEZ
DOSEMERDADAS

BARRO EL PINON
The Financing and Construction of New Housing Stock

Most of the ICT's resources were allocated to the construction of new housing stock. Despite data inadequacies a fairly accurate picture of its activities in Pereira from 1942 to 1976 can be given.

Volume of Construction

Table 46 shows the total housing stock built by the agency in the city between 1942-76, and Table 47 shows the cumulative significance of its contribution to the urban housing stock: 2.8% in 1951; 14.8% in 1964 and 23.4% in 1973. Considerable variations in output can be observed both by year and by decade. Over the total period, the agency managed an average annual rate of construction of 178 houses, 50 per year in the Fifties, 357 per year in the Sixties and 288 a year in the Seventies. In the first half of the Seventies the ICT was building less houses in the city than during the Sixties.

Housing Subprogrammes

There are great difficulties involved in analyzing data on ICT subprogrammes. In the Forties and Fifties, the ICT exclusively built middle class conventional housing. In the early Sixties it attempted to increase affordability by introducing systems of self-help housing and minimum units for progressive development. By the early Seventies the ICT had evolved a range of programmes targetted at specific income groups. For the lowest income groups a basic serviced site was provided; at a higher income level this serviced lot was complemented with a sanitary core; at a higher income level still, a serviced lot, sanitary core and an enclosed shelter were made available. Above a certain income threshold families were eligible for a conventional house. By the mid-Seventies the range of subprogrammes was as follows:
1. **Sites and Services (Lotes con Servicios)**

   After 1972 serviced lots (access, water, sewerage and electricity) were provided by the ICT through construction contract (CC) with a building firm. For those with slightly higher incomes, the agency through a combination of contract and self-help labour provided, a serviced lot and a sanitary core (WC, shower, kitchen, party walls). Thereafter individual families progressively constructed the house using ICT designs and loans. Sites and services output was limited in the mid-Seventies. In 1975 the agency was spending a mere 1.7% of its national investments in new housing on these projects (Table 53).

   In 1975 the ICT offered a small number of serviced lots, with and without sanitary cores, in Barrio Otún on the northwest terrace of the Otún valley (see Map 7, pocket). Here the agency provided serviced sites, loans for their purchase and building materials loans. Applicants with higher incomes could acquire an additional serviced core built through ‘aided self-help’ or by direct contract. Progressive development occurred in closely-monitored stages clearly defined in the compulsory designs leading to the completion of a single family, two-storey, five bedroom house with brick walls, cement floors and asbestos-cement roof with a total area of 86.40m² (Diagram 7).

   Three different cost options were made available to the resident: a serviced lot by ICT contract ($17,996, US $546); a serviced lot plus a sanitary core built by ‘aided self-help’ ($31,517, US $956); and a serviced lot and sanitary core provided by contract ($36,475, US $1107). Loans were extended over 15 years at annual interest rates of 14% with a 5% annual increment on monthly payments, and a 10% downpayment (Table 48).
BARrio EL OTOIn 3rd Stage:
Cement Floors, Brick Walls, Asbestos Cement Roof.

KITCHEN
DINING

MINIMUM SOLUTION

FIRST STAGE

SECOND STAGE

SECOND FLOOR

BEDROOM
WC

BEDROOM
BEDROOM

BEDROOM
BEDROOM

GARDEN

PATIO

PATIO

PATIO

3rd Stage Program: Development of ICT Site, Site and Services, and Minimum Solutions Projects.
2. **Minimum Solutions (Soluciones Mínimas)**

The concept of the minimum solution was first introduced into ICT programmes in 1960 but it was not until 1970 that a formal schema of minimum, basic, intermediate and maximum units using standardized designs was formulated.

Escalating production costs and affordability problems led to a constant redefinition of the 'minimum solution' from a 45m$^2$ built area in 1968 to 20-30m$^2$ in 1975. The cost of a 30m$^2$ solution rose in constant 1970 prices from $16,000 in 1970 (US $838) to $19,195 (US $1460) in 1976. The serviced lot and built area were delivered to the resident through three options - by direct contract, by P-3 contract or by 'aided self-help'. Credit conditions varied for these options - downpayments of 0% to 5%, interest rates of 10 - 12% plus 2% mortgage insurance, and amortization periods of 10 to 12 years. Obligatory designs were provided for progressive development. Further loans were extended for 90% of building materials costs, with a 10% downpayment.

Output from the Pereira office closely reflected national trends: 58.8% of total output in 1971, and 36.4% in 1973 (ICT, 1971b; 1973a; 1973b).

In 1975 the ICT built 87 minimum solutions in Barrio Otun. A sanitary core and a multiple-use space with a total built area of 37.22m$^2$ on a serviced lot of 59.40m$^2$ was offered for progressive development into a single family, two-storey house (86.40m$^2$) with brick walls, cement floors and asbestos-cement roof using compulsory designs (Diagram 7). The ICT built the serviced lot with contract labour, but thereafter three options were available to the resident (Table 49). Loans were for 15 years at 14% annual interest rate with a 5% annual incremental increase on monthly downpayments.
The first option (Option A) involved the construction of the sanitary core and multiple space by aided self-help at a cost of $43,569 (US $1323) with a 4% downpayment. The second option (Option B) provided a sanitary core by contract labour and the multiple use space by aided self-help at a total cost of $48,527 (US $1473) with a 7.5% downpayment. The third option (Option C) was entirely contracted and cost $52,945 (US $1607) with a 10% downpayment. A number of costs were constant for all three options - raw land, urbanization, and materials for the sanitary core and multiple space ($39,608 total, US $1202). In all options the ICT charged 9.1% of total costs for administrative and technical assistance. The maximum substitution of contract labour by self-help labour between the options resulted in a 17.7% reduction in total costs for a similar housing solution.

3. Basic Solutions

In 1970 a basic solution involved the delivery by contract of a serviced lot, sanitary core and two or more living spaces with between 41-60m² built area on a lot size of approximately 90m². These solutions increased in price from $27,000 (US $1414) in 1970; to $110,000 ($47,909, 1970 prices) in 1975 (US $3339) affordable only by those with monthly incomes of over $4200 (US $128). In Pereira in 1973 almost two thirds of the agency's output (63.6%) was basic solutions.

4. Intermediate Solutions

After 1970 intermediate solutions consisted of conventional housing with 61-90m² of built area on 100m² lots. Increases in building and land costs led to reductions in per capita built areas, and the use of modular, and industrialized building systems (e.g. apartment blocks). In Pereira intermediate solutions cost $55,000 (US $2881) in 1970, and in 1975 $200,000 ($87,108 constant 1970 prices)

5. Maximum Solutions

After 1970 a maximum solution consisted of a conventional house with 90m² built area on a 120m² lot. A typical design was a two-storeyed semi-detached house with a total area of 162m² with brick walls, wooden floor and clay tile roof. Houses were built by contract with UPAC credits. In 1970 a maximum solution cost $81,000 (US $4243), and in 1975 over $250,000 (US $10,880) requiring monthly family incomes in excess of $7,000 (US $212).

Nationally the ICT increased its share of total investments in maximum solutions from 14% to 24.2% between 1971-75 producing 3.6% and 9.1% of total output respectively (ICT, 1971b; 1973b).

Systems of Construction

1. Autoconstrucción Programmes

The first use of an ICT 'aided self-help' programme occurred in Cali in 1959. In 1960 the agency developed the programme nationally. Thereafter autoconstrucción programmes remained a constant feature but their significance fluctuated according to the availability of external loans. Three periods of intensified interest in self-help programmes can be identified.

The first and most important period was between 1960-64 when external credit was made available for self-help by the Alliance for Progress agencies (USAID, IDB, and Development Loan Fund). Between 1961-63 the contribution of foreign loans to the ICT's income rose dramatically from 1% to 42% (C.P.U., 1976). Between 1961-69 the ICT received US $74 mills. from USAID with US
$27.2 mills. in 1961-62 alone (Bagley and Botero, 1978: 302). In 1964 USAID made available US $19.5 mills specifically for programmes of ‘ailed self-help’ and a further US $10 mills for ‘housing cooperative programmes’. Table 50 shows that between 1942-67, 45.0% of total ICT output (57,916 houses) was produced by \textit{autoconstrucción dirigida} (all after 1960). In addition most of the 1362 houses built under the Slum Eradication programme in these years incorporated self-help labour.

A second but less significant period of interest in self-help housing came in the early years of the Lleras Restrepo government (1966-68) when the ICT channelled loans from USAID, the IDB and PMA programmes into slum eradication (ET), the provision of services (FR) and home and settlement improvement. Between 1966-68 the ICT received US$18.8 mills from the IDB alone, and between 1966-72 the agency distributed 17,633 metric tons of food from the World Food Plan to pay for self-help labour in these projects.

The contribution of foreign loans to the agency’s income fell dramatically from a third (31%) in 1966 to 3.9% in 1974 (C.P.U., 1976), and there was a corresponding decline of interest in self-help housing. In 1973 three quarters (75.6%), and in 1975 two thirds (64.5%) of national ICT investments were producing housing with no self-help component whatsoever.

Pereira branch activities reflected these trends (Tables 50, 51 and 52). Between 1953-76 44.9% of all ICT housing stock was built through aided self-help. However, two thirds (66.3%) of the ICT’s self-help housing stock was built between 1960-62 alone. Output peaked again in the period 1967-70 when 27.3% of the city’s self-help housing stock was built, and a further 6.3% was built in 1975. ICT interest in self-help housing revived in the mid-Seventies in
anticipation of World Bank loans for two Integrated Urban Development projects.

The ICT defined its programmes of ‘aided self-help’ (*autoconstrucción dirigida*) as ‘the sale of a serviced lot inside an urban project and the provision of building materials and technical assistance by the agency. The family must build the house using its own labour and part of its economic resources, using weekly free time or contracting skilled workers if necessary, but always under the technical direction and social assistance of the Institute’ (ICT; 1968: 107-108).

The Pereira branch used three systems of self-help building: family-based self-help; mutual aid, and aided community development in a wide range of programmes including: sites and services, minimum solutions, settlement improvement, slum eradication, home improvement, and the provision of communal facilities (Table 52). In all cases contract labour was used for the serviced lot and in some cases for the sanitary core and multiple-use space.

a. **Family-Based Self-Help (Esfuerzo Propio)**

The ‘aided self-help’ system family-based, self-help labour organized and financed by the ICT. Each family was assigned a specific lot and worked exclusively on its own house with the agency’s assistance to build a basic unit subsequently to be expanded by progressive development (Diagram 8).

Compulsory settlement plans and housing designs were provided; the ICT’s technical and organizational structure was obligatory; loans came in the form of building materials whose release, price, volume and quality were determined by the agency, and a compulsory work regime was established with the agency in strict control of the labour and the building process. Land was acquired by the agency, laid out in blocks of 20 to 25 houses, and serviced by contract labour. Sometimes a sanitary core and multiple space unit were also built by contract
labour, although the self-help option was introduced for these units in the Seventies. Families were selected according to income criteria and organized into workgroups on a block-by-block basis.

Prior to construction there were three general meetings where the workgroups were informed of housing specifications, materials costs, the work regime, and loan conditions. A Junta Directiva of the workgroup was elected (a coordinator, secretary, treasurer, and fiscal) to mediate between the families and the agency. Construction was preceded by the transfer of ownership rights and the issuing of a card allowing building materials to be withdrawn from an on-site warehouse. Construction proceeded on a family basis, coordinated for blocks under the agency's technical and social direction, in part through the regulation of the flow of materials from the warehouse. The rules governing the work-regime were strictly enforced by fines and even expulsion and included the obligation to put in a weekly minimum of 12 hours self-help labour (on Saturdays and Sundays only); to attend all general meetings; and to use only ICT materials and designs. The programmes permitted the use of paid skilled labour at specific stages in the construction process, defined by the agency. Payment was by direct contract between the Junta Directiva and the workers.

The final costs (not including paid labour) were determined by the agency and included the costs of raw land, land development, building materials, and 'administrative costs'. The latter included in the Sixties: a 2% levy for indirect costs (e.g. guarantees for fulfilling contracts, rights to install services, legal costs for regularizing land tenure); a 5% levy for 'general' costs; a 4% levy to cover honorariums for plans, designs and documents; and a 3% levy to cover part of the costs of communal facilities. Thus residents had to contribute an extra 14% on
top of other housing costs. There was no downpayment, and monthly repayments were made over a 20 year period, at an 8% annual interest rate.

These terms changed over the years. After 1974 sites and services programmes had repayment periods of 12 years at a 9% rate of interest plus 2% for mortgage insurance, with a 5% annual increase on monthly repayments. However, ICT administrative costs on these programmes were down to 9.1% in 1976.

b. **Mutual Aid (Ayuda Mutua)**

The mutual aid system was defined (ICT:1968) as 'a collective agreement amongst people to build a determined number of houses which subsequently are distributed amongst themselves. The families work collectively on building these houses without knowing which is their own, and when finished they are distributed by lottery or another system of adjudication' (Diagram 9).

In this system the agency purchased the land, designed the houses, planned the settlement, selected the community, provided the raw materials and technical assistance and organized the residents into block-based workgroups with a *junta directiva*. Co-operative labour was then used on all stages of development of the house and settlement, although skilled labour could be contracted by work groups for specific tasks. Work was closely supervised by the ICT field teams using a controlled work regime similar to that in the *esfuerzo propio* projects.

The cooperative nature of the system allowed for a greater division of labour and the introduction of plans, designs, materials and methods of construction based on a measure of industrialization (e.g. terracing, prefabricated wall panels and roofs, shared structural components, standardized doors and window frames etc.). However, it also resulted in very high administrative costs which were levied
Diagram 9: Progressive Development in an ICT Mutual Aid Project

First Stage

- Bedroom
- Kitchen
- Dining Room
- Garden
- Patio

Final Stage

- Bedroom
- Kitchen
- Dining Room
- Garden
- Patio

Barrio San Camilo

Total Lot Area: 8120 m²

1968
as a 24% surcharge on the total loan: 18% for general costs and the elaboration of plans, designs and documents; 2% for inventory; and 4% for guarantees for fulfilling contracts, service installation, legal costs etc.

c. **Aided Community Development**

The third ICT system of self-help was 'aided community development' (Accion Comunal Dirigida). Here the Acción Comunal structure was used to organize collective self-help labour to build or improve the means of collective consumption. The system was widely used in the agency's upgrading and self-help housing projects.

Table 52 gives data on all projects built by autoconstrucción in Pereira between 1960-75, and reveals several important features. First, the ICT overwhelmingly used family-based self-help rather than mutual aid for its projects. Second, the most active period of self-help building by the agency was between 1960-62 when 1871 houses or 66.3% of the total were realized. A further 27.3% of the total output was built between 1967-70. Thereafter no self-help projects were built by the agency until 1975. Third, a general tendency to reduce lot areas can be observed which undoubtedly reflected budgetary constraints and increasing land costs. In the early Sixties a basic lot area of 140-145 m² was common, and as the decade proceeded (with two exceptions) lot areas were reduced to around 100m², and by 1975 to 80m². A parallel reduction in minimum built areas also occurred from around 50m² in the early Sixties to 20-30m² in 1975, and in some sites and services programmes no built areas were provided. Fourth, over the period there were real increases in the sale price. By the mid-Seventies the sale price per m² of Barrio Otun minimum solutions was in real terms 47% higher than the Boston solutions of 1960, 336% higher than 1961 Cuba solutions (which
were unserviced), and 97.6% higher than the San Camilo solutions of 1968. The Table, however, gives no data on the serviced lot and core solutions offered in Barrio Otun in 1975, but given their price ($31,517 - $36,475) real increases of a lower magnitude can be calculated in comparison to 1960 solutions (15.9% to 34.1%) and in comparison to 1968 San Camilo solutions (55.6% to 80.0%).

2. Other Construction Systems

a. Loans to Lotowners (PPL/CIS)

The PPL programme was introduced in 1962 with Alliance for Progress funds. It awarded supervised credits (generally as building materials) to lotowners who wanted to build or improve houses. The recipient had to build with approved designs using either contract or self-help labour. Between 1962-76 the Pereira branch awarded 702 PPL loans (11.2% of its total housing loans). 58% of these loans were made in the period 1962-63. The prior requirement of legal title and credit conditions tended to exclude low income groups.

b. Direct Contract (C.D.)

This system involved land acquisition by the agency and construction by contract through public bidding. Initially it was used exclusively to build middle class conventional housing. Its significance waned in the late Sixties, but revived in the early Seventies when it was used to build large, prefabricated, middle class housing estates. Between 1953 and 1976 almost a third (32.7%) of the branch’s output was produced through direct contract and over one half of this output was realized between 1972-76 (Table 51).

c. Co-financed Contract (P.3)

Introduced in 1960 with Alliance for Progress funds, this system consisted of an arrangement between the resident, the ICT and a third party (state agency,
bank, building firm etc.) to finance a given contract. In Pereira 3.8% of total output of the branch between 1953-76 was built using the system (Table 51).

d. Workers Plan (P.T.)

Introduced with USAID funds in 1963 the programme attempted to stimulate investments in worker's housing. The ICT advanced 50% of project costs, the employer 30% and the employee 20%. The programme was terminated in the early Seventies, and 215 houses (3.4% of the agency's housing stock) were built using the system between 1953-76.

e. Cooperatives

The Pereira branch's interest in cooperative housing was confined to the construction of 215 houses in Barrio Providencia in 1953, its first and last experiment with the system.

System of Financing

The ICT was highly centralized in the mid-Seventies, with the central office retaining control over project design, construction procedures and finance. All aspects of financial accumulation, allocation and recovery were determined in Bogota and periodically at the international level. Expenditures were heavily weighted in favour of Colombia's larger cities and the financial difficulties at the national level (shortage of funds, high interest rates, decapitalization) manifested themselves at the local level.6

Investment levels and volume of output in the different housing subprogrammes and operational systems in the Pereira branch, clearly reflected national priorities and responded to changes in the composition of the ICT's national budget. The Pereira branch's interest in self-help housing was a response
to national priorities largely determined by the participation of foreign finance: by Alliance for Progress funds (IDB, AID, DLF) specifically targeted at aided self-help, PPL and PT projects in the early Sixties; by USAID funds and World Food Plan aid for slum eradication and settlement improvement in the late Sixties; and by World Bank loans for upgrading, service provision and Integrated Urban Development in the mid-Seventies.

The local branch had little influence over allocation procedures. Persistent complaints about ICT self-help housing projects in Pereira included the lack of information available to the residents on final housing costs; delays in signing contracts, and the inadequate and irregular flow of tools, equipment and materials. The adjudication of contracts, the purchase of materials, the calculation of budgets, and the purchase and release of tools and equipment were all decided by the central office, with the branch merely implementing these decisions.

The central office was likewise in strict control of all aspects of the recovery cycle. Loans were based on criteria established in Bogota, and included the rigid enforcement of income thresholds for entry, and an inflexible system of monthly repayments. Interest rates on ICT loans were based on the average cost of the agency’s borrowing requirement. During the Sixties and Seventies this requirement increased substantially as the contribution from the government budget to the agency was reduced and as external credit dried up. The ICT became increasingly reliant on internal credit and on self-generated resources leading to increasing pressure to raise interest rates on its programmes. The ICT calculated that the average annual rate of interest on its loans necessary to cover its capital costs was 12% in 1970 and 14% in 1975 (World Bank, 1978b).
Given a situation of rising interest rates, rapid increases in land and building materials costs, static or slowly rising incomes, and marked income inequality, the ICT attempted to maintain affordability through subsidizing interest rates, lengthening repayment periods and reducing initial downpayments. Indiscriminate subsidization of interest rates was abandoned in 1968, and cross-subsidization was introduced with rates of 4-8\% on self-help and low income solutions, and 10-12\% on middle income solutions. Given increases in interest rates on its own capital borrowing, the agency was forced, in the Seventies, to increase the contribution from its own resources or face decapitalization. This resulted in steady increases in the subsidized interest rates on self-help programmes and the diversion of an increasing proportion of resources to middle income programmes bearing a higher interest rate. By 1975 the agency was spending only 1.3\% of its resources on sites and services, and in 1975 nationally the ICT was spending almost two thirds (64.5\%) of its resources on programmes affordable only by those earning more than $4200 (US $127) a month (Table 53). Attempts to lengthen amortization periods on self-help programmes met similar constraints falling from a 20 year maximum in the early Sixties to a 15 year maximum in 1976. Thus the prospect of decapitalization constituted a strong constraint on the levels of subsidy and the proportion of resources available to low income groups.

MUNICIPAL GOVERNMENT AND THE POLITICS OF SELF-HELP BUILDING IN PEREIRA

The Structure of Municipal Government in Pereira

Colombia’s system of government was characterized by the relative strength of the administrative over the representative tradition. The administration was
Diagram of Colombia's System of Government:

Local Level:
- Municipal Council

Regional Level:
- Departmental Assembly

National Level:
- Chamber of Representatives

Representative Bodies:
- Municipal Government (Mayor)
- Departmental Government (Governor)

Administrative Bodies:
- National Government (President)

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structured at three levels - national, departmental and municipal (Diagram 10). At each level there was a strong administrative organ and agent (President and National Government, Governor and Departmental Government, and Mayor and Municipal Government), with vertical linkages dominated by the Presidency. The representative tradition took the form of elected bodies at each of these levels - the Congress (consisting of a Senate and a House of Representatives); a Departmental Assembly, and a Municipal Council. Colombians voted every four years for the Presidency; and every two years for the membership of the various representative bodies.

Administrative Bodies

Once elected the President formed the national government and nominated the Governors of the various Departments, who administered the national programmes at the regional level (Diagram 11). Each Department was composed of municipalities (municipios), administered by a municipal administration (alcaldía). The mayors (alcaldes) were nominated by and responsible to the Governor of the Department. The mayor in turn appointed the heads of the various departments of the municipal administration.

Pereira is the capital of the Department of Risaralda, which consisted of 14 municipalities (Map 9). Diagram 12 shows the structure of the municipal administration in Pereira, which we shall now briefly consider.

1. The Mayor's Office

In the mid-Seventies the mayor's powers in relation to the municipal council were formidable: most council legislation had to be proposed by the mayor; he had considerable powers of government by decree; he had independent access to a part of the budget, and rights to nominate the general managers of the
council-controlled agencies. But he also had to enact Council legislation; the
council-controlled agencies had much larger investment powers than the municipal
administration (Table 54), and the council's fiscal powers and ability to block
legislation made it important for him to secure a working majority in it.

2. The General Secretary.

This office managed the daily business and legal affairs of the
administration. Demands for regularization of tenure, for example, or legal
assistance for a housing plan were referred to the office.

3. The Government Secretary.

The Secretary was in charge of the police, fire brigade, the issuing of
licenses, and the registration of complaints. The post was vitally important in
settlement issues such as the use of public force and the infringement of municipal
codes, though action was contingent on a formal request from the Planning
Department.

4. The Treasury and Education Secretary.

The office was responsible for the maintenance of the city's schools; the
execution of the municipal budget, and the payment of municipal wages and
salaries.

5. The Secretary of Public Works.

The Secretary was responsible for the construction of local roads,
pavements, public buildings and installations. He was also in charge of municipal
equipment.

6. The Department of Municipal Planning (DAPM)

The Department was responsible to the Municipal Planning Board (Junta
de Planeación) which was made up of the mayor, the managers of the
council-controlled agencies, and a number of councillors and laymen. The Department had four major functions. First, it was responsible for preparing the municipal budget, municipal reforms and public investment strategies. Second, it was responsible for the formulation, implementation and evaluation of the city's Development Plan (Appendix 4). Its third function was to monitor and implement the norms established in the municipal codes; to issue and withdraw building permits, and to initiate legal procedures against all breaches of legislation on urban development. Notification of these breaches was referred to the Government Secretary for police action, and to the General Secretary for legal action. Finally, in the Seventies the Planning Department also began to sponsor self-help housing projects (planes de vivienda).

7. The Municipal Workers Housing Fund (Fondo Obrero)

The Fund was established by the municipal council in 1973, to undertake low income housing programmes on a non-profit-making basis; to buy and sell land for this purpose; and to extend credit to workers to build or improve their houses. The Fund was administered by a Junta consisting of the mayor (President), the municipal Personero, the Director of the Planning Department, three municipal councillors and two municipal workers. In the mid-Seventies the Fund had extended credit to municipal self-help housing plans for land purchase and collaborated in ICT P3 programmes. In the late Seventies the agency's role in financing municipal self-help housing plans was greatly expanded.

Representative Bodies

The vote for the representative bodies was not for an individual but for a political party. Each party and its factions issued a list of candidates equivalent to the number of posts open for election. Voting was for the whole list and each
party got a number of seats proportional to the total votes cast, according to the electoral quotient system. Although the local representatives to all three bodies could be brought into the urban political process, the most important were the local municipal councillors.

1. **The Municipal Council**

Pereira’s municipal council had 14 members, and the structure of the council and its dependent bodies is shown in Diagram 13. Its weakness was expressed in its inability to initiate legislation, and in the mayor’s strong powers of veto, but it could delay legislation, fix levels of local taxation, modify the municipal budget, and determine the municipal urban codes. The Council also had powers of direct appointment and control over the Municipal Treasury, the Controller’s Office and the Municipal Personeria. It was also represented on the *juntas* governing the Municipal Planning Department and the Municipal Workers Housing Fund. Its most important powers, however, were in the five municipal agencies responsible to it: the Municipal Public Services Corporation (EEPP); the Department of Valorization; the Office of Tourism and Development; the Social Security Fund (*Caja de Previsión Social*), and the Airport Board (Diagram 13). These powers included the composition of their *juntas*, the appointment of their fiscal auditors, and the ability to reject the mayor’s nominations for their directors. Important aspects of the settlement process, however, remained outside of its control - it could not prevent demolition; it had no powers over the use of the police or army, and it had no powers of disposal of municipal land.

2. **The Municipal Controller**

The Municipal Controller was directly appointed by the Council. His basic
function was to monitor the spending of the municipal administration and the legality of its activities.

3. **The Municipal Treasury**

The Municipal Treasurer was directly appointed by the Council. The office handled all the funds of the municipal administration (taxes, fines, rents and *auxilios*), and allocated them to the agencies empowered to receive them.

4. **The Personería Municipal**

Although previously the legal embodiment of the municipality and a sort of 'co-mayor', in the late Sixties the powers of the office were reduced to advisory and 'rubber stamp' functions in the administration's legal matters.

5. **The Valorization Department**

The Department was run by a Directorate (*Junta Directiva*) nominated by the council, consisting of 3 councillors, 2 laymen (political appointees), the mayor or his representative, and the Director. Neither the mayor nor the Director had voting rights. The Director was appointed by the Council but with exclusive rights of nomination and dismissal resting with the mayor.

The Department's functions were to plan and build all public works that were financed through valorization taxes. The Department was authorized to expropriate required land and to collect valorization taxes. Its budget grew rapidly between 1960 and 1973 (Table 54) - reflecting its responsibility for implementing the city's Development Plan, (particularly the Road Plan). The local office of the Codazzi Institute (IGAC, *Oficina Catastral*) determined the value of affected land and not the Valorization Department, and was also responsible for the property rolls and cadastral surveys.

6. **The Public Services Corporation (EEPP)**
The functions of the Public Services Corporation (EEPP) were to provide water, electricity, sewerage, telephones, public lighting, abattoirs, street cleaning, garbage disposal, and market facilities. The agency was governed by a Managing Board and administered by a General Manager. The Board was nominated by the Council in consultation with the mayor, and consisted of three councillors and two laymen (political nominees). The mayor (or his representative) and the General Manager attended Board meetings with no voting rights. The Manager was appointed directly by the Board, but after 1976 exclusive rights of nomination and dismissal rested with the mayor (Diagram 14).

The Corporation was the city’s most important urban agency, with a budget larger than that of the Municipal Administration, Valorization Department and the Pereira ICT. Its budget increased by 7.4 times in current pesos between 1962-73, roughly doubling in real terms (Table 10). Current resources were derived from taxes on street cleaning, garbage disposal, and public lighting; transfers from the municipal budget, and from service tariffs. As in other intermediate cities (ANIF, 1974) these revenues were insufficient to cover depreciation costs and interest charges, and by the mid-Seventies the agency had become increasingly dependent on credit (particularly from INSFOPAL and the World Bank) to finance its obligations to the Master Plans for Water, Sewerage and Electricity. Water and sewerage tariffs were increased by 57% in 1974 at the insistence of these agencies; and further increases were being demanded for loans to cover obligations to the Integrated Urban Development Programmes.

Although treated water supply was increased by 33.4% and the number of individual connections by 67.2% over the years 1960-75, in 1972 42,000 people (17.8% total population) still lacked direct access (EEPP, 1972:4). Between 10
Diagram 14: The Structure of Pereira's Public Services Corporation (EE.PP)
and 20% of the population in 1972 were not connected to the sewerage system. Considerable progress, however, was made on expanding the capacity of the city's hydro-electrical plant. Between 1959-75 output increased by three and a half times, and consumption by two and a half times. In 1972 6.1% of households in the metropolitan area lacked electrical connections (EEPP, 1972:8). Serious problems remained with the city's garbage disposal system and abattoirs.

**Municipal Self-Help Housing Plans**

In the early Seventies the Municipal Planning Department began to sponsor self-help housing plans (*planes de vivienda*) allowing the progressive attainment of housing, services and settlement standards. For political and other reasons, the Department began to help various housing committees (*comités de vivienda*), around the city constitute themselves into 'housing plans.' It became possible for groups to organize as a housing committee within the *Acción Comunal* system, even though its members lived in different settlements and had not yet acquired land for realizing their goals. Housing committees had legal identity and could therefore negotiate financial and other assistance from public and private bodies.

Planning Department sponsorship of housing plans involved legal and technical assistance, provision of designs, settlement plans, and credit (through the Fondo Obrero), and coordination of the activities of the other official bodies involved (e.g. EEPP, OOPP, SENA, *Acción Comunal* etc.).

The first (1972) and largest of these housing plans was Barrio Hernando Velez Marulanda which became a testing ground for working out a general policy on the most appropriate form of project assistance. Given the rapid proliferation of housing plans in the city in the mid-Seventies, a case study of the project was
In 1975 two other committees constituted themselves into municipal self-help housing plans. Barrio Salvador Allende was the result of a mass invasion of lands belonging to a religious charity in April 1975. An agreement was reached between the Society, the municipal authorities, the ICT and residents to transform the invasion into a self-help housing plan for approximately 600 people. The second was a self-help housing plan involving the resettlement of 650 people living in the La Dulcera squatter settlement in the Consota valley. In 1975 a housing committee was formed within its Acción Comunal structure, and with the assistance of the Planning Department and the Valorization Department an adjacent plot was acquired for the construction of 100 self-help houses.

The urban statutes were changed in 1975 to rectify the legal anomalies that had arisen out of the ad-hoc nature of state sponsorship of these plans. The most important was Acuerdo 67 which established a body of revised minimum norms which could be progressively obtained in new zones of Progressive Residence (ZPR) established as part of the city's zoning plan. The Planning Department acquired the obligation to extend free technical assistance to housing plans and to suspend construction activities in breach of norms established in the Acuerdo.

To qualify for municipal assistance and receive a building permit the body organizing the housing plan had to have legal status (persona jurídica); the assent of the Municipal Housing Committee on the suitability of the land for the plan, and on the financial capacity of the body to acquire it; whilst settlement designs and plans, and fiscal and administrative statutes by the Planning Department, Municipal Housing Committee and Superintendency of Banks.

The political advantages of housing plans were quickly recognized and led
to the formation of numerous housing committees in 1976. In April 1976, the
Comité de Vivienda 'Chico Restrepo' an offshoot of Barrio Hernando Velez
Marulanda, managed to acquire housing plan status (30 houses) after invading
municipal land in the east of the city.

The 'Comité de Vivienda Jose Hilaire Lopez' was organized out of Barrio
Cuba, and in April 1976 had over 800 affiliates (100-120 families). After being
displaced from an invasion of railway land, housing plan status was granted in
May 1976. By late 1976 several housing committees were being legalized, with the
aim of becoming 'housing plans' (e.g. Nader Nader, La Rivera, and La Churria)
and in 1977 the pace of their formation increased rapidly.

Patron-Clientage, Ventajismo and the Political Party System in Colombia

Colombia's political life has been dominated by the often bitter conflicts
that exist within and between its two principal parties - the Liberals and the
Conservatives, and the political arrangements between them known as the
National Front (Frente Nacional).\textsuperscript{11} The National Front resulted directly from
La Violencia, the bloody civil war between the two parties between 1948-58.\textsuperscript{12}
Both parties had highly centralized and authoritarian structures, with party
assemblies and directorates organized at the national, departmental and municipal
levels. Local party members elected delegates to the municipal assemblies,
municipal delegates elected delegates to the departmental assemblies, who in turn
chose the delegates to the national convention. Each assembly had its own
directorate. At the national conventions the party directorate and the party's
Presidential candidate were elected. Factions were organized within the parties,
and party lists with candidates for public office were issued by each faction (Dix,
At the municipal level, political mobilization occurred largely through settlement-based branches, and was centred on urban demands.

A number of other parties also existed. The most significant was ANAPO, a right-wing populist party, which in the early Seventies seriously threatened the National Front arrangements. Others included the Colombian Communist Party; MOIR, a left-wing populist party; and a number of small left-wing political parties. Locally they could be represented in the municipal councils and departmental assemblies, where they could be crucial for establishing working majorities through alliances with factions of the two main parties.

The constitutional provisions and formal relations of the Colombian political system did little to check a body of attitudes and informal institutional networks that weakened the representative tradition. The Colombian political system can be conceived in terms of tiers of patron-client linkages which operate at all levels and structures of the system. A patron-client relationship is one in which political and personal loyalty are exchanged by the client for access to the resources controlled by the patron in the state administration, political party or other organizations representing power and authority (Wolf and Hansen, 1967; Friedrich, 1968; Weingrod, 1968; Collier, 1976). A patron-client relationship is typically asymmetrical and ‘patrons stand guard over the crucial conjuncture or synopsis of relations which connect the local system to the larger whole’ (Cornelius, 1973:158). A potential patron has access to goods and services and in securing this access the client will be bound in an economic, political and ideological obligation to the patron and the organization he represents (Kern, 1973; Lomnitz, 1977). Considerations of patron-clientage and *caciquismo* are vital for understanding the political and ideological articulation of self-help activities,
the institutionalization of low income demands, and the state's response to them.

Colombian government has also been characterized by the predominance of ventajismo (Ray, 1969) or the 'spoils system' (Dix, 1966) - the use of government power to advance the governing party at the expense of the opposition. The rule of one political party has meant the exclusion of the other party not just from government but from resources controlled by government. Public positions have been distributed as a reward for political favour and there has been the partisan use of state resources at all government levels. Ventajismo was a major reason for the bitter antagonisms between the Liberals and Conservatives, and was recognized as such by the Pact of Sitges which initiated the National Front agreements.\(^\text{13}\)

There were five principal ways through which the National Front\(^\text{14}\) sought to put an end to the system of ventajismo: parity in the distribution of seats between Liberals and Conservatives in all bodies controlled by public corporations (Senate, House of Representatives, Departmental Assemblies, and Municipal Councils); all public administration posts to be distributed by agreement between the parties; the Presidency to alternate between the two political parties every four years; all public corporation decisions to have a two thirds majority; and the electoral quotient system to be retained with party factions issuing separate electoral lists.\(^\text{15}\)

These measures were introduced, often with great difficulty, but they did not eliminate the spoils system so much as divide the spoils equally, whilst the demand for parity introduced an element of great instability into the administrative system.\(^\text{16}\) On being elected, the President had to appoint the 22 governorships according to parity agreements. Each governor in turn was
responsible for realizing parity in the distribution of mayors for municipalities within the Department. The mayors in their turn were responsible for ensuring parity in the distribution of the posts under their jurisdiction. This process of securing parity at all administrative levels was carried out through consultation with the respective national, departmental and municipal party directorates. Similar arrangements to assure inter-party and intra-party parity (on the basis of electoral voting patterns) were implemented in all the agencies controlled by the representative bodies. Vertical chain reactions derived from small shifts in party and factional arrangements at a higher level became common. The parity arrangements for Governors and Mayors were determined by a balance of political power at higher levels which often bore little relationship to that in the administrative unit for which they were responsible. Governorships in particular were very sensitive to small changes at a national level, and there was a high rate of turnover. The forced resignation of a Governor automatically meant the resignation of all the municipal administrations within the Department, and these frequent governmental crises were an endemic feature of the system. The National Front agreements also failed to attack one of the roots of ventajismo by leaving an electoral system intact where voting was for political parties rather than for individual candidates. It was logical therefore for officials to demonstrate party allegiance in handling authority.

Similarly patron-client relations were central to the operation of the political parties. Real control within both parties rested with the party directorates which were virtually self-perpetuating and dominated by local political bosses (caciques). These caciques stood at the head of the various party factions - and indeed the identity of these factions although tied to genuine
GRAM 15: CACIQUISMO AND SETTLEMENT POLITICS IN PEREIRA IN THE EARLY SEVENTIES
clashes of interest and dogma, was in large measure bound up with the personal rivalries and tactical considerations of local caciques. Once established the caciques could become very powerful through their influence on: the party organization; the municipal administration; the municipal council and its dependencies; the departmental administration and assembly; the national government and Congress, and on the local branches of the decentralized national agencies. This influence was used to build up political support in the settlements in exchange for 'privileged' access to the resources that they controlled. The domination of the directorates over the party's elected bodies and the use of the electoral quotient system in combination with factional electoral lists effectively meant that the choice of candidates for public office rested firmly in the hands of the party caciques. It is hardly surprising therefore that local political activity came to be dominated by the machinations of the political caciques.

The Political Articulation of the Low Income Settlement Process in Pereira

We can now examine how low income urban demands (including artisanal and state self-help housing practices) were articulated by an institutional political system based on patron-clientage, caciquismo and ventajismo in the city. Three political models are presented to clarify this articulation process.

Model One

Diagram 15 shows the relationship that existed between the system of patron-clientage and the institutional political system in Pereira in the mid-Seventies.

Political life in Risaralda was dominated by the Liberal Party and its struggles with the Conservatives. Departmental parity arrangements gave the
Conservatives greater public representation in nominated positions than their voting strength.\textsuperscript{19} Seven of the fourteen alcaldias had to be controlled by the Conservatives. Moreover, although Pereira’s municipal administration was guaranteed to the Liberals, the Conservatives were similarly guaranteed the post of General Manager of the Public Services Corporation (EEPP).\textsuperscript{20} The rate of turnover of Governors was particularly rapid in Risaralda - between 1967 and 1975 it had 15 Governors, an average period of office of 6.4 months. Each change of Governor meant the resignation of the Departmental Government, and the 14 municipal administrations; and the reshuffling of all these posts to arrive at a new expression of the parity agreements.

Diagram 15 shows the institutional political spectrum in Pereira in the mid-Seventies. Political life in the city was dominated by the Liberal Party and its factional conflicts. The Conservative Party was generally more concerned with developing its political base in rural Pereira, and in securing its guaranteed posts in the departmental and municipal administrations than in active political mobilization of the city’s low income barrios.\textsuperscript{21} Although represented in elected bodies ANAPO and MOIR were excluded from administrative posts by the National Front agreements. However, by tactical alliances with the governing faction of the Liberal Party in the Municipal Council, they managed at various times to gain posts on the council-controlled agencies, and thus to access to resources for their settlements.

Both the Liberal and Conservative Parties were divided into factions. Thus in the mid-Seventies there were two Conservative Party factions in the city (Official Conservatives and the Unified Conservatives) and three Liberal Party factions (Official Liberals, the Front for Liberal Integration, and the Integrated
Liberals). Local factions were generally allied to the system of national party factions, but their identity was largely bound up with the personal rivalries of local caciques (Diagram 15).²²

Although these caciques at various times held the most important local political posts, they were generally content to use their positions on the local party directorates to put their placemen on the factional electoral lists, and in the various administrative structures.²³ However, they often became Senators and by delivering their faction's vote to national factional caciques they often acquired access to national resources for local distribution. Once established, caciques and their factions seemed to be remarkably resilient.²⁴

Thus the political life of the Liberal Party after the late Sixties was dominated by the factional disputes between Camilo Mejía Duque (Official Liberals) and Oscar Velez Marulanda (Front for Liberal Integration), and by the latter's attempts to overthrow Mejía Duque's long-established control over the local party, the municipal council, the municipal administration and council-controlled agencies. Often the competition between the two caciques eclipsed the differences between the Liberals and other parties. Thus in 1972 the Front for Liberal Integration allied itself with the Unified Conservatives and ANAPO in the Municipal Council (the so-called Bloque Cívico), depriving the Official Liberals (in alliance with the Official Conservatives) of their working majority thereby forcing the Official Liberal mayor to resign.

Although the basic relationship between cacique and barrio was exchange of political allegiance for state resources controlled by the cacique, it was only rarely that he dealt directly with the settlement. It fell upon the sub-caciques to make the necessary mediations. Generally-speaking they were prominent local
politicians seeking advancement through the local party, representative bodies, and state apparatus through the good offices of the *cacique*. Thus in Diagram 15 the Mejía Duque sub-caciques, Hernando Velez Marulanda and Gabriela Zuleta, were both Congressmen. Cesar Gaviria Trujillo was a councillor and member of the directorate of the Public Services Corporation whilst simultaneously organizing settlements on behalf of Oscar Velez Marulanda. Subsequently (1975) he was rewarded for his services as a sub-cacique by being made mayor. Often direct contact with the settlements allowed the sub-cacique to develop his own political following. Under certain circumstances (usually to secure his own personal advancement), the sub-cacique could transfer allegiance to an opposing *cacique* delivering the vote of his settlements to the new patron. Thus in 1975 after a long period with Mejía Duque, Gabriela Zuleta transferred her allegiance to Oscar Velez Marulanda, and these new votes were important for his subsequent success in breaking the Mejía Duque hegemony.

Although sub-caciques were frequently in the settlements, day-to-day affairs were handled by political lieutenants, who were crucial figures in the patron-client hierarchy. They were usually party members in direct receipt of party patronage (e.g. jobs, funds). Normally they preferred to act through a settlement leader but examples existed of political lieutenants directly organizing invasions and pocketing funds from illegal land sales.

The local settlement leaders acted as organizers, informal opinion leaders, and as political brokers, using their connections with the *caciques* and their placemen in the state apparatus to exercise political control in the settlement. In return for the promised satisfaction of settlement demands a settlement leader was expected to mobilize the settlement into the *cacique’s* political faction. This
could be through attendance at political meetings, declarations and
demonstrations in support of the mayor; the formation of a settlement party
branch, and electoral support for the faction's candidates. In return he might get
privileged access for the settlement to state resources and personal benefits.
These could include the unofficial sanctioning of the fraudulent handling of
community funds, illegal trafficking in lots, special fees for service provision and
income from settlement properties. In this way he could also acquire powers of
patronage within the settlement itself. These transgressions could be overlooked
as long as there was a continued flow of material benefits to the settlement in
general. If there was not, then opposition could arise and he could be replaced by
another settlement leader allied to an opposing cacique and political faction.

Patron-client links with the political caciques were considered so important
that many settlements publicly demonstrated their allegiance by naming
themselves after them, e.g. Barrios Camilo Mejía Duque, El Plumon (Oscar Velez
Marulanda's nickname), Salazar Robledo, and Hernando Velez Marulanda.
Other named themselves after national and international political figures e.g.
Barrio Gaitan (Liberal Gaitanista) and Barrio Salvador Allende (MOIR).

Model 2

Diagrams 16 and 17 show the relationship between the institutional
political system, the state and the low income settlement process. The political
life of Pereira was dominated after 1968 by the attempt of the Front for Liberal
Integration (Oscar Velez Marulanda) to depose the Official Liberals (Camilo
Mejía Duque) from control over the council and municipal administration. In the
process the Front to used the political opportunities thrown up by the conflicts
surrounding squatting and artisanal building. The Velez Marulanda faction
Diagram 16. Low Income Settlement and the Political Process in Pereira in a Pre-Electoral Period.
supported and organized invasion movements in order: to pose as the people's champion; to win the votes of those organized, and to force the Mejía Duque administration into repressive actions that exposed its anti-popular attitude to the electorate. The period immediately before elections was the preferred time to carry out these activities. Thus the Velez Marulanda faction was directly involved in the organization of squatter movements before the 1968, 1970, and 1972 elections (Barrios El Triunfo and Gaitan), and the 1974 elections (Barrio El Plumon). Policies varied from political support for established invasions, to active political organization of invasion movements.

In this situation the Mejía Duque administration had to choose between legal, police and military measures, and measures to coopt these movements. The latter included access to municipal self-help housing (e.g. Hernando Velez Marulanda); tenure regularization and credit (e.g. El Triunfo, and Gaitan), and opportunities to join the community development system. Policy choices depended on the conjuncture - the popularity of the administration, proximity to elections; the delicacy of factional arrangements in the municipal council; the strength of landowners; the importance of the area invaded for development plans etc.

Diagram 16 shows how the state response to barrio demands was conditioned by their political allegiance to either the governing or opposition party factions. Thus responses such as the granting of financial and technical support, service delivery, the use of police or military force, regularization of tenure, entry into a municipal self-help housing project; concessions on service installation costs etc., were to a significant degree contingent upon the settlement's political allegiance.
The diagram illustrates the relationship between political factions and settlement processes in a post-electoral period. It shows how political factions with legal and administrative powers can support or oppose settlement organizations, and how these organizations can influence the political process through various means such as proposals for housing and municipal services. The diagram highlights the complex interplay between political power and settlement efforts.
Diagram 17 shows what happens when one cacique and his faction replaced the other in the municipal administration, a situation which occurred in Pereira in 1975 when the Velez Marulanda faction finally displaced the Mejía Duque faction. Clearly the position was reversed, with demands from Velez Marulanda settlements now getting privileged treatment from the municipal administration and those from Mejía Duque settlements being denied or given a low priority. Velez Marulanda appointees who had previously organized or assisted invasions now had to oppose them. The strategy of the Velez Marulanda faction was to deny or give low priority to the urban demands issuing from the Mejía Duque settlements, to improve their own settlements and to coopt invasion movements before or after they took place by using municipal resources to set up self-help housing projects. Given this policy it seemed likely that the Mejía Duque faction would be increasingly forced to use the same tactics as the Velez Marulanda faction when it was in opposition.

The other political parties standing outside of the National Front (ANAPO, the Colombian Communist Party, and MOIR) adopted a similar political strategy to build up a power base in the barrios. Thus in Pereira both the Communist party and MOIR organized squatter movements and settlements (e.g. Barrios La Isla de Cuba, Cuba Carrilera Sur, Salvador Allende). Needless to say they were fought tooth-and-nail by both Liberal Party factions through police and legal measures and promises of state resources were generally made contingent on shifts in political allegiance to the governing faction.

Model 3

Diagram 18 shows the relationship between settlement demands, political patronage structures and ventajismo in Pereira in the Seventies. A settlement
linked to a *cacique* of the governing faction would exchange its political support for the exercise of his patronal powers in satisfying its demands. These powers derived from the political control the *cacique* exercised through: political nominees in the municipal administration as a result of his participation in parity agreements; his factional representation on the municipal council and his nominees in council-controlled agencies, and his political influence in the local branches of the national agencies. Thus a demand for legalization of tenure could be addressed through political pressure placed on the Government Secretary. Demands for the relaxation of the municipal codes could be achieved through political pressures on the Planning Department. Technical assistance and equipment for construction work could be achieved by political pressures on the Secretary of Public Works or the Planning Director.

Selective access to a wide range of services and infrastructure could be secured through the *cacique*’s influence on the council, and his nominees on the directorates of the Public Services Corporation and Valorization Department. Political influence could also be exercised by the *cacique* (either nationally or locally) in the nomination and conduct of public officials in the local branches of the national decentralized agencies.26

On the other hand demands proposed by settlements supporting an opposing faction or *cacique*, could be repressed, ignored or satisfied in exchange for a shift in allegiance. Needless to say if a settlement was constantly promised satisfaction and none was received it could shift its political allegiance to an opposing *cacique* and faction or even to extra-institutional forces.27 An experienced *barrio* leader could use the threat of a shift in allegiance to secure
fulfillment of demands, and could play off one cacique and faction against the other.28

COMMUNITY DEVELOPMENT AND SELF-HELP BUILDING IN PEREIRA

Colombia's community development system (Accion Comunal) dates back to the late Fifties and early Sixties when a range of community development institutions was established by government, military, cultural, and economic organizations (Alderfer 1961; Violich and Astica 1967; Nelson 1979).29 The 1957 Administrative Reform Law delegated the administration of many services to juntas de accion comunal (JAC) - elected bodies representing residents of a rural community or urban neighbourhood. Subsequent legislation provided matching funds and legal recognition (personeria juridica) to registered juntas and a National Division of Accion Comunal, with a full-time promotional system was set up within the Ministry of Government. In the early Sixties numerous government organizations, (e.g. SENA, ICT) and private bodies (FEDECAFE, FENALCO) incorporated Accion Comunal into their extension programmes. The National Division also began to receive substantial assistance from the Alliance for Progress agencies (USAID, CARE, Peace Corps)30. Between 1961-66 the number of JACs increased from 83 to 8812 (Pardo, 1976).

The Lleras Restrepo administration (1966-70) reformed the promotional system in the National Division (now called DIGIDEC) which was empowered to allocate funds (partidas) from ministerial budgets to the JACs. The Pastrana Borrolo government (1970-74) tightened up bureaucratic controls over the promotional system and established a more formalized regional and municipal structure - the Municipal Associations and Departmental Federations (National
Decrees 835 and 836, 1973). Bagley and Edel (1975) estimated that between 1966-75 the number of JACs doubled to around 17,500.

*Acción Comunal* activities in Pereira reflected national trends. The first JAC in Pereira was set up in Barrio America in December 1962. Between 1962-66 10 JACs were established in *inquilinato* settlements or in ICT self-help projects. During this period 20.8% of all JACs formed between 1962 and 1975 came into existence (Tables 55 and 56).

The most active period of formation of JACs in the city was between 1967-1970 when 22 *juntas* or almost a half (45.8%) of the city's total in 1975 were formed. Although the policy of incorporating *inquilinato* settlements continued, two new types of settlement were brought into the system: ICT working and middle class settlements, and recently-formed squatter settlements, and unimproved subdivisions. The granting of legal status to communities without legal tenure was interpreted by the settlers as consolidating their demands for services, infrastructure and tenure.

Between 1971-75 15 new settlement *juntas* were created, roughly one third (31.9%) of the total. Most were squatter settlements, some of them recently-formed demonstrating a rapid expedition of JAC status. A new development was the granting of JAC status to municipal self-help housing plans. The jurisdictional limits of these *juntas* were often vaguely defined.

In 1973 Pereira had 42 *barrios* with JAC status covering a total population of 109,383 - 62.8% of the urban population (Table 56). Active membership was, however, infinitely smaller. A study of eight JACs in the east of the city in 1975 revealed only 524 affiliates (Ofisel, 1976). Levels of participation varied over time, and once a settlement acquired JAC status it rarely lost it despite being
effectively moribund.

The basic unit of the *Acción Comunal* system was the *junta de acción comunal* (JAC), a group of residents who voluntarily constituted themselves into a junta under conditions specified in the *Acción Comunal* statutes. (DIGIDEC, 1973; 1975).

The general policy-making body of the *junta* was the General Assembly (Diagram 19). It had to meet at least three times a year, but extra meetings could be called by the Directorate, by local promoter, or by petition of 10% of the members. General Assemblies were called to establish the community's needs; to approve budgets and investments; to approve the rules of the working committees, and to elect or sack the Directorate (*Junta Directiva*) and the *Fiscal*.

The Directorate was responsible for the day-to-day coordination of activities. It consisted of a President, Vice-President, Treasurer and Secretary who were elected annually by the General Assembly and the Presidents of the Working Committees, who were elected by their own members. The *Fiscal*, an official watchdog directly responsible to the General Assembly also had non-voting rights.

The executive organs of the JAC were the Working Committees. Each committee (of which there had to be a minimum of three) had to have at least four members.

Real power in the *Acción Comunal* system rested with DIGIDEC and was exercised through control over the expedition of legal identity; the appointment of Regional and Municipal Promoters, and through the administration and release of funds (*partidas*) from the National Community Development Fund (*Fondo de Desarrollo Comunal*). These arrangements retained national control whilst
Diagram 19: Organization of a Junta de Acción Comunal.

Directorate:
- President
- Vice President
- Secretary

Presidents:
- Housing Cttee.
- Education Cttee.
- Health Cttee.

General Assembly

Community

Fiscal
permitting a small measure of municipal and departmental consultation and limited horizontal linkages between the juntas themselves.\textsuperscript{32}

The Regional Promoter of Risaralda was directly appointed by DIGIDEC on the Governor's nomination. His functions were to promote, coordinate and evaluate the activities of the juntas, and to supervise the activities of the four Municipal Promoters in Pereira. The Departmental Administration also had a separate promotional system covering the rural areas of Risaralda.

An important reason for the willingness of many settlements to join the Acción Comunal system was to acquire legal eligibility for public finances which were derived from three sources.

The most important were the partidas. Decreto no. 3159 of 1968 set up the Community Development Fund (FDC) within the Government Ministry. The Fund received direct allocations from the national budget and other ministries that were specifically targetted for community development projects. These partidas were distributed annually through the Fund's sections and deposited in the Municipal and Departmental Treasuries for distribution to individual juntas.

The second source of funds was parliamentary auxilios - annual sums from the national budget made available to senators and representatives for distribution to organizations of their own choice within their constituencies. The most important recipients were the JACs but also included were charitable, social, cultural and cooperative organizations. The allocation of auxilios was determined by the 4th Commission of the Chamber of Representatives, whose activities were periodically rocked by scandals of fraud and misappropriation.\textsuperscript{33}

The third source of funds was Departmental auxilios - small sums from the Departmental budget distributed to JACs and other organizations mainly within
the rural areas.

Data obtained from DIGIDEC and published lists (Tables 57 and 58) give only a partial idea of the sums made available to Pereira juntas in the early Seventies.\textsuperscript{34} In 1971 juntas in Pereira received $1.3 mills. (US $62,200) in partidas and parliamentary auxilios; in 1974 $1.2 mills (US $42,046) and in 1975 $3.2 mills. (US $97,146). Allocations from departmental auxilios in 1974 amounted to $203,000 (US $7108).

There was great unevenness in the distribution of these funds: in 1971 19 out of 33 JACs received funds; in 1974 29 out of 44 JACs, and in 1976 41 out of 50 JACs. In 1974 20 out of 44 received departmental auxilios. Seven juntas received no money whatsoever over the three years and some settlements received much more than others. Barrio Cuba for example received 28.6% of all funds in the three years. Other favoured settlements were Barrio Salvador Allende (7.4%) Kennedy (6.8%) and La Dulcera (4.2%) (Table 57). Of course these juntas had very different population sizes. The picture changes when rough estimates are made using 1973 barrio census returns (Table 57).\textsuperscript{35} Here the range was vast - from nothing to $1964 per head in Barrio La Dulcera. 11 out of the 42 juntas received over $100 per capita. Significantly these included settlements with a history of state self-help activities: San Camilo ($234), Gaitan and El Triunfo ($161), Cuba ($137) and Hernando Velez Marulanda ($135).

Table 59 breaks down the total value of partidas, and auxilios according to the type of project financed. The highest levels of funding were for 'various works' (39.7%), but housing plans and improvements constituted a significant 15.5%, followed by construction of bridges (8.4%), markets (7.5%), and roads and pavements (6.2%).
The *juntas* closely coordinated their activities with numerous institutions, including decentralized national agencies (ICT, SENA, SSSR, ICBF, IDEMA, COLDEPORTES), public corporations, municipal bodies (EEPP, DAPM, OOPP), departmental government and international agencies (CARE, USAID, Peace Corps).

This material from Pereira is relevant to the theoretical discussion on articulation in Part One. The *Acción Comunal* system was clearly an important mechanism for channelling local resources and self-help labour into housing and urban development at relatively little cost to the central state. *Auxilios* and *partidas* were contingent on a matching contribution from the *junta*. Bagley and Edel (1975:15) estimated the grant/self-help input ratio in community development-projects at 60:40 and on this basis the total value of community development investments in Pereira in the three years was $9.95 mills.

*Acción Comunal* clearly represented a systematic attempt to articulate self-help activities and community resources towards national planning decisions and development priorities. It thus attempted to assert some control for national institutions over the local development process, and often to redefine low income needs in terms of central state priorities. Indeed the allocation of *partidas* from the Community Development Fund (FDC) was explicitly conceived in these terms.\(^{36}\)

On the other hand, although originally conceived to counteract the influence of local institutions and leaders *Acción Comunal* undoubtedly was used as a source of local patronage by national political figures,\(^{37}\) and the *juntas* were drawn into the complex network of local patron-client relationships that linked the political parties, the political *caciques* and the *barrio* leaders. Indeed in many
ways the system institutionalized and allowed the further development of these relationships by offering more sources and new types of patronage. Caciques or their political appointees often used their national influence in favour of their client juntas. The auxilio system was openly used by political caciques, to maintain or acquire the political support of client juntas and they often influenced Departmental decisions in matters such as the release of auxilios, and the expedition of legal identity.

The organizational structure of the juntas also failed to impede the development of patron-client relationships. The system of concentrating power on three members of the Directorate (President, Vice-President, and Secretary) allowed the barrio leader and his followers to use 'legal' mechanisms to consolidate power including: the use of suspension procedures to oust political rivals; the packing of General Assemblies to support the Directorate, and the packing of the Directorate with political allies through the creation of new working committees, whose presidents had seats on it. Again the passage of all funds through the Directorate created numerous opportunities for patron/client pay-offs. Allegations of the fraudulent use of auxilios and partidas by both Congressmen and junta leaders were very common in the city. They included the allocation of auxilios to mythical settlements or institutions; the recycling of auxilios by the junta to local branches of the party that awarded them; and outright embezzlement of funds once received.

Thus the community development system was not a technically and bureaucratically neutral system, operating in the interests of the common good but rather the location of inter-factional and inter-party rivalries to capture and distribute the scarce resources it gave access to.
The Acción Comunal system was also used to defuse extra-institutional forms of opposition through the use of state resources as a form of political co-optation and social control. This is hardly surprising given that JAC status introduced the vital element of legality into the settlers' situation, and offered the prospect of formal links with numerous local and national agencies providing settlement goods and services. These functions of paralelismo (Ray 1969) were particularly important in rural areas affected by La Violencia, but examples existed in Pereira of attempts to wean squatters away from anti-National Front organizations (e.g. from Provivienda in La Isla de Cuba) by combining an unyielding approach to demands organized outside the junta system with the promise of resources through membership.

The predominance of vertical structures and the absence of horizontal linkages between juntas also meant that the Acción Comunal system was open to the politics of divide and rule where juntas were encouraged to compete for scarce resources whilst overlapping and ill-defined boundaries were a frequent source of junta rivalry in the city.

In the early Seventies, the absence of horizontal linkages was used by juntas in some parts of the country to challenge the status quo. Spontaneous municipal and regional associations of juntas threatened to become a powerful challenge to local and regional power structures (Bagley and Edel, 1975:17). In Pereira, however, the absence of these linkages was used by the dominant Camilista faction to reinforce municipal-level control. The Junta Central de Acción Comunal was set up by the Municipal Council in 1964 when only 12 JACs, existed in the city. It had considerable powers over individual JACs and acquired a patrimony of its own from auxilios and partidas which was subsequently
distributed to individual *juntas*. Table 57 shows that in 1971 $300,000 of the $1.25
mills, awarded in *partidas* and *auxilios* to the city's JACs went directly to the *Junta
Central* whose President was Camilo Mejía Duque. The subsequent demise of the
*Junta Central* can be traced to the 1973 measures (Decretos 835 and 836) which
set up municipal associations and federations of *juntas* precisely to neutralize
organizations of this type.

In Part Two the urban level has been our principal spatial frame of
reference for investigating empirically the economic, political and ideological
dimensions of self-help housing and state interventions. In chapters 7 and 8 we
shall proceed to identify these dimensions at a lower spatial scale through two
case studies of artisanal and state self-help building at the *barrio* level.
Notes for Chapter Six

1. Prior to 1970 the Pereira branch of the ICT was a sub-office in the Manizales branch.

2. In 1969 at the height of the programme the ICT had 174 PMA programmes operating in 99 settlements in 21 Colombian cities and distributed 183,652 kgs. of PMA foodstuffs for settlement improvements in Pereira (ICT, 1969).

3. Comprehensive data are not available for the Pereira branch but in 1971 Fondo de Redes programmes received 12.1% of direct branch investments, PMA programmes 2.9%, FHB 4.5% and FDC 2.1%. These allocations closely mirrored those at the national level (ICT, 1971b; 1973b).

4. These difficulties include: constant changes in the nomenclature of activities; constant changes in definitional criteria; changes in the quantity of goods delivered, systems of finance and systems of construction; the introduction of new programmes, and discrepancies in data issued by the branch offices and the central office.

5. At a national level in 1971 the ICT spent 32.8% of its total investments in new housing stock on minimum solutions, representing 58.7% of its output; in 1973 22.6% for 37.2% of its output and in 1975 34.2% for 37.8% of its output (ICT, 1971b; 1973b; 1973a; 1973b).

6. Thus according to a CENAC survey (Murillo and Ungar, 1978:164-165) over the period 1960-75, the Bogota, Medellin, Cali and Baranquilla branches received a minimum of 38% of total ICT investments, and in some years this reached 50% and 72% of total investments.

7. Over the period 1961-75 the agency managed to increase its resources at a rate of 5.2% in real terms (World Bank, 1978:4). The contribution of external credit was eliminated; the contribution from the government budget declined from 39% in 1961 to 14.1% in 1976 (World Bank, 1978:24); self-generated funds were increased to around a third of the agency’s budget in the mid-Seventies; and the share of internal credit was increased from around 10% in the early Sixties to around a half in the mid-Seventies (Bagley and Botero, 1978).

8. In April 1988 the post of mayor was thrown open to election for the first time.

9. The Department of Risaralda was formed in 1967 in a three way fragmentation of the former department of Caldas (Old Caldas): the rump of Caldas (with its capital Manizales); Risaralda (with its capital Pereira), and Quindio (capital Armenia).

10. The valorization system which dates back to 1921 in Colombia, was a means of financing public works and improvements by capturing in advance, part of the increase in land values derived from the improvements. Public works and improvements that could be financed through valorization taxes included: the
construction, widening, extension and paving of roads; the construction of pavements and footpaths; the provision of public service networks and street-lighting; the straightening, channelling or enclosure of water courses the draining of swamps; the construction of bridges and tunnels; the building of squares, public parks and sports and recreational facilities, and the provision of a large range of works and improvements aimed at ornamentation, beautification or security (e.g. planting trees, public fountains, roadside verges).

11. In Latin America in general in the 19th century, Conservative Parties tended to be rural-based and to favour decentralization and landowning and clerical interests. Liberal Parties tended to be urban-based, in favour of centralization, anti-clerical and oriented towards commerce and industry. Up to the 1930s one could correctly have characterized the Colombian Liberal Party as representing the interests of a rising industrial bourgeoisie and a powerful commercial bourgeoisie, and the Conservative Party as representing the interests of the great latifundistas. The conflict between these classes came to a head in La Violencia in the Forties and Fifties, but the processes which underlay this conflict also destroyed this political bipolarity. Capitalist agricultural development has since brought about a partial conversion of the latifundistas into an agricultural bourgeoisie; whilst industrial capital has also invested in the new agro-industries in order to ensure raw materials for industrialization, and in urban land and property. The 'modernization' programmes of the post-war period also produced a rapid expansion in the activities of finance capital. All of these fractions of capital- agrarian capital, industrial capital, commercial capital, property capital and financial capital were represented as political factions in both parties. For an analysis of the class basis of the political factions of the Liberal and Conservative Parties, see Pradilla (1974).

12. La Violencia, the last of Colombia's many civil wars, erupted after the assassination of Jorge Eliecer Gaitan, a populist Liberal leader in 1948. For a period of 10 years the country was rocked by civil war, banditry, terrorism and open class revolution that left anything from 150,000 to 300,000 dead. Although the struggle took on a party political character with Liberals pitted against Conservatives, the conflict was ultimately of a class nature with the landowning classes bitterly opposing the changes demanded by industrial and commercial interests, with both mobilizing the subordinate social classes in their cause. When these social classes began to move beyond these political parameters into a revolutionary position in defence of their own interests, the ruling classes in both political parties quickly united in order to terminate the conflict - first, by supporting the military dictatorship of Rojas Pinilla between 1953-58, and later by instituting the National Front agreements. Large areas of Colombia continue to remain in the hands of left-wing guerilla movements. See Guzman (1964) and Ramsey (1973).

13. 'It is necessary to suppress the concept that the political victor has the right to the spoils of the vanquished, and to transform the public administration from top to bottom replacing all the employees with a new set of favourites. The tragedy of each transfer of power in Colombia has been precisely that the current employees promote violence in order to defend their posts and aspiring employees promote it in order to acquire them' (Pact of Sitges).
14. The original agreement was to last for four Presidential terms terminating in 1974. After that date it was extended in a modified form.

15. The electoral quotient system has been applied to all elections for the Senate, House of Representatives, Departmental Assemblies and Municipal Councils since 1929. The system works as follows: the total votes cast for the elected body are divided by the number of seats at issue. This gives the quotient. The quotient is then divided into the votes cast for the different party lists (and under the National Front for the factions of each of the two historic parties). This gives in each case the number of seats won by that party. Any seats remaining will go to the party or parties with the largest sum of votes nearest to quotient. Thus if there were 11 seats for a municipal council and 500,000 votes were cast in total the quotient would be 45,455. If the Liberal list received 300,000 and the Conservative 200,000 then the Liberals would get 6 seats and the Conservatives 4. As the Liberal residual of 30,000 votes was greater than the Conservative residual of 20,000 and thus nearer to the quotient they would win the remaining seat. Before 1958 minor parties could win seats in the same way, but between 1958-74 they were excluded from assemblies and municipal councils, as only the two major parties could contest the seats. After 1974 this right was reestablished. The candidates themselves win elections according to their rank order on the respective party lists. Thus in the example quoted the first seven on the Liberal list would win seats as well as the first four on the Conservative list. Lists are made up by the party (or factional) leader. There is no opportunity for the voter to select individual candidates.

16. These difficulties related to what constitutes parity in regions with a strong loyalty to one of the parties, and to qualitative parity - parity in posts of equal importance. Though many of the problems of parity between the parties were ironed out, the allocation of posts according to factional strength proved more troublesome.

17. Thus though there had to be parity in any one Department in the number of Liberal and Conservative mayors, these did not necessarily always have to be the same municipalities. Similarly with the Departments - they changed from Liberal to Conservative hands and parity was maintained at a national level.

18. The heart of Colombian party life has traditionally been the patron-client relationship whose typical embodiment has been that between the hacendado and the campesino. At the service of the hacendado and acting as mobilizer and manipulator of the rural vote has been the gamonal usually himself a government official, an overseer, a local merchant or a landowner. Given such a system rooted in the pattern of social power, the necessity of any formal party organization was for long minimal. Meanwhile the hacendado has used his power over the vote as well as his connections with the upper class to occupy directive posts, or otherwise to wield his influence at the departmental or national levels of his party' (Dix, 1966:204). For a discussion of the development of caciques in urban contexts see Cornelius (1973) and Ray (1969).

Some observers have thrown doubt on the existence of urban caciquismo (Montano, 1976; Gilbert and Ward, 1985). However, they have tended to argue against the existence of caciques at the barrio level. An important difference with the usage here is that caciques are identified at the urban level and the factions of
the political parties are organized around them. *Caciquismo* in the thesis is also understood as being an articulated political/cultural structure whose origins have been variously traced in Colombia to ‘pre-capitalist’ and Spanish ‘feudal’ roots (Steward and Farol, 1959; Gibson 1973; Schwerin 1973). The term *cacique* was in common use in Pereira to identify these figures.

19. In the 1974 elections for President, Senate and the Chamber of Representatives in the Department - the Liberals took two thirds of the vote (66.1%), the Conservatives 18.8%, ANAPO 11.7%, and UNO (Union of the Left) 2.6%.

20. Up to 1967 the municipality of Pereira was part of the Department of Caldas whose capital was Manizales, a traditional Conservative stronghold, whilst Pereira traditionally had a Liberal administration. In 1967 the Department of Caldas split up and Pereira became the capital of the new Department of Risaralda. The tradition of the Liberal administration was however maintained.

21. However, these posts and the frequent need of the governing faction of the Liberal Party to form alliances with it in order to secure a working majority in the Municipal Council, allowed it to use the selective distribution of resources to some of Pereira’s settlements and to build up a political base there.

22. Thus in 1976 the Oscar Velez Marulanda faction was allied to the Llerista faction of the Liberal Party, and the Mejia Duque faction was allied to the Lopista faction at the national level.

23. The parity agreements allowed the party *caciques* to directly negotiate with the Governor over who should fill the municipal posts vacated as a result of changes in the departmental government.

24. Factions have been present in the Pereira Liberal Party at least since the Thirties. The principal factions which developed at this time became known as the *blancos* and the *negros* - the former consisting of technocrats, lawyers and professionals, and the latter businessmen, industrialists and financiers. Many local people indentify the conflict between the Velez Marulanda and Majfa Duque factions as being the continuation of this original factional schism.

25. Thus in the 1970 elections the Liberal Integration Front organized invasions for vote-catching purposes in the Cuba area. On April 18th, eight days before the Presidential and council elections, an invasion occurred on land immediately to the west of the road entrance to Barrio Cuba. That this invasion had been organized by the Front was suggested by the mayor and the Duque party press two days later:

'The mayor of Pereira informs the citizenry that yesterday an invasion occurred on land destined for public use in Barrio Cuba, and that the municipal authorities will have to demolish those houses that have been erected. The municipality is disposed to study with the poor people of Pereira all of its problems in order to arrive at a just solution. But it cannot allow public property destined for collective use to become the private property of invaders. The administration will continue to make efforts to seek a solution to the housing problem of the poor people of the city, but will not tolerate a demagogy based on
their hardship. It will be implacable in its application of the law against those who seek to encourage the poor to break the law in such a grave manner' (El Diario, April 20th 1974).

Despite these harsh words and the strident tone nothing was done, presumably because of the political sensitivity of using public force given the proximity of the elections. On April 26th 1970 the elections took place and a national victory for Pastrana, supported in Pereira by the Duque Liberals allowed the Duque administration to realize its threats, and to identify more positively the political agents responsible. Thus on April 27th 1970 the day after the result the following story appeared in El Diario:

'This morning the demolition was completed of the shacks on public land invaded in Barrio Cuba that had been raised before the elections and patronized by the Liberal Dissidence (the name used by the Duque for the Liberal Integration Front) who were thus trying to obtain votes, cheating poor people, and leading them to lose all their goods, which they had sold to buy bamboo and tiles for their houses. With the failure of these night-time invasions the false leaders of Barrio Cuba were put in their true place, which is exactly the same one as they have found themselves in the past electoral campaign'.

26. In Pereira, for example, it was a common practice for the national decentralized housing agency (ICT) to consult the local party caciques before making an appointment of the director of the local Pereira branch of the agency.

27. An alternative to this political switch of allegiance is of course the growth of political apathy. Although many low income settlements can go through sustained periods of political apathy, outside of the inquilinato districts where there is a floating population it does not seem to be very common, in Pereira at least.

28. This phenomenon is widely reported throughout Latin America. See Roberts (1978) Leeds and Leeds (1976); and Lloyd (1979) for examples from Guatemala, Brazil and Peru.

29. The most important of these were Acción Comunal; Acción Cívica-Militar; Acción Cultural Popular and Defensa Civil.

30. Between 1961-66 USAID advanced US $8.4 mills. in gifts and loans to Acción Comunal, and the budget of the National Division increased from $2.9 mills. to $22.5 mills. over the period (Garces, 1971; 317). Acción Comunal also received technical and organizational assistance from USAID, including the integration of Peace Corps volunteers into its structures.

31. It is difficult to estimate the proportion of the total population of the city formally integrated into the Acción Comunal system in the mid-Seventies but Table 56 attempts a rough estimate using 1973 barrio census returns. There are frequent discrepancies between the boundaries of settlements established by municipal legislation and the jurisdictions of the juntas. In Table 56 where the discrepancy of the JAC limits with 'official' barrios means there is no population data for 1973 available, population data from the ICT (1972) census was used.
32. After 1973 the various *juntas* in a municipality or department could form themselves into a Municipal Association or Departmental Federation of Community Development Boards. Their powers were however limited to advisory, promotional and training functions with no control over individual *junta* funds.

33. The 1968 Constitutional Reform restricted the amount available to Congressmen for distribution, but nonetheless considerable sums continued to be distributed. In 1976 the Commission, for example, wanted to distribute 1.6% of the 1977 National Budget.

34. Data unfortunately are only available for specific years and aggregate *partidas* with *auxilios*. Strong annual fluctuations in sums received by individual *juntas* therefore restrict the utility of the data. Table 57 lists the sums received by JACs within the city from *partidas* and parliamentary *auxilios* for the years 1971, 1974, and 1976, and Table 58 gives data on allocations of departmental *auxilios* in 1974.

35. This however has to be a rough estimate given the absence of population data for some *barrios* (particularly those formed after 1973) and given the often significant variations between the boundaries of the JAC *juntas* and the settlement boundaries established by the census.

36. For example in April 1970 the distribution of partidas from the Fund was based on the following national priorities: 22% for the development of collective municipal services; 22% for school building and communal centres; 17% for agricultural development; 26% for public works, and 13% for health and social welfare.

37. Thus on May 7th 1971 100 JACs in the Department of Risaralda received television sets as gifts from the President the day before he was due to make a public visit to the area.
Chapter Seven

BARRIO EL PLUMON: ARTISANAL BUILDING IN A SQUATTER SETTLEMENT

PHYSICAL ASPECTS

The settlement was formed by the seizure of a 12.5 m. strip of land on either side of the Pereira-Armenia railway lying between the road to Barrio Cuba and the Batallon San Mateo (Map 10). It was named after the political cacique Oscar Velez Marulanda.

The settlement stretched for about a kilometre along the slope between the meseta (1350m), and the Consota valley bottom (1280m). The railway negotiated a 70 metre ascent by running parallel to the contours and ascending through a series of wide loops. Erosion by the north/south flowing tributaries of the Rio La Dulcera gave the slope an undulated form (Map 11).

Mild gradients were achieved by cuttings and embankments with the land dropping steeply away from the tracks. The steep downslope confined construction to the northern strip where lots were backed by slopes of varying height and angles. Diagrams 20 and 21 show topographical cross sections of the site. At the foot of the barrio there was a steep northern backslope (A-B) with a large flat area facing the houses and then a rapid descent downslope. The backslope gently dropped way moving down the barrio (C-D), leaving flat land to the north and a steep descent into a tributary valley of La Dulcera to the south (E-F). The railway then entered a narrow 100 metre cutting with 80°-90° slopes.
Map for the location of the Cross Sections

Legend:
- El Plomón
- Rio La Dulce
- Road to Cuba
- Cuba Road
- Railway

Diagram showing the topographic cross sections of the El Plomón site.
DIAGRAM 21 TOPOGRAPHICAL CROSS SECTIONS OF THE EL PLUMON SITE.
towering 8m over the settlement (G-H). Thereafter another tributary valley was crossed by means of an embankment 90m long and 3-4 metres high (I-J). In the wet season it dammed up the headwaters to form a lake. The last 100 metres of the settlement were built along a 7m deep cutting with a slope angles of 75°-90° (L-K).

The topography confronted the residents with numerous difficulties. The height and angles of many of the backing slopes sometimes resulted in fatal landslides in the wet seasons. Many of the lotowners had to cut back the slope to reach the 12.5 metre limit of railway property, and the waste earth was deposited in the large cutting, impeding communications within the settlement. The embanked lake was stagnant and mosquito-infested in the wet season when rainwater also drained freely down the backslopes making many parts of the settlement a muddy quagmire. The disposal of garbage and sewage downslope created a serious health hazard.

SOCIO-ECONOMIC CHARACTERISTICS OF THE SURVEY POPULATION

Here we shall summarize the socio-economic characteristics of the sample population revealed by the survey which was undertaken in July/August 1976. Fuller details can be found in Appendix 5.

The total (resident and non-resident) population of El Plumon was around 800 people. Almost 60% of the sample population was under the age of 20 and a mere 8.1% was over 50 years old. The average household size was 5.5 persons. Though the nuclear unit was most common (68.9%), 13.8% of households had only one head.

55% of the sample population were migrants (according to place of birth),
and over a half of these were born outside of the Pereira cabecera but within the limits of Old Caldas. Three quarters of migrants had migrated 'indirectly'. The average period of residence of migrant heads of household in the city was 9.9 years. On arrival migrants lived throughout the city but concentrated in the Otun Valley inquilinatos and invasions. 71.4% of migrant heads of household named assistance from friends and relatives as the reason for locating where they did, and whilst over half respondents paid commercial rents for this accommodation almost a third (32.1%) were arrimados. Migrants showed high levels of urban residential mobility. The average number of houses lived in by migrants before moving to El Plumon was 4.48 but although their location changed periodically they tended to remain in low quality rented accommodation.

The sample population was largely literate (86.5%) with a greater tendency for female illiteracy. Only 44.7% had received some form of primary education and 12.2% secondary education.

One quarter (25%) of the sample population was economically active, and 12.8% of the EAP was itself unemployed, leaving an employed EAP of one fifth (21.9%) of the population. Almost a half (45.7%) of the employed EAP worked in unstable jobs. Almost the entire EAP worked in the 'low' and 'marginal' occupations.

The employment and income data indicated generally low income levels and substantial social and economic inequality. There was a wide distribution of monthly household income with a quarter (24.2%) earning less than $1000 (US $27), a half (51.7%) making less than $1500 (US $41), and a fifth (29.7%) making more than $2500 (US $69). An average household income of $1552 was calculated.
HISTORY OF THE SETTLEMENT

There are four principal points of interest in the settlement’s history: the history of the railways; the origins of the settlement; its relationship to the land market and urban development; and its relationship to municipal plans and legislation. A history of the railways can be found in Appendix 3 and we shall move directly on to the other issues.

The Origins of the Settlement

The Pereira-Armenia railway rose from the Consota valley bottom in a series of long loops and joined the Cartago-Manizales line on the meseta at the Nacederos station. It was the stretch of line leading up to the last loop (La Ultima Copa) that was invaded by the settlers. By early 1974 all services had been suspended; the line had already been invaded to the south (Barrio Cuba Carrilera); and a plan existed to build a new railway terminus just south of Cuba. The objective conditions for the further invasion of railway land were present, as were the political forces and conditions that were critical for success.

In Chapter 6 we saw how the Cuba area had become the central power base for the Liberal Integration Front and its cacique Oscar Velez Marulanda. The Front adopted two strategies to realize its central goal of displacing the Camilo Mejia Duque faction from power in the municipal administration.

The first was to use its electoral strength to participate in the complex factional arrangements governing the distribution of nominated posts in the municipal and departmental administrations. Through growing electoral strength, and clever alliances with other factions and parties in the municipal council, the Front was able to gain substantial powers of patronage in several of the
decentralised juntas under the Council's charge particularly in the important Public Services Corporation (EEPP), whilst Oscar Velez Marulanda's national influence (particularly with the railways) was frequently used to develop his local political interests.

The second strategy was to mobilize inquilinos into squatter movements (particularly in pre-electoral periods) in order to win votes and to force the administration into vote-loosing repressive measures. Several examples of the use of this strategy have already been given for the period 1968-74.2

Two significant events occurred immediately prior to the April 1974 elections. In February the Planning Department studied the possibility of building a new city railway station west of the airport on land owned by Oscar Velez Marulanda. A 4km by-pass would connect the Belmonte with the San Joaquin station, thereby freeing the Armenia and Cartago railway land in the Cuba area for alternative uses. In March the Department also granted hilos y niveles to residents of Barrio Cuba Carrilera for properties built within the 12.5m limit. Lopez Michelsen's victory in the April elections and accession to power in August 1974 fundamentally changed the balance of power between the two Liberal factions in the city. A new Governor appointed a Liberal Integration Front mayor for the first time, and through coalition the Front secured a majority in the municipal council under the presidency of Oscar Velez Marulanda.

The Front's accession to power triggered a wave of invasions in the Cuba area organized by the non-National Front left. In September 1974 the pro-Communist Provivienda organized an invasion to the south east of Barrio Cuba (La Isla de Cuba), and MOIR organized an invasion of railway land south of the Oso bridge (Cuba Carrilera Sur). Both of these 'mass invasions' adopted a
strategy of direct confrontation with the state. The El Plumon invasion also occurred at this time, but here settlement occurred through progressive invasion which as a political mechanism had the merit of sidestepping a direct confrontation with the authorities.

Barrio El Plumon started with a legally disputed land claim. In January 1974 the retired gatekeeper of the level-crossing over the Cuba Road (Map 12) sold off a plot in his garden. However, construction activities were blocked by the Planning Department until August. In September 1974 the invasion proper started. The settler sold half of his recently-purchased plot to Fabio Elias Montoya, a political organizer for the Oscar Velez Marulanda group. He cleared a large area down-line from the plot, and planted coffee. This area was then subdivided and sold as *compras de mejora*. Some newcomers to the settlement were reluctant to pay up, but it seems that his political muscle was sufficient to convince them of the need to pay 'Don Fabio'.

By October, 10 plots were laid out, most with 14 yard frontages. The attitude of the Front administration contrasted with its repressive measures against the two invasions organized by opposition parties to the south. During a personal visit the Planning Department Director issued three strictures: construction should be in a straight line allowing for a central access road 10m wide; maximum plot depths of 12.5 metres should be maintained; and construction should not take place on the southern side of the tracks. This was taken as official approval and rapid incremental growth by subdivision and illegal sale of lots continued with reports of people owning up to five 14 yd. lots that were subsequently subdivided into 7 yard plots for sale.
By December 1974 with rapid growth and blatant land speculation, the gatekeeper petitioned the Cali railway office to prosecute the municipal administration for encouraging the invasion. The Planning Department was forced to publicly denounce the speculation and the Government Secretary ordered regular police and army patrols to prevent further growth. Residents claimed that it was only the influence of Oscar Velez Marulanda that prevented eradication given the hostility of the Cali branch, local landowners and the army base. The crisis was resolved in February 1975 when an agreement was reached for the municipal purchase of the invaded land largely through Velez Marulanda's influence in the Bogota railway office.\(^5\) No transfer occurred (at least up to October 1976) but it allowed the withdrawal of the police and army, and continued settlement growth and land speculation. Even a new Camilista administration (March 1975) could not stop this process and by July 85 plots had been laid out. A letter to the Planning Department in May 1975 from an El Plumon resident identified Oscar Velez Marulanda supporters and a future secretary of the junta as the principal speculators, and another in July complained that poor families were being turned away because of shortage of funds by people 'who owned property in the city centre'.\(^6\)

In early 1975 the Oscar Velez Marulanda camp also used its influence in the administration and council agencies to improve settlement facilities. On January 5th a provisional General Assembly elected Fabio Elias Montoya as president of the junta. On April 2nd it applied for Acción Comunal status which was granted within the month, with jurisdiction up to the Batallon San Mateo. Armed only with the legal status derived from Acción Comunal membership and despite continuing tenure illegality, in July 1975 it acquired electricity and water
from the Public Services Corporation (EEPP), and a loan of $20,000 for individual electrical connections. These unprecedented measures were derived from the political influence of Oscar Velez Marulanda on the agency's directorate, through his suplente, Cesar Gaviria Trujillo, an important Front, sub-cacique. In August 1975 a plot was set aside for the construction of a local Liberal Party office. The settlement had now reached the deep cutting, which was gradually being filled with waste earth as settlers cut back their lots to the 12.5m limit. The first stage of the invasion process had been completed (Diagram 12).

In October 1975 a new but weak Duque administration was installed, and the political horse-trading of votes for settlement goods and services began in anticipation of the April 1976 elections. The settlement was now being organized for the Front by Gabriela Zuleta, a sub-cacique who had defected from the Duque camp to Velez Marulanda in December 1974. It was in this political climate that the second stage of the settlement was initiated through mass invasion.

Recruitment for the invasion took place in the pro-Velez Marulanda/Zuleta Otun valley settlements of Barrios Risaralda and San Judas. The invasion down-line from the cutting started in mid-October, and on October 23rd the Batallon commander wrote to the Planning Director openly identifying Oscar Velez Marulanda and Zuleta as its instigators. Two days later the Government Secretary invoked a 48 hour eviction and demolition order on the occupants of 14 houses in the second stage. Police attempts at demolition however were frustrated according to a police report of the event by 'Dr. Gabriela Zuleta Alvarez in the company of virtually all the residents in the neighbourhood'. The issue was then bounced between the Planning Department and the
Government Secretary, as a weak administration hesitated to use public force faced with popular opposition and countervailing pressure from the army. The impasse was breached on October 24th, 1975 when the Front's council majority managed to suspend the demolition order by arranging for a special council session to discuss the issue. A police census at this time recorded 21 ranchos, 17 lots ready for construction and 10 lots clearly staked out. Two days before the council meeting the Government Secretary received a telegram from Bogota railway headquarters expressing a willingness to negotiate the transfer of land ownership to the municipality. Clearly, once again the Oscar Velez Marulanda palanca had been used to secure the settlement's future.

These events were taking place in the middle, and as part of a local government crisis. The strength of local anti-Camilista forces had forced the Governor's resignation in late October and the appointment of a new one on November 5th. In the struggle to get a pro-Liberal Integration Front mayor, the faction used the issue of El Plumon type invasions in the council. On November 20th 1975 in a decision that provoked popular enthusiasm and national comment, the council ordered the mayor not to dislodge invasions on municipal land. The Camilista administration resigned and on November 25th Cesar Gaviria Trujillo, the Front sub-cacique was nominated mayor. Gaviria who had been actively involved in the political organization of squatter settlements quickly denounced the Council motion and declared 'publicly and officially that it is necessary to defend private and public property' (El Espectador Nov. 26th 1975). Simultaneously the police were withdrawn from the settlement, and the second stage was now successfully established.

A more uniform poverty and a collective system of allocating lots of a
standard 7 yard frontage, imparted a distinct physical and socio-economic character to the second stage. Initially the two stages were clearly marked by the earth infill but soon, latecomers set up 11 houses on top of this infill (see Diagram 22, pocket).

Relationship With the Urban Land Market

Maps 13 and 14 show land values in the area in 1968 and 1973. The area to the west of the Batallon was optimal land for coffee and sugar cultivation. The development of the Airport and Barrio Cuba in the early Sixties resulted in land values in the area being ‘squeezed up’ between the eastwards and westwards march of the Cuba and Pereira land markets. By the late Sixties with the further development of the Airport, the Olympic Village, the Avenida 30 de Agosto and Barrio Cuba it became clear that the area would be physically incorporated into the city within 20 years. The 1968 Pereira Development Plan anticipated this development by zoning most of the area for middle class residence, whilst Master Plans incorporated the area into the city’s service and infrastructure networks.

A wave of land speculation hit the area as some of the city’s best known land developers, and wealthiest and most powerful families began to buy up properties. The pattern of land ownership began to change under these pressures (Map 15). The south-western periphery was traditionally an area of coffee fincas and sugar cane estates owned by some of the city’s oldest families: both Barrio Cuba and the Batallon were built on sugar cane plantations; to the north and west lay Felix Carillo’s estate; to the south of the Rio Oso, there was the 110ha. finca of the Villegas family; south of Cuba lay the 200ha. estate of Fanny Aristizabal; to the northwest there lay the haciendas of Oscar Velez Marulanda, and the Caño
and the Cortes families. Between the Otun and the Avenida large properties were owned by the Sierra family (a 200ha. sugar plantation), the Ospinas, and the ubiquitous Felix Carillo.

By the early Seventies, many of these properties were broken-up and sold to the ICT or municipal administration, or to land speculators and developers. In 1970 the Villegas coffee finca was broken up and a large part purchased by a consortium that included some of Pereira's most powerful figures - Gonzalo Vallejo (a former Governor); Carlos and Arturo Angel and the Ramirez and Gonzalez families. In 1971 the Sierra estate was sold to Nicolas Ramirez, and in 1976 the ICT was negotiating for its purchase. In 1976 the municipal administration was negotiating the purchase of Oscar Velez Marulanda's estate for a new railway terminus; and Felix Carillo's properties to the north and west of Barrio Cuba were sold to the ICT, the Fondo Obrero and Pereira's notorious 'pirate' speculator Jaime Giraldo Garcia. Properties exchanging hands for $15-20m² in 1968 (US $0.80 - $0.89) had an official value of $75m² in 1973 and were fetching $90-100m² ($32-$38 constant 1968 prices) in 1975.

Map 15 shows the projected developments around Barrio Cuba. In 1975 the ICT (ICT, 1975) revealed plans for an integrated urban project to the west of Cuba to house 25,000 people over a 10 year period (Barrios Gamma, Aeropuerto and San Joaquin). To the east, in 1976, the agency began to construct the 6th stage of Cuba on the Villegas coffee estate, whilst the Fondo Obrero purchased the Villa Alicia site for $90m² from Felix Carillo. In November 1975 Carillo also sold the lands immediately to the north and south of El Plumon for $90m² to Jaime Giraldo Garcia who planned to build a 1000 unit middle class apartment complex at an average unit cost of $100-150,000 (US $3036-$4554). The
settlement plans were premised on the eradication of El Plumon and in 1976 Giraldo made a number of offers to the residents to secure this goal: alternative accommodation in Dosquebradas; rehousing on an adjacent plot involving $400 (US $12) monthly repayments for 15 years; and finally, individual cash settlements on generous terms. These offers had the effect of splitting the settlement between the wealthier property owners and speculators, and the poor who saw little to gain from them. Appeals were made to prohibit individual negotiations with Giraldo and tensions mounted with rumours of Giraldo buying off the junta’s directorate.

In August 1976 Giraldo levelled off the area to the north and many settlers found loose earth deposited in their patios.

The Zoning Plan reserved the area for single family, middle density housing and in this respect and in relation to the codes governing service provision, construction standards, height of backing slopes etc., the settlement was clearly illegal.

THE PHYSICAL DEVELOPMENT OF THE SETTLEMENT

Settlement Services and Infrastructure

The settlement was well-served by the Cuba-Pereira bus routes. The former course of the tracks acted as a central access road, but the infill in the cutting made even pedestrian communication difficult. The road was generally impassable during the wet seasons and access to the settlement was by footpaths over the Giraldo plot to the Avenida (Diagram 22).

Electricity and a provisional water system was installed in April 1976. A PVC pipe was laid along the settlement and connected to the main under the Cuba road. The water was turned on twice a day and 20 cement tanks were built
by the junta at measured intervals. The service cost $3500 (US$96.39) a month. The pipe frequently broke, and water was a scarce and expensive commodity in the settlement.

The greatest problem, however, was the absence of sewerage. Sewage was either collected in individual cess-pits or drained downslope through bamboo pipes laid under the road. Garbage was disposed of in a similar manner. There were no educational, health or recreational facilities. There was however a wide range of commercial and retail facilities. Numerous shops sold basic domestic supplies; there were cantinas, and a range of services was offered (including laundry, bakery, candlemaking, shoe repairs, and needle-work). Otherwise local employment was confined to local construction and agricultural work and most people sought or found employment in Pereira.

Housing Conditions

Housing data were collected in the survey, and in a housing census involving classification of the external aspects of all housing in the settlement. The results were represented pictorially in the Settlement Profile (Diagram 22) reference to which should be made in the following analysis.

Tenancy

Only one household in the sample was renting a house, and of the remainder (96.6%), one half were occupying the lot 'without title', and the other half through compra de mejora (Tables 60 and 61). However 20.6% of households stated that they lived with arrimados (17.2%) or renters (3.4%) (Table 62).

Housing Densities and Occupational Characteristics

Given differences in physical conditions, length of residence, and
construction rates, density and occupational data can only give an estimate of
conditions existing during the survey. By definition progressive development and
changes in family size can often involve rapid changes in the relationship of built
area to lot area and *per capita* space rates in a relatively short period of time.

Table 63 shows the distribution of lot areas in the sample and reveals the
system of land subdivision used. All lots had a depth of 12.5m and areal
variations were entirely due to differences in frontages which were based on the
division and further subdivision of 14 yard and 7 yard units. The Settlement
Profile shows these frontage variations and, a greater tendency to uniform seven
yard frontages in the second stage. Lot areas for 14 yard and 7 yard fronted lots
were 140m² and 70m² respectively. The distribution in the survey and Settlement
Profile suggests the popularity of 7 yard frontages, planned in the second stage
and based on the subdivision of 14 yard frontages in the first. Whilst only a small
proportion of lots retained the original 14 yard frontages, a substantial proportion
of lots were based on further subdivision of 7 yard plots. Areas ranged from a
minimum of 35.2m² to a maximum of 155m², the latter belonging to the President
of the *junta*.

Table 64 shows the distribution of the built areas for each lot in the
sample. The substantial variations can be attributed to differences in length of
tenure, income levels, specific site conditions, and initial lot areas. The smallest
built area was 16.8m², the largest 112m² and the average built area was 43.4m².
Table 65 gives data on the ratio of built area to lot size and shows that over two
thirds (68.9%) of the sample lots had built areas occupying between 41-80% of
the lot, indicating the rapidity of progressive development building.

The average number of persons per house was calculated at 6.45 with a
maximum of 14 and a minimum of 3. Tables 66 and 67 show \textit{per capita} space rates that indicate relatively low densities. Nonetheless using three or more persons per bedroom as an indicator, 74.3\% of the sample were living in overcrowded conditions (Table 68).

\textbf{Physical Housing Conditions}

Data on the use of materials in roofs, floors and walls can be understood in the context of the incremental replacement of materials associated with progressive development. About a half (51.7\%) of houses surveyed had floors of bamboo or wood, a quarter (27.6\%) of cement or \textit{baldosin}, and a fifth (20.7\%) of earth (Table 69). Over a half (51.7\%) of houses had split cane walls, a quarter \textit{bahareque} (24.1\%) and about a fifth (20.7\%) brick (Table 70). The priority given to stable roofing materials by self-help builders was reflected in the survey. 62.0\% of houses had clay tile as the predominant material, and 13.9\% a stable manufactured or industrial product (zinc, asbestos-cement or cement). However, a substantial 24.1\% had the unsatisfactory bitumenized cardboard (\textit{cartón}) as the predominant material (Table 71).

The Settlement Profile (Diagram 22) and census gave comprehensive data on housing types and materials in El Plumon. Table 72 shows clearly that in August 1976 the most popular material used in the front walls was split cane (41.3\%), whilst another fifth (21.4\%) had front walls made of the related \textit{bahareque}. About a third (34.9\%) of all houses had brick facades or walls. Significant differences between the two stages reflected the effect of their different dates of foundation on the progressive development process. Thus in the first stage brick was the most popular building material for front walls (49.4\%), whilst construction in split cane and \textit{bahareque} amounted to only 46.8\% of the
total. In the second stage, on the other hand, construction in split cane and bahareque amounted to a massive 89.3% of all houses.

The same pattern was revealed for roofing materials (Table 73). Within the settlement as a whole, clay tile emerged as the dominant roofing material in 41.3% of houses, and, roughly a third of all houses (31.7%) had cartón roofs. However, in the first stage, tile was the dominant roofing material (46.8%), followed by cartón in a fifth of all houses (19.0%). In the second stage this pattern was reversed: over a half of houses were roofed with cartón (53.1%) whilst the number using tile dropped to approximately a third (31.9%).

The differences in the use of materials between the two stages indicated the gradual replacement of temporary and unstable materials (split cane and cartón) with more stable ones (brick and tile). The provision of an adequate roof and a brick facade were regarded as high priorities.

The Settlement Profile (Diagram 22) gives numerous examples of progressive improvement of materials including typically the construction of a brick shell around a provisional structure, and the replacement of part of the roof with more permanent materials. A substantial proportion of houses (7.9%) were roofed with cement slab indicating provision in the construction process (laying foundations) for vertical progressive development. The Profile reveals three two-storey brick structures in the first stage, and five two-storey properties in the traditional style of bahareque and tile. 10 houses were built down the embankment on bamboo stilts giving three or four-storey structures with top-storey access.

Table 74 gives data on the internal housing facilities in the survey. A third of the houses (37.9%) had the kitchen in the patio; only one in five (20.7%) had a
toilet facility on site; only one in ten (10.3%) had a garden; and about a half (48.3%) had a wash-place on site. There was the widespread use of space for petty commodity activities (retail, commercial and artisanry), and over a third (37.9%) of households kept domestic animals including chickens, pigs, goats, turkeys, ducks, dogs and cats.

Thus the data on physical housing conditions indicated high levels of overcrowding, bad sanitation, and a lot of housing in a very poor physical condition. However, a considerable number of large, well-built properties were present. Significant differences clearly existed between stages, but the juxtaposition of properties with contrasting levels of physical development in the first stage indicated high levels of economic inequality.

COMMUNITY ORGANIZATION AND INSTITUTIONAL INVOLVEMENT

The nature, timing and levels of institutional involvement, and the form of community organization in El Plumon were profoundly shaped by political interests. Thus the attitude of the railways to the settlement was determined by the political influence of Oscar Velez Marulanda on the company, and by his economic and political interests in railway invasions. The relationship with the Armed Forces was governed by the political protection offered by the national status of Oscar Velez Marulanda and Gabriela Zuleta. The relationship with the Municipal Planning Office and the Government Secretary was closely governed by the changing political influence of the Liberal Integration Front in the municipal administration. Similarly the relationship with the municipal council and its agencies (particularly the EEPP) was closely governed by the faction's political strength in the council, and its agencies.
These political interests were expressed through the Acción Comunal structure, which was the only formal social organization functioning within the settlement. Legal identity associated with JAC status secured access to electricity, water and finance. Up to August 1976 the junta had received $90,595 in auxilios and loans from the EEPP, the Department, and the Velez Marulanda/Zuleta lists. Some residents claimed that part of these funds went straight into the Liberal Party branch coffers.

Accion Comunal reports (DIGIDEC 1976) showed that many of the settlement’s structures were either moribund or inactive. Between May 1975 and July 1976 the General Assembly met 18 times, with attendances fluctuating between 47 and 58 members. The Health and Sports Committees were inactive and even the Housing Committee had little to its credit - the collective construction of the Liberal Party Office, the water tanks and the collective organization of monthly water payments but little else. Land speculation was carried out by at least two Presidents of the junta. These organizational weaknesses occurred at a time when the settlement lacked legal tenure, adequate water supply, sewerage and roads, and where there was a complete absence of educational, cultural and recreational facilities.

ARTICULATION PROCESSES IN BARRIO EL PLUMON

Economic Articulation

The Acquisition and Development of Land

The area around Barrio El Plumon was clearly characterized by an increasing number of commodity transactions incorporating rural land into the urban land market. Agricultural estates were converted to urban functions or
were subdivided and sold to urban land speculators. These activities and those of
the state in providing housing, services and infrastructure increased land values in
the area to a point where low income groups were increasingly excluded from
both private and state projects. Thus with land selling for around $90/m² in 1976,
the average plot in the El Plumon sample (76.6m²) would have cost $6894 (US
$190) to the settler if purchased in a legal commercial transaction. With an
average monthly household income in the sample of only $1552 (US $43) and
assuming a rent/income ratio of 30% it would thus take the settler 15 months to
pay for the undeveloped land. Table 75 shows clearly how ICT Cuba projects
progressively moved upmarket over the years. In 1976-1977 solutions were in real
terms (constant 1961 $/m²) costing two to four times more than those built in the
Sixties. Again the Fondo Obrero Villa Alicia project offered housing at $80,000
(US $2203) with monthly repayments of $856 (US $24); and the Giraldo project
offered housing at $100,000-150,000 (US $2754-4131).

Land development costs were an even more important source of low
income exclusion from private and state projects. The Villa Alicia project
estimated land development costs alone at $180/m² and total land costs of $270m².
The exclusive development of the area for middle class settlement was further
consolidated by the municipal codes.

Given this exclusion, low income groups were forced to settle on land
market regarded as unsuitable by the market (e.g. the Consota valley bottom and
the railways). Moreover, land developed by the artisanal form could fall into the
lower sphere of commodity circulation because of its illegality (lower land prices),
the absence of service costs, and because of flexible adjustment to budgetary
fluctuations.
In Part One it was argued that artisanal forms of land acquisition rarely escaped the influence of commodity transactions; that invaded land was a potential commodity; and that transformation of land from a potential to a real commodity could quickly set in. The origins of Barrio El Plumon, a classical case of the professional invasion, were to be found in the right to land profits as a reward for political mobilization. Certain leaders were tacitly allowed to take more land than they needed for sale to other families. The original subdivision in the first stage was 14 yards, a frontage designed to permit further subdivision and sale of lots to newcomers. Sales by compra de mejora according to sample data allowed these people to net anything from $3000 to $9000 (US 1975 $91-273) for a 7 yard x 12.5m lot. Although there was less buying and selling of lots in the second stage it seems that most were also sold through the compra de mejora system.

The compra de mejora was an inferior legal instrument that enabled the seller to transfer the right to improvements, outside of the issue of land ownership. The study showed that sales took place for sums far exceeding the value of the improvements and therefore represented a kind of implicit land value. It proved difficult to arrive at an accurate estimate of the value of these commodity transactions, but the survey did reveal a general consistency in land values.11

Thus a municipal nightwatchman with an estimated monthly household income of $3000 (US $105) acquired a 14 yard plot (149m²) in December 1974 for $1500 (US $52), giving an estimated land value of $10m² (US $0.35m²). Another household with an estimated monthly income of $2000 (US $61) bought a similar size plot in May 1975 for the sum of $1700 (US $52) giving a value of $11.41m² (US $0.35m²). At about the same time another household with a monthly income
of $1200 (US $36) acquired a 70m² lot for $500 (US $15) - at a price of $10m² (US $0.30). This range of land values was maintained in the second stage where there was a more standarized distribution of 7 yd. lots. Thus in June 1976 a household with a monthly income of $1200 (US $35) bought a *compra de mejora* for $1200 (US $35) giving a total value of $16.14m² (US $0.44m²). A household with a monthly income of $1000 (US $27) purchased a similar *mejora* in the 2nd stage for $500 (US $14) giving an estimated land value of $6.72m² (US $0.19m²). Two examples existed of households who claimed they had paid a lot more for their *mejora* - $54.86m² (US $1.5) and $29.59m² (US $0.81m²). It was notable that neither required earth movements to clear back their patios. In these examples, in which it was claimed that the *mejora* itself involved no substantial improvement, land values were in the $10-20m² range (US $1975 0.30-0.60m²), and $1000-$1500 (US 1975 $30-45) generally passed hands. With an average monthly household income of $1552 (US 1976 $43) a sum roughly equivalent to one month’s income passed hands for land rights.

Thus, in El Plumon land values were running at about 5 to 10 times less than in the surrounding legal land market, and a plot could be purchased with an equivalent of 3 to 4 months rent in the city’s *inquilinatos*. The attractiveness of this land market for renters is obvious and explains why ‘avoidance of paying rent’ and ‘cheapness of the *mejora*’ were given as the principal reasons for moving to the settlement.

**The Provision of Construction Materials**

The following conclusions can be made concerning articulation processes governing building materials supply.¹²

1. The vast majority of building materials used in the settlement were
purchased as commodities on the market. Only two cases were found where throwaways constituted the predominant roofing material, and none where they were the predominant materials in the walls, and even these materials were acquired as commodities. In El Plumon the principal sources of artisanal materials were three medium size suppliers in Barrio Cuba.

2. Artisanal building uses all three forms of building materials (industrial, manufacturing and artisanal). Table 76 shows that of the 126 lots with some type of construction, 104 (82.5%) used industrial building materials in the external elements, 84 (66.7%) used manufactured materials, and 110 (87.3%) used artisanal materials. All houses combined materials from at least two sources because of the absence of straw, the traditional artisanal roofing material, in the city. Even the most elementary roofing materials had to come from manufactured (clay tile) or industrial sources (cartón). Two principal reasons can be identified for this diversity in materials.

First, although a high priority was often given a facade ‘en materia’ the availability and versatility of artisanal and manufactured materials (especially bamboo and clay tile), in combination with traditional building techniques often resulted in the construction of long-standing structures. Moreover, certain industrial materials (e.g. cement) were needed for even elementary construction and improvement.

Second, research revealed numerous houses that were built directly (rather than incrementally) with industrial and manufactured materials ‘to order’ by building contractors.

3. Several systems of progressive development were identified but most involved the progressive replacement of temporary for permanent materials and a
shift from artisanal to manufactured or industrial materials. The Settlement Profile (Diagram 22) revealed the widespread replacement of split cane and cartón for brick and tile. The provision of an adequate roof seemed to be the highest priority followed by a brick facade. Differences in materials use within and between the two stages indicated that the rate of incremental replacement was a function of the length of residence and the amount of available income.

Thus in the housing census 68 or 86.1% of all first stage houses, and 36 or 76.6% of all houses in the second stage were using industrial materials. However, if cartón is excluded two thirds (67.1%) of houses in the first stage were using industrial materials, but only one fifth (21.3%) of those in the second stage.

Similarly 64 houses (81%) in the first stage were using manufactured materials, but only 20 houses (42.5%) in the second stage. All second stage houses used artisanal materials and 62 houses or 78.5% of those in the first stage (Table 76).15

4. Differences between the two stages in the use of construction materials, the development of permanent structures, brick facades, stable roofing materials etc., indicated that the level of replacement of materials and the construction rate were functions of the length of residence and the amounts of available income. This was attributable to 11 months extra incremental investment in building in the first stage. Of course given the degree of commodification, the most important factor was the amount of household income available. The consequences of its unequal distribution were observable in the substantial differences existing between and within the two stages, and particularly within the first stage. The survey (Table 114) revealed that about a quarter (24.2%) of households had a monthly income of below $1000 (US $27), and a half (51.7%) below $1500 a month. However, a
fifth (20.7%) had a monthly household income in excess of $2500 (US $69). A minimum monthly income of $250 (US $7) and a maximum of $4500 (US $124) were recorded. These income differences undoubtedly produced variations in the rates of progressive development and levels of housing investment. The self-estimates of property values in the survey ranged from $1500 (US $41) to $96,000 (US $2644), and there existed at least one property whose market value despite tenure illegality was over $100,000 (US $2754). Income differences within the first stage were indicated by the high incidence of housing 'built to order', construction in permanent materials but without residence; and by the juxtaposition of substantial houses in brick, alongside bamboo and bahareque ranchos (Diagram 22). Land subdivision and speculation was of course one way whereby different levels of improvement between neighbouring lots was made possible.

5. Finally, exclusive adherence to family-based self-help systems precluded on-site collective materials production or their wholesale purchase.

The Organization of the Construction Process

The organization of the construction process in El Plumon revealed the way in which artisanal building was articulated with capitalist labour markets. Table 77 shows both the significance of wage labour and the continued importance of self-help labour in the construction process. 58.7% houses in the survey were built without wage labour - 48.3% through exclusively household labour, and 10.4% with additional labour inputs from friends, neighbours or relatives. However, a substantial 34.4% of houses had used paid labour - 24.1% through a combination of self-help and wage labour, and 10.3% entirely with wage labour. Two cases existed where the house was purchased in its existing condition.
as a commodity from the previous owner.

In Barrio El Plumon four distinct systems of construction can be identified each characterized by a specific form of organizing the labour process.

1. The most common system involved a sequential construction process based on the progressive replacement of temporary by permanent materials, the vertical or horizontal addition of new structures, and the alteration of earlier structures, in ways permitting continuous on-site residence. Clearly this process can take years to complete but its various stages were exemplified in different houses in the settlement.

The initial stage involved the creation of a multiple space (kitchen/dining room/bedroom) and a separate structure (letrina) at the back of the lot, housing a cesspit (Diagram 23). Construction was typically in bamboo with cane matting for walls; a roof of clay tile or cartón, and an earth or wooden floor supported by bamboo piles. Depending on household income and spatial needs this could become a permanent structure. Here progressive development consisted in replacing the roof with clay tile, putting in a wooden or concrete floor and replacing split cane walls with whitewashed bahareque. Interior spaces were divided by split cane partitions.

More commonly, however, this house acted as a nucleus for a larger structure. Extra bedrooms and usually a kitchen were built onto the back of the house and patio. This became the final structure and subsequent improvements involved upgrading the materials (cartón to clay tile, split cane to bahareque etc.). The result was a one-storeyed bahareque or split cane house in the peasant style (Diagram 5).
Often, however, this expanded structure marked the beginning of a third stage - its conversion into a one-storey town house (Diagram 6). Here a brick facade with the traditional *atico* was constructed. Subsequently a brick shell was built around the provisional structure and often the patio. The existing roof frame was adjusted to fit the new shell, the provisional structure dismantled and a cement floor added. The absence of foundations confined construction to one floor.

Self-help labour was widely used in this progressive development system with some specialized tasks being allocated to paid skilled workers (transference of roof, bricklaying, carpentry). However, the need for this labour fell in the last stage, and houses at earlier stages of development were largely produced by self-help labour. Variations in skill levels resulted in a variable product, but the versatility of traditional building materials such as bamboo and clay tile, and the use of traditional designs and construction techniques often produced relatively high standard shelter.

Thus the general characteristics of the labour process in this system were a high incidence of low skill self-help labour in the first two stages, with a greater tendency in the third stage to contract wage labour (*a maestro de obra* sometimes with a 'labour gang') for specific tasks such as the laying of concrete floors, bricklaying, carpentry, and service installation.

Converting a provisional structure of split cane and cardboard into a permanent brick and tile town house, or *bahareque* and tile 'peasant' house was expensive and the labour costs involved could be a vital consideration in the course of action decided upon.

2. A second system of progressive development popular in El Plumon was
also based on on-site residence in a temporary shelter but here constructed at the back of the lot. In the second stage, cement foundations and the brick walls of a permanent structure were laid on the front of the lot (Diagram 24). In the third stage, the roof of the temporary structure was transferred to the permanent structure, and the temporary shelter demolished. Extra rooms were progressively built onto the back of the structure. In the fourth stage, this roof was removed and a reinforced cement slab placed over the walls. A second floor could be added and the original roofing materials used to complete the structure.

The great advantage of this system was that it allowed reinforced foundations to be laid that permitted vertical development of the structure. However, many of the preliminary operations (foundations, floor-laying, construction of walls and service connections) required skills that the self-help builders often lacked. Thus in contrast to the first system the model required a high initial incidence of paid labour, with greater opportunities for self-help labour in the latter stages. High initial labour and materials costs could therefore make the model too expensive for many low income households.

3. In the third system, the lot owner contracted a small building company to build a house to personal design specifications, whilst he lived elsewhere. Sometimes this was a complete house 'to order', and the process differed little from that of the manufactured form. The result generally was a high quality, brick townhouse which could be developed either horizontally or vertically.

4. A fourth system of progressive development identified was closely associated with the high levels of land speculation in the settlement. Large initial plots were subdivided in two, and one half sold to other settlers. The money was used to improve the seller's house. Several examples existed of settlers
Diagram 24 Progressive Development in El Plumon 2

Stage 1: Temporary shelter erected on back of lot.

2. Foundations of permanent structure laid on front of lot.

3. Temporary shelter demolished, residence in permanent shelter built.

Stage 1: Original lot subdivided by squatter

2. Initial shelter erected on A, permanent structure on B.

3. Residence in B, shelter and lot A sold to other family.

Both models permit further horizontal and vertical progressive development if foundations are laid.
constructing a provisional shelter on one half of the lot, and building a permanent construction alongside it. Here a substantial two-storey brick structure could be built because there was no on-site residence until completion, when the provisional structure was sold as a *compra de mejora* to another settler (Diagram 24).

The most common system in the settlement was the conversion of a split cane shack with a cartón/tile roof into a one-storey town house. This system involved the maximum use of self-help labour in the initial stages. However, in general the incidence of wage and self-help labour in the production process was a function of income availability, and the stage reached in the progressive development process.

In this context the differences in the incidence of the two types of labour in the first and second stages of the settlement were instructive. Whereas 90% of houses surveyed in the second stage were built using only self-help labour, this was true of only 42.2% in the first stage. Only 10% of houses in the second stage used a combination of paid and self-help labour, but almost a third (31.5%) in the first stage. Similarly no houses in the second stage were built exclusively with wage labour, but 15.8% were in the first stage (Table 77).

Table 78 shows that 82.2% of the sample received no external financial assistance for construction. Consequently the level of development and type of construction were closely governed by the overall levels and distribution of household income.

**Housing Consumption**

The houses produced in Barrio El Plumon were clearly potential commodities, whose constituent elements (land, materials and part of the labour
power) were purchased as commodities. Although there were larger markets for land and simple ‘improvements’ several examples could be found of real housing commodities both in the sense of production expressly for exchange, and for subsequent sale after initial use.

Thus one household with a monthly income of $3000 (US 1976 $83) purchased a 95.6m² plot with a brick house, cement floor and tile roof for $53,000 (US 1975 $1609), a mere six months after the invasion started. In June 1975 another household with a monthly income of $1600 (US $49) purchased a 15m² split cane, bamboo and tile house on 62.5m² lot for $7000 (US $212). A similar price was paid in July 1976 for a 56m² bahareque and cartón house on a 75m² plot. In August 1976 a one-storey brick, cement and tile town house was up for sale for $55,000 (US $1515). The highest price paid for a compra de mejora in the sample was $87,000 (US 1975 $2641) for a 117m² lot, containing a brick house with a cement slab roof, baldosin floors, an impressive facade and a total area of 82.5m². Clearly the land and housing market was not confined to the lowest income groups.

Numerous economies were made possible by the progressive development systems and the element of self-design. The construction process was adjusted through horizontal or vertical expansion, within income constraints, to changing spatial requirements. Construction permitted the immediate investment of rents through the simultaneous production/consumption of the house, a major reason for the rapid construction rates achieved in the settlement. Similarly designs permitted use of the house as a workplace (retail, artisanal, commercial activities) and source of rental income. Space was often set aside to allow supplementary domestic economies - over a third of households interviewed (37.9%) kept
domestic animals, and many cultivated food crops on their patios (e.g., yuca, bananas, tomatoes, beans and coffee).

However two major diseconomies were identified with the mode of housing consumption in the settlement. First, the family-based progressive development systems inhibited the development of community responsibilities, towards those less able to help themselves. The old, the sick and the poor could not achieve the same rates of development as those with higher incomes, larger families, and greater skills. This uneven development gave rise to social tension, mistrust and apathy which inhibited the further development of community consciousness, and organization necessary for the acquisition of public services and facilities. Second, progressive development often involved unhealthy living conditions, overcrowding and lack of services for long periods of time especially for low income families.

Ideological Articulation

Three themes emerge in discussing ideological articulation in Barrio El Plumon: ideological aspects of transference of private property rights; ideological aspects relating to housing designs and settlement plans, and ideological aspects of the relationship between the settlement and the municipal codes.

1. The squatting process involved the transference of land from the public domain into the realm of private property. Legal issues played an important role in the consciousness of the settlers. They included the legal ramifications of compra de mejora status; the use of Planning Office interventions as legitimating devices; the promise of future tenure to secure withdrawal of repressive measures; and the use of personería jurídica as a legal pretext for public service provision.
The settlement history also revealed a tension between the consciousness associated with private property interests, and the collective consciousness needed for their defence, and the improvement of the means of collective consumption. Whereas ‘mass invasions’ involved an initial condition of collective organization that could be used to secure future settlement improvements, in progressive invasions of the El Plumon type - the consciousness appropriate to private property was more significant from the very beginning. Immediate entry into land markets and the exercise of the right to transfer property affected both the internal and external relations of the community. Social tensions derived from the sale of land rights for personal gain, and patterns of social inequality and uneven physical development combined to discourage cooperative behaviour.

2. The most interesting ideological aspect of self-help building was the relationship between the producer agent and consumer agent in the design and planning process, and its consequences for the relationship between housing needs and use-values. The majority of owners in El Plumon worked on, financed and managed the building process, and with no separation in the design process between producer and consumer, the resident could maximize use-values on the basis of a personal assessment of need. Elsewhere in the settlement a degree of separation between producer and consumer agents was present, but again the design process was largely in the hands of the consumer.

Distinct advantages and disadvantages can be identified with this control over the design process. Amongst the former must be included the flexibility to improve or expand housing according to the household’s changing spatial needs; combined construction/consumption allowing for the immediate capitalization of rents; the use of the house as a workplace and source of rental income; and the
incorporation of subsistence economies into designs. Disadvantages included failure to organize bulk purchases of materials and equipment; over- and under-estimation of materials required, and overcrowding, bad living conditions, and lack of services often over long periods of time.

The design process in El Plumon was mediated by ideological factors, but was everywhere governed by material constraints derived from the low level of development of the productive forces and low income levels. A striking feature of El Plumon was the wide variety of designs, building materials and housing types produced by self-help building (Diagram 22). Two clear ideological influences can be identified in the choice of designs and materials.

First, many artisanal builders designed their houses according to distinct social and cultural influences derived from peasant traditions. Long-accepted models of housing production and consumption were used utilizing traditional building materials (bamboo, clay tile, split cane and bahareque), techniques (single and multi-storey bamboo frame structures), and building skills. Design elements were strongly influenced by traditional value systems (e.g. in the arrangement of internal spaces, number and uses of rooms, location of services, and aesthetic elements). The use of these materials and designs often maximized housing use-values in terms of ventilation, light, space for horticulture, and the external location of toilets and kitchens to fit the logic of progressive development. However, the fact that these skills were not universally distributed in the community was amply revealed by the presence of both high standard and unsatisfactory structures built with the same models, materials and systems of construction.

On the other hand, there were numerous houses, particularly in the first
stage of the settlement, that were indistinguishable from the typical housing types in long-established parts of the city. In its system of construction, preference for 'modern' materials and designs, and adherence to the signs and symbols of urban value systems, this housing clearly reproduced the formal elements of urban housing ideology. Again the great unevenness in the quality of construction revealed that the required building skills were unevenly distributed amongst or available to the residents.

In effect, these buildings were the product of two distinct housing ideologies - those of rural and peasant traditions, and those of capitalist urban society. The relationship between them can be interpreted in terms of ideological articulation. The artisanal builder formulated his housing needs according to the process of ideological articulation accompanying his exposure to urban capitalist society. Housing designs were greatly influenced by the dominant ideological values and models of housing consumption and were expressed in the preference for industrial and manufactured materials and modern design elements.

Ideological articulation was observable in the progressive development process, where houses initially constructed according to traditional design models, materials and techniques were converted into urban town houses with modern materials and design features. However, these transformations involved a preconception by the resident of the final form and materials of the house, which was expressed in the choice of the progressive development models already reviewed. Elsewhere construction proceeded directly through the progressive development of housing that at all stages conformed to urban housing ideologies and models, sometimes with simultaneous residence in a temporary, traditional, on-site structure. Ideological articulation was therefore important for explaining
why the artisanal form used materials from all three forms.

It would be a mistake however, to identify this process purely as operating in the realm of individual ideological preferences. Given the commodity nature of the building process, the amount of available household income was crucial in determining the rate of transformation and the progressive development model used. Thus two-storeyed construction involved unavoidably high initial costs; 'building to order' was possible only for those with substantial initial capital and regular income; the choice between sequential conversion or simultaneous construction of a separate permanent house with on-site residence in a temporary dwelling, was largely determined by the different incidence of building materials and labour costs in the two cases.

3. The third ideological issue centred on the relationship between the settlement and the standards and specifications of the municipal codes. These codes zoned the area for middle class development, and were in conflict with construction standards in the settlement. Possible resolutions of this conflict were: the eradication of the settlement (which seemed unlikely, given the on-going patronage of the Oscar Velez Marulanda faction); the redefinition of the area as a 'zone for progressive development'; or the improvement of construction standards and services up to legal levels. The latter course of action seemed to be contingent on an improvement in the income levels of a substantial proportion of the population, high levels of middle class encroachment, and favourable treatment from the local state.

Political Articulation

The account of the origins and development of El Plumon showed the
essentially political nature of the settlement process, and the impossibility of discussing the nature of state interventions, organizational forms and internal conflicts, without reference to the political mediation of urban demands. The settlement history showed that it was impossible to discuss virtually any aspect of settlement development outside of the struggle of the two rival Liberal Party caciques for control of the local state apparatus, using the traditional mechanisms of ventajismo and patron-clientage.

Two broad themes emerge in discussing political articulation in Barrio El Plumon. First, there is the way in which the barrio was related to the political articulation of the low income settlement process in the city as a whole, and in particular its relationship with the political party system, caciquismo and systems of patron-clientage. Second, there is the analysis of the state response to the barrio and the conjunctural circumstances governing the use of domination-integration, and domination-repression measures.

In Chapter 6 we saw how the institutional political system in Pereira was based on caciquismo and hierarchical patron-clientage networks. It is relatively easy to trace the chain of patron-client relations outlined for the city as a whole in Model 1 (Diagram 15) within the barrio.

At the top stood the cacique Oscar Velez Marulanda anxious to build up a base of political support in the settlement and the Cuba area, in exchange for ‘privileged access’ to the institutional and state resources under his control within the party organization; the municipal council and its agencies; the departmental administration; the Bogota office of the railway; the national Government and Congress, and the local branches of the national decentralized agencies.

The sub-cacique who dealt immediately with settlement demands in the
first stage was Cesar Gaviria Trujillo a well-known political activist for the Liberal Integration Front in the Cuba area and a municipal councillor. As Velez Marulanda's suplente on the Public Services Corporation (EEPP) he played an important role in securing water and electricity for the settlement, despite its on-going illegality. In November, 1975 he became mayor of the city. In the second stage of the settlement (October, 1975) the political patronage of the Velez Marulanda faction was represented at a sub-cacique level by Gabriela Zuleta.

A third link in the patron-client hierarchy was that of political lieutenant. In Barrio El Plumon there was a clique of these figures who as a reward for the successful mobilization of the barrio into the political camp of the cacique were tacitly allowed to engage in the illegal trafficking of lots both for personal gain and probably as a means of collecting funds for the faction's coffers. In Barrio El Plumon this political clique took over the direct and formal leadership of the junta.

The political articulation of urban demands was vital for understanding the origins and development of the settlement and the varying nature of the response of the local state to it. Patron-client relationships had as their goal the exchange of votes and political support for a flow of goods, services and finance at the disposal of the cacique. Control of the municipal administration was the most important for the relations of ventajismo identified at the city level in Model 3 (Diagram 18). In this context Barrio El Plumon was an interesting case because during its first stage the barrio was linked in a patron-clientage relationship with the governing faction in the local state apparatus and in its second stage this faction was in opposition (albeit briefly).
The history of the first stage revealed clearly the relations of ventajismo established between the settlement and the local state which were identified at the city level in Model 3 (Diagram 18). Between 1968 and August 1974 the Oscar Velez Marulanda faction achieved growing electoral strength in the municipal council and Congress at the expense of the governing Duque faction. Using Barrio Cuba as its power base the faction was able to gain increasing political support through alliances with other party factions in the council; through its powers of patronage in the council-controlled juntas; and through the national influence of Oscar Velez Marulanda. A principal strategy employed by the faction and other opposition parties was to organize invasions in the area. The Mejia Duque faction’s tactics involved repressive measures against new invasions and attempts to win the political support of those in established invasions.

For many reasons, including opposition from Manizales over disconnection, the politics of conversion of railway land in Pereira involved the ‘fiction’ of constructing alternative facilities capable of continuing operations in the future. It was clear that the Duque administration’s plan for a rail by-pass would make substantial areas of railway land available for alternative uses, and facilitate tenure regularization in those sections already invaded. The possibilities for co-option of the Front’s support in these settlements may well have been the dominant consideration, given that these initiatives were made immediately before the April 1974 elections. Velez’s Marulanda’s tactics were to go along with the plan, given the possibilities for squatting opened up by the initiative. Formal negotiations with the railway company began in February 1974.

El Plumon’s origins have to be located in this political conjuncture whose significance can be derived from Model 2a. (Diagram 16). The Velez Marulanda
forces initiated the invasion process in January 1974 when the first plot was purchased from the gatekeeper. The response of the Mejia Duque administration was to exercise the domination-repression function, through constant police vigilance. This contrasted with its own attempts to coopt political support from Velez Marulanda in Cuba Carrilera through initiating land tenure regularization.

The March 1974 elections resulted in the accession of the Velez Marulanda faction to power in the administration for the first time (August 1974), and majority control of the council with Oscar Velez Marulanda as its President. By early September plans were drawn up for the new station on Velez Marulanda's estate. The Duque precedent, the progress on the project, and the accession of the Front to power alerted the non-National Front parties to the opportunities for invading railway land and led in September to the MOIR-led invasion of Cuba Carrilera Sur and the Provivienda invasion of La Isla de Cuba. Police control over El Plumon was removed, and the settlement grew through the 'politically diffuse' method of 'progressive invasion'. The Municipal Planning Office was seen to give approval with its regulatory provisions in October, which contrasted with its repressive measures towards the new non-National Front settlements to the south. In October 1974 opposition from local railway officials and the Batallon forced the administration to limit further growth through police and army patrols.

An agreement with the railway company promising residents future tenure - the result of Velez Marulanda leverage - gave a pretext for their withdrawal in February 1975.

The accession of two weak Mejia Duque administrations to power with a strong Liberal Integration Front presence in the council between March and November, 1975 allowed the Oscar Velez Marulanda forces to return to a more
direct identification with the settlement, which developed rapidly and consolidated its legitimacy at this time. *Acción Comunal* status was achieved with an expanded definition of the area of jurisdiction, and electricity, water and financial assistance were extended through the Public Services Corporation, both through the political influence of Velez Marulanda. The accession of a second and weaker Mejia Duque administration, the defection of Zuleta to the Velez Marulanda camp and a local political crisis led to a return to open political confrontation in line with the characteristics identified in Model 2b (Diagram 17). The mass invasion of the second stage was openly associated with Oscar Velez Marulanda and the sub-cacique Gabriela Zuleta, and was countered with the use of repression. An openly pro-invasion stance was adopted by the Front-dominated council. Again a formula for dissipating this repression was found through Velez Marulanda's influence on the railways and in the council. The associated political crisis was resolved by the accession of the Liberal Integration Front to power again, and thereafter these repressive measures were withdrawn.

Summarizing these relations of political articulation we can identify the following:

1. Recruitment to the settlement organized in part through Liberal Integration Front connections in the city's low income settlements.
2. Removal of police control to facilitate the start of the squatting process (August, 1974).
3. Political influence on the Bogota office of the railways to facilitate police and army withdrawal (February, 1975).
5. Provision of water and electricity from the Public Services Corporation despite on-going illegality (July, 1975).

6. Open sponsorship of the second stage by Zuleta/Oscar Velez Marulanda to defuse repressive measures.

7. Influence on the national office of the railways to secure promise of future land regularization (October, 1975) in the second stage.


The settlement was also articulated by the dominant political structures through its membership of the Acción Comunal system. This membership brought some positive benefits to the settler but despite its formal democratic structure the system proved powerless to prevent or transcend the development of patron-client relationships in the settlement. Indeed these structures did little more than formalize these relationships.

Internal conflicts had their roots in the serious social and economic inequalities in the community derived from high levels of unemployment, substantial income inequalities and significant variations in lot areas, rates of construction and housing improvement. The ability to create strong community organizations was substantially weakened by the identification of the junta with that group which was responsible for and enriched by the process of land speculation. Given that this group had access to the political patronage considered vital for the settlement's survival, the scope for collective organization within an institutional framework to ameliorate these inequalities seemed
In this chapter we have presented a case study of artisanal building in El Plumon. Theoretical analysis of the data was included in order to retain the integrity of the study at this spatial scale. In Chapter 8 we shall proceed in the same manner, though here our object of investigation will be a state self-help housing project.
1. The municipal codes stipulated a maximum height of 2 metres, and slope angles of 45° for backing slopes.

2. The following account of the origins and development of Barrio El Plumon has been pieced together from interviews with settlers, newspaper reports and the correspondence on the settlement conducted between the municipal and national institutions involved (the Municipal Planning Department, the Secretary of Government, the Railway Company, the Armed Forces, and Acción Comunal).

3. 'Don Fabio invaded a large area of land and planted cafe caturra. Afterwards he subdivided the land to sell the mejora. The plots were very expensive because he is a person who owns capital and wants to increase it, but a group of people prepared to invade the plots. He demanded and forced them to pay for the mejora because of his political influence' (Interview with settler August, 1976).

4. Frontages were measured in yards (varas) because Colombian railways were built according to US and UK specifications.

5. It was widely rumoured in political circles in the city that Oscar Velez Marulanda had been directly responsible for the appointment of the Technical Director of the national office of the railway company.

6. 'I should like to suggest that an inventory of plots be undertaken in Barrio El Plumon where numerous plots of land of considerable size are in the hands of people who are not in need of them, and who are selling them for exclusively commercial reasons without any benefit to the families living there. In addition there are other families without economic resources who have been unable to obtain a plot to organize themselves in a humane fashion. I believe that there are abuses that the office under your charge could eliminate now and which later may be proved to be insoluble. I appeal to your social and human spirit to help the poor families who have been marginalized from their basic rights, whilst other families with properties in the centre of the city take advantage of what should be in the hands of those who are truly in need' (Letter from a resident to the Director of the Planning Department July 8th 1975).

7. A member of the Municipal Council and House of Representatives, and at that time Chairman of the all important 4th Commission of the House of Representatives controlling the distribution of national auxilios, Zuleta was an important local and national figure who had been active in the city's politics for several years. In August she had been publicly denounced for the fraudulent misuse of national auxilios and began an intensive campaign to win support in the city's barrios.

8. 'I should like to inform the mayor that in the invasion El Plumon near the Batallon San Mateo which is concretely patronized by Dr. Oscar Velez Marulanda and Dr. Gabriela Zuleta Alvarez a number of offenders can be found at night engaging in the voto-abraco of the residents and others in the neighbourhood'.
9. 'This' - announced a popular leader - 'makes it easy for us to solve the housing problem of many families because the municipality has land that is suitable for these types of settlement' (El Tiempo, November 20th 1975).

10. Of course Presidents of these committees sit on the *junta* is directorate and in political terms their nominal existence can be significant.

11. It proved difficult to arrive at anything other than a rough estimate of the value of these land commodity transactions largely because of the reticence of those interviewed to give a true figure (because of its significance for the Giraldo project); lapse of memory, and because of lack of accuracy in gauging the value of the *mejora* (as opposed to land) at the time of purchase. In the first stage of the settlement, the *mejora* merely involved a staked-out lot that had been recently planted with a few token coffee bushes and banana trees; elsewhere the land had been staked out and levelled, whilst other cases existed of a temporary shack of split cane, cardboard and bamboo being sold as the *mejora*. At the time of the survey even substantial brick properties were up for sale. The problem was further compounded by the fact that the value of the *mejora* was also in part a reflection of particular site conditions, as well as of the date of purchase of the land. Nonetheless the data do give some clear examples of the amounts of money changing hands through the *compra de mejora* system.

12. Data limitations have to be borne in mind. The survey was undertaken some time after construction started, and it therefore had to rely on the memories of those interviewed. In a situation where there was rapid inflation in building materials prices, and where the system of progressive development was based on incremental irregular improvements finely-tuned to variations in household income, lack of accuracy in estimates of past costs by self-help builders constituted a serious obstacle. Often materials were acquired piecemeal and in very small quantities, and this made, for example, an estimate of the cost of a roof or a wall extremely difficult. Often payment for materials was made through non-cash transactions. An example in El Plumon consisted of one man who in exchange for three days labour laying a new tile roof in a neighbour's property was remunerated with the cardboard sheets which previously covered the house, and which he promptly used on his own property.

Second, as we have seen from the settlement history, there was considerable speculation in lots and houses in the settlement, and the actual condition of the *mejora* at the time of the purchase remained a second hand account often fudged with bad memory. Thus some settlers bought the *mejora* in the form of undeveloped land; others the land and a temporary shelter which they have subsequently improved and yet others the land and shelter of varying quality (including high standard finished housing) Thus in many cases it was virtually impossible to separate out the contribution of the building materials to the cost of the *mejora*, from land and labour costs and profits on sale.

Third, Barrio El Plumon is a classical example of a self-help system of family-based progressive development with little direct institutional or communal participation in the building process. By its very nature it therefore presents a maximum degree of variation between lots in the type of building systems used, the system of financing, the type of building materials, the rate of construction, the type of improvements carried out and so on. Thus houses existed within the settlement where the present owner worked on, managed and financed the entire
building process. However, other cases existed where the owner built only the initial stages of the structure, and then contracted out the remaining construction work to builders. Yet other examples existed of owners purchasing a completely finished house as the *compra de mejora*, and of the owners purchasing an undeveloped *mejora* and paying for the construction of a finished house before occupancy. In the latter case it is often very difficult if not impossible to arrive at an exact and separate figure for the costs of building materials, and the problem was further compounded by the fact that different houses were started at different times, and that rates of construction varied greatly both within and between the two parts of the settlement.

13. One interviewee who had used a large sheet of transparent polythene to cover the greater part of his roof claimed he purchased it from a ‘professional’ garbage picker for $120, and yet another who had used large sheets of metal taken from a demolished filling station claimed he purchased them from the foreman of the demolition gang for $200.

14. *Cartón* was a temporary and unstable roofing material (with an effective life of 6 months). It consisted of corrugated sheets of recycled cardboard, bitumenized and pressed by the large firm ‘Carton de Colombia S.A.’, and was sold on the market to self-help builders as a commodity.

15. These data refer only to the external housing elements. The use of artisanal and manufactured materials (particularly bamboo and wood) is widespread in internal structures and elements.
Chapter Eight

BARRIO HERNANDO VELEZ MARULANDA: A STATE SELF-HELP HOUSING PROJECT

GENERAL ASPECTS

The settlement was located in northeast Pereira in an area of great diversity. To the south and west lay Pereira’s eastern inquilinato zone (Barrios Villavicencio, Berlin, Corocito and Santander); to the east the working class settlement Barrio Alfonso Lopez, and to the north the squatter settlements lining the Otun (Ormaza, San Francisco and Charco Negro) (See Map 16).

The site was well served by local transport, retail and commercial facilities. There were also major employment sources within walking distance: the Hilos Cadena textile factory to the east; the Bavaria Brewery to the west; the textile, food-processing and metallurgical industries of Dosquebradas; and small clothing, and bicycle factories adjacent to Barrio Ormaza.

The relatively central location (1.5 kms from CBD) meant that the site could be easily integrated with the city’s infrastructure and service networks. The project also had access to neighbouring educational, health and recreational facilities which although inadequate, were due to be upgraded as part of an Integrated Urban Development Project. A 24 metre highway was projected to run through from the Puente Mosquera bridge to Barrio Kennedy involving the eradication of the riverside squatter settlements.
PHYSICAL ASPECTS

The settlement was being constructed on the southern slope of the Otun valley at a point where the river was running 50 metres below the plateau (Map 17). Diagram 25 reveals steep gradients and two parallel river terraces lying 10-15 metres, and 20-25 metres above the valley bottom, with widths varying between 80m and 20m. The slope to the plateau was particularly steep, whilst that between the two terraces contained heavy concentrations of boulders. The Otun's fluvial régime followed the rainfall régime closely, at its highest in April and November and at its lowest in August. The site was crossed by a network of streams draining off the plateau.

These physical conditions created several difficulties for the project. Steep backing slopes demanded complicated and expensive construction techniques; slope variations called for flexible techniques and designs; the boulders caused construction delays in the absence of earth-moving equipment; there were problems of erosion on the backslopes and flooding on the terraces; several streams drained off rubbish tips causing health hazards, and the Otun valley bottom was prone to flooding in April and November (Map 18).

SOCIO-ECONOMIC CHARACTERISTICS OF THE SURVEY POPULATION

The survey was carried out in May-July 1976. Full details can be found in Appendix 6 and we shall here briefly summarize its principal findings.

The project consisted of approximately 175 households, with an average sample household size of 7.5 persons. Over a half (54.3%) of the sample population was under 20 and a mere 5.5% over 50 years old. The nuclear family
DIAGRAM 25  TOPOGRAPHICAL CROSS SECTIONS OF THE HERNANDO VELEZ MARUIANDA SITE.

See Map 17 for location of the sections.
was the most common form of household but 38.3% households had only one head.

56.6% of the sample population were migrants and almost a half of these were born outside of the cabecera, but within Old Caldas. The average period of residence of migrant heads of household in the city was 16.5 years. On arrival migrants tended to live in the principal inquilinato zones in the west and northwest of the city. 58.6% of the migrant heads of household named assistance from friends and relatives as the principal reason for choice of initial location and 65.5% of the households paid commercial rents for their first accommodation. The migrant population showed high levels of urban residential mobility. The average number of houses lived in by migrants in the city was 5.4, mainly shifts within the market for low quality rented accommodation. By the time of the survey 47.0% of households lived in settlements adjacent to the site. 79.4% of households were renting.

The sample population was largely literate (77.8%) but female illiteracy was quite high. 68.6% of the sample population had received some form of primary education.

Approximately a third (36.7%) of the sample population was economically active, but with 17.1% of the EAP unemployed, the total employed EAP was only 30.4% of the sample population. Moreover, 55.6% of the employed EAP were working in unstable jobs. The occupational distribution revealed a predominance of working class jobs, but with significant proportions of white collar employment, and ‘marginal’ occupations.

Data on income, rents, and employment revealed significant inequality. Almost a third (29.5%) of households earned less than $1000 (US $27) a month
and 11.7% more than $2500 (US $69). An average household income of only $1336 (US $37) was calculated. On average over a third of household income was spent on rents.

HISTORY OF THE PROJECT

Relationship of the Plot to the Land Market

The various legal documents registering and transmitting ownership of the plot revealed its history as a lote de engorde.¹ In the Forties the area now occupied by Barrios Hernando Velez Marulanda and Alfonso Lopez (66,000m²) was used for pasturing horses. It belonged to the Castaño Robledo family and in 1946 was valued at $6000 in a will transferring ownership to the three Castaño Robledo brothers. In July 1956 an escritura was signed registering the value at $30,000. In August 1962 the brothers constituted themselves into a property development company and sold off the eastern-most half of the plot (33,000m²) to the ICT for the development of Barrio Alfonso Lopez, and in 1964 built 14 houses in the project through P.3. contract.

The ICT installed waterlines under the undeveloped plot to service the outlying barrio, greatly increasing its value. However the continued invasion of the valley bottom upstream from Barrio Ormaza increased fears of invasion of the property. An attempt by the Castaño brothers to develop a part of the plot in the late Sixties, was abandoned when the capital costs of building to the specifications of the new municipal codes became known.²

In 1974 the Fondo Obrero purchased the plot (33,112m²) from the brothers for $1.3 mills (US $45,918) and in September ownership was transferred to the Junta de Acción Comunal Hernando Velez Marulanda for this sum.
Maps 19 and 20 and the accompanying cross sections (Diagram 26) show the land values in the area registered in the 1968 and 1973 cadastral surveys. These data were generally confirmed by land values recorded in the various legal documents which gave values of $11m^2$ in 1946, $22m^2$ in 1956 and $39m^2$ (US $1.37) in 1974.

The Origins of the Self-Help Housing Project

The history and organization of the self-help housing project demonstrates the process of ‘political mediation’ of low income housing demands that was pointed out in Part One.

In the early Seventies the Duque-led faction of the Liberals was still in charge of the municipal administration but its hegemony was increasingly challenged by the Liberal Integration Front. A major element in the Front’s strategy was to mobilize inquilinos into invasion groups in order to win votes, and to force the municipal administration into vote-losing repressive measures in pre-electoral periods.

The western inquilinato zone around the cemetery was an important focus of political activity in the early Seventies, partly because of local discontent with an ICT slum clearance programme in (Barrio San Camilo). Some reports had it that up to 800 families in the area were being organized into housing pressure groups by political activists, and in particular by the Liberal Integration Front. In January 1971 200 families largely from the area, invaded lands alongside the Otun and established two settlements, El Triunfo and La Gaitan. As the domination-repression function was limited by forthcoming local elections, the
Duque faction's response was to attempt to co-opt invasion movements organized out of the San Camilo area.4

Perchis Giraldo, the settlement leader recounted how he had been on the committee representing those expelled by the ICT from the San Camilo project. By 1971 the committee concluded that the ICT would not meet their housing needs and an 'independent' group of 35-40 people was formed to investigate the best way to address these needs.5 The group grew steadily and by the end of 1971 attracted the attention of Hernando Velez Marulanda an important Duque sub-cacique.6 According to Giraldo, Velez Marulanda dissuaded the group from organizing an invasion and persuaded it to take the path of an 'invasion legal'.

The future evolution of the project - the obtaining of legal identity, the delivery of national and departmental auxilios, and the municipal loan for land purchase and technical assistance was outlined at this time. Thereafter the group counted on the political patronage of Hernando Velez Marulanda and the Duque faction. Their meetings were now held in the Liberal Party office in Barrio Venecia and Hernando Velez Marulanda allowed the use of his car to look for a suitable plot. By April 1972 over 100 families were affiliated, almost all being recruited from the area around Carreras 7 and 9 and Calles 29-33.7

In the April 1972 elections the Duque faction managed to stave off the threat of the Liberal Integration Front. The group (now with 144 members) was granted junta de acción comunal status in October 1972 despite the fact that it had no territorial identity, and used its legal status to set up two bank accounts. Finding a suitable and cheap plot proved difficult and by August 1973 membership had dropped to 120.8

The first institutional moves to provide finance for land purchase occurred
in September 1973 when the Duque-controlled municipal council established the *Fondo Obrero* to fund housing projects for municipal workers. A loophole was introduced that allowed the *Fondo* to assist projects of the type proposed for the group. In February 1974 the *Fondo* was authorized to extend finance to the *junta* for the purchase of a plot and in March 1974 the agency purchased the land.9

This spate of developments after a long period of inactivity coincided with elections due on April 18th. Nine days before the election, a national *auxilio* of $10,000 (US $350) was also deposited in the *junta* bank account.

The Duque group failed to stay in power after the April elections but the community had already made considerable progress: it had acquired legal status, access to public funds; the promise of a loan to purchase a specific plot of land, and its three bank accounts held assets of $251,698 (US $8813). As the major obstacles confronting the project had already been overcome, political cooption was the logical policy for the new Liberal Integration Front administration. On October 2nd the legal documents transferring ownership were signed.

Between October 1974 and March 1975 institutional arrangements were worked out with the Municipal Planning Department and various local agencies. In March 1975 the *junta's Assembly* accepted the designs and plans submitted to it by the Municipal Planning Office; agreed on arrangements for on-site training with SENA; decided on a cooperative system of self-help building and organized itself as a 'housing committee' within the Acción Communal system. On April 20th 1975 almost 4 years after the group's formation, work finally began on the first house.

Once work started, the numbers applying to join increased dramatically. Almost 30% of the sample claimed they were not original members and several of
those interviewed indicated that membership had been achieved through political
cornerstone with the Liberal Party Directorate or through 'personal links' with
Perchis Giraldo.10

By July 1975 around 250 families were either members or applicants to the
scheme. Some of the applicants were accommodated, but many were unable to
join for lack of the downpayment. Giraldo's solution was to organize 50 families
into the Housing Committee Chico Restrepo under the statutes of the junta,
which negotiated with the municipal administration for housing plan status.11
When this was not forthcoming, he organized an invasion of municipal land near
the Mora Mora stadium in the lead-up to the April 1976 elections, which resulted
in separate legal identity and a Fondo Obrero loan.

The junta shifted its political support towards the Liberal Integration Front
in late 1974, and began to receive assistance from numerous public bodies in late
1975 and early 1976. Technical, planning and design assistance was received from
the Municipal Planning Department; equipment was borrowed from the Secretary
of Public Works; and SENA introduced on-site training for construction,
carpentry, electrical training, and dressmaking. In November 1975 the junta was
awarded auxilios of $300,000 (US $9107) from the Oscar Velez Marulanda and
Gabriela Zuleta lists, and in December 1975 the Caja de Credito Agraria
promised a $500,000 (US $15,179) loan for a carpentry workshop. In May 1976
the World Bank was considering a leading role for the junta in the administration
of Neighbourhood Development Centre (CDV) on an adjacent plot. In May 1976
however, things began to take a sour turn. The Planning Department was forced
to suspend the distribution of finished housing, the Zuleta auxilios failed to arrive
and in June the police were looking for Perchis Giraldo for suspected embezzlement of project funds.

THE NATURE OF THE HERNANDO VELEZ MARULANDA SELF-HELP HOUSING PROJECT

The project involved the construction of a planned settlement of 217 houses through a cooperative self-help system using the organizational structure of Acción Comunal, with the assistance of numerous public institutions. The cooperative system was extended to land development, the organization of the labour process, the manufacture of building materials, the extraction of sand and gravel from rivers, the processing of wood, housing construction, and the collective organization of social, cultural, recreational, health and employment activities. The cooperative system also covered certain aspects of consumption - such as collective financing systems and consumer cooperatives.

Plans, Designs and Physical Aspects

In the regulations governing 'Progressive Residential Development' and 'Housing Plans', the Municipal Planning Department was responsible for providing plans and designs in consultation with the junta. The junta was asked to specify its requirements and the Planning Department, in collaboration with the Architectural Department of the National University in Manizales, threw the design for a self help housing project open to competition. Twenty entries were received, narrowed down to eight by the Planning Department which were then submitted to the junta's General Assembly for selection. The designs and plans from two Departmental Planning Office architects were accepted, work commenced in April 1975, and by July 1976 twenty houses were nearing
completion, some built according to design modifications introduced by the settlers.12

The plans and designs involved the construction of 217 single family, two storey houses, a system of pedestrian roads with two principal access roads, a community restaurant and artisanal centre, a green area, a children's playground and a concrete play area (Map 21). They can be analyzed in terms of the interrelationships between three types of space.

Private Spaces: The Housing Project

The design provided for a single family, two-storey house with a built area of 96m² on a 66m² lot (Diagram 27). Further construction in an enclosed patio (18m²) would allow an eventual built area of 114m² if desired. 217 lots were to be laid out in 17 blocks at a density of 180 persons per ha.13 72.1% of the total site area was to be allocated for private use.

The arrangement of internal spaces involved a shared living room/dining room, a small kitchen, service unit, and a rear bedroom on the first floor. Access to the patio was via the kitchen. The second floor consisted of an open space served by four windows that could be partitioned into four bedrooms.

The design eliminated front gardens and rear street access to the patio. The facade was characterized by four brick columns that constituted an embellishment, and the absence of an atico. Attempts to incorporate this design feature (in the first nine houses) led to serious construction problems and a reversion to the original design (Diagram 27). The design demanded a reinforced perimetral concrete foundation and earth infill, a simple concrete floor with a cement finish, cement block walls with asphalt insulation supported by lateral
wooden beams; and a simple wooden roof frame to support asbestos-cement sheets.

The house was originally designed for progressive development around a basic service nucleus and two bedrooms. However this procedure was rejected by the *junta* under the influence of Perchis Giraldo, who for 'psychological' reasons wanted to see completed housing as quickly as possible.

In April 1975 work started on the two eastern most blocks (see Map 21). The cooperative system of construction and the municipal codes prohibited temporary shelters to be built on-site. However despite official and local opposition 17 *ranchos* were built housing 25 families on the site.

**Public Spaces**

The settlement plans involved the full integration into the city grid with the extension of Carreras 7, 7a and 8, with 7 bis as the principal vehicular road. Pedestrian roads were extensions of the north-south calle system (calles 2, 2a and 2 bis). The total area destined for public use was 6000m$^2$ or 18.2% of the total area (Map 21).

**Communal Spaces**

The plan allocated 3200m$^2$ for communal areas, 9.7% of the total area. A large central block of land facing carrera 7 bis (Map 21) was designated for a school, health centre, a community centre with a training workshop and a green area. A small playground was also planned in the west of the plot. The central communal area was occupied by a temporary workshop - a bamboo and tile structure used for the manufacture and storage of bricks and sewage pipes.

Temporary connections to neighbouring electrical and water supply systems were made, and permanent connections would involve no great cost or difficulty.
Sewerage installation would however be expensive and difficult on steeply-sloping parts of the site. Table 1 compares specifications with the minimum norms stipulated in the 1968 municipal codes, and with the revised minimum norms for a Progressive Residence Zone. Many specifications were illegal in relation to the 1968 codes (lot areas, absence of front gardens, road and parking specifications, areas allocated for recreational and collective activities), and some continued to be illegal under the new codes (e.g. parking and recreational areas, pedestrian roads).

Institutional Involvement

The project was highly institutionalized with relatively low levels of decision-making autonomy.

Acción Comunal

Although the original group was relatively free of institutional links, it soon constituted itself into a JAC. Subsequently virtually all aspects of its social, cultural and the political life, as well as the organization of the construction process were carried out within the Acción Comunal structures.

The Municipal Planning Department

The project rapidly became a testing ground for a more general policy of assistance to self-help housing plans in the city. The junta undoubtedly benefitted from the liberal approach of the Planning Department, but it also suffered from its emphasis on strong supervisory functions, the political influences on its activities, and delays in carrying out its obligations. Despite some tolerance of legal infractions, the Department generally pressurized the junta to act legally, whilst convincing the Municipal Council to pass legislation regularizing this type of
housing plan. Municipal codes were revised to permit progressive development to lower norms in designated areas (ZPR) and to define the extent of the Department’s responsibilities and powers.16

The Department provided technical, planning and design assistance to the project and coordinated the activities of the other agencies involved including the Secretary of Public Works, the Secretary of Government, SENA, ICT, Caja Agraria, and even international agencies (CARE, World Bank). However these benefits were offset by a constant interference in the internal affairs of the community, inadequate grassroots consultation in the formulation of plans and designs, and a construction rate dictated by bureaucratic delays and the prohibition of full on-site residence in temporary dwellings.

SENA

SENA set up four basic training programmes as part of its ‘Mobile Programmes’. On-site courses in construction, electrical skills, dressmaking and carpentry were taught by instructors in the evenings and at weekends.

The Fondo Obrero

The Fondo Obrero’s role was confined to a loan of $1.22 mills. for land purchase and a mortgage in the event of default.

Other Institutions

The junta also struck up relations with numerous other institutions. In December 1975 it secured a loan from the Caja Agraria to equip a carpentry workshop; CARE gave courses on dietary cooking to the kitchen committee; agreement was reached with INDERENA for access to the bamboo reserves on a borstal farm at Combia, and with the Secretary of Public Works for access to
municipal equipment; and contacts were made with the ICT and the Public Services Corporation (EEPP) for service provision.17

Social Organization and the Organization of the Construction Process

Virtually all aspects of the organization of the construction process were expressed through the Acción Comunal structures.

Conditions of Membership

Article 4 of the junta's regulations stated its purpose as the construction of 'popular economic housing' through 'personal community labour', and the 'education' of its members. Article 7 confined membership to heads of family over 15 years old who were residents of Pereira. No family member could own other property and no member could remain illiterate. All members had to be able to make a downpayment, initially of $4500 (US $140) but increased to $6000 (US $165) in May 1976; and weekly charges of $20 (US $0.70) increased to $40 (US $1.40) in May 1976. All had to take out a life assurance policy which was partly in favour of the junta's housing committee. Grounds for expulsion included antisocial behaviour; ownership of property elsewhere in the city; and failure to pay fines and installments. Expulsions had to be approved by a two thirds majority of the General Assembly. The statutes however stated that no member could be expelled for lack of money alone. Article 16 gave the Directorate right to replace members who had retired or been expelled from the project.

The Organizational Structure of the JAC

The general policy-making body of the junta was the General Assembly which met weekly to approve investments, make recommendations and introduce changes in the construction process. Day-to-day coordination of activities and
resource management was carried out by the Directorate (*Junta Directiva*) consisting of the President, the Vice-President, Treasurer and Secretary; the Presidents of the three working committees (Housing, Education, and Monitoring), and the Fiscal (Diagram 28).

The three working committees met once a week, and a SENA survey in 1975 showed that 78.4% of the sample (n=51) belonged to one or more of these committees. The Education Committee was concerned with fulfilling the literacy requirements and organizing the SENA training programmes; the Monitoring Committee coordinated the activities of the Education and Housing Committees, and the Housing Committee was concerned with the organization and management of the construction process.

**The Organizational Structure of the Housing Committee**

The controlling body of the Housing Committee was General Assembly which appointed a Directorate to execute its decisions. The Directorate consisted of a President, a *maestro de obra* (from the Builders Committee) and a Treasurer and Fiscal. The President, Treasurer and the Fiscal had the power to sign cheques; contract labour; lend money; acquire construction materials; buy land, and supervise the labour and fiscal regime of the Committee, but these powers could only be exercised in consultation with the full Directorate.

The specific tasks involved in the housing project included land development; the on-site assembly of construction materials; labour-training, and the construction and distribution of houses. These activities were carried out through subcommittees responsible to and coordinated by the Directorate (Diagram 29).
Diagram 394: Organization of the Hernando Verel Marulanda Housing Committee
The Production Committee produced cement bricks and sewage pipes for the project and sale elsewhere. All members had to contribute four hours labour on this task on a rota basis (gangs of five persons working a four hour shift). Two hours of this labour were credited to their ‘sweat equity’, and two hours to the collective work bank.

The Builders Committee consisted of 9 members with specialist building skills who were paid to work full-time on the project by the junta.

The Workers Committee consisted of those members who had received or who were receiving SENA training.

The Founders Committee acted as a mutual aid committee and collective work bank for original junta members. In May 1976 it had 35 members.¹⁹

The Kitchen Committee supplied food and drink to the workteams every Sunday on fiestas.

The Residents Committee acted as a mutual aid committee for the 25 families living in ranchos on-site. It collected the $40 (US $1.10) weekly rent and organized the obligatory nightwatches of the community’s assets (2 nights per month per family).

The Youth Committee encouraged sports and recreational activities.

The Timekeeping Committee was in charge of keeping the books on compulsory labour and financial contributions; fines; work exemptions in the case of sickness; and the buying and selling of hours that was permitted in the statutes.

The Organization of the Construction Process

The project was an example of a cooperative system of self-help housing in which everybody was engaged in a wide range of tasks, with specialized functions being carried out by paid workers and staff from participating entities. Everybody
was contributing to the construction of everybody else's house and a system of adjudicating finished housing was written into the statutes. Cooperative activity included the collection of primary materials (sand, gravel, bamboo); the on-site assembly of construction materials; and all aspects of the construction process.

The statutes stipulated that all members worked a minimum of 6 hours a week, and although members could work on other days, most work was carried out during a compulsory labour *convite* on Sundays. Allocation of tasks was carried out by the Directorate of the Housing Committee, the Builders Committee, the Workers Committee, and SENA instructors coordinated by the Monitoring Committee. The land was cleared by work-groups (20 or more persons) using pickaxes, shovels and dynamite.

The cooperative system was extended to the production of cement blocks and sewage pipes. Work-teams were organized every Sunday to go to Cartago to collect sand and gravel from the River Cauca. Bamboo was cut every six weeks in Combia. Cement was bought wholesale in Santa Rosa and stockpiled whenever finances permitted it. Processed wood was bought from Pueblo Rico and asbestos-cement roofing materials were bought directly from the Manizales factory. Transport of materials was undertaken with municipal equipment (Secretary of Public Works) with the drivers paid by the *junta*. Iron frames and parts were purchased, but some were welded on-site. Eventually it was hoped that with training, project members would be able to put in sewerage, electricity, carpentry, and plumbing themselves.

There was an almost continuous production of bricks and sewage pipes on-site by the Production Committee. Using a mixture of cement, gravel and sand, over 3 tons of bricks were produced weekly with two simple block-making
machines. In February, 1976 they cost 43 centavos a unit to produce and were sold at 60 centavos. Outside of the block and pipe presses, very little machinery was used. SENA equipped a workshop for teaching electrical and construction techniques in one house, and in June 1976 a loan was received from the Caja Agraria to buy wood-processing equipment. There were plans to put a motor on the brick-making machine, and in July 1976 the idea of making a tile press was discussed.

Labour was credited at fixed rates against the future cost of the house. The JAC statutes stipulated that everybody had to work a four hour rota on brick production. Although there were exemptions for sickness, the labour regime was strictly enforced. Thus Article 8 stated that if a person could not attend the Sunday convites, he had to find a replacement worker, and also work on a weekday himself. Article 10 imposed a fine of $5.00 or two hours labour for failure to carry out an allocated task. Article 11 allowed for hours of work to be bought and sold, and there was a considerable trade in them. Moreover, other family members could work on the project and their hours be accredited to the registered head. There were 9 full-time building workers who were junta members and paid $350 a week, and there were also 30 trainees whose construction skills when used on-site were credited at $5 an hour.

**The System of Financing**

The principal sources of financing were:

1. Initial downpayments - originally $4500 (US $158), raised to $6000 (US $165) in June 1976.
2. Weekly payments - $20 (US $0.70) a week, raised to $40 (US $1.10) in June 1976.
3. Annual interest on life assurance policies - approximately $80 per member (US $2.20). Redemption payments amounted to $10,000 (US $275) for natural death, $20,000 (US $551) for accidental death, 80% payable to the beneficiary, 20% to the *junta*.

4. $40 (US $1.10) weekly rents from the 25 families living on the *ranchos* on-site.

5. Cash fines and cash surpluses from the kitchen committee.

6. Revenues from the sale of bricks, sewage pipes, sand and gravel to other self-help builders.

7. National and Departmental *auxilios*. - Between April 1974 and May 1976 the *junta* was promised $505,000 (US 1976 $13,908) and received $440,000 (US 1976 $12,118).

8. The *junta* received substantial loans from the Fondo Obrero ($1.22 mills.) and the Caja Agraria ($0.5 mills), and was anticipating finance from the Integrated Urban Project in July 1976.20

9. Interests on bank deposits.

Outgoings included payments for water and electricity; $8,000 (US 1976 $220) a month in wages for 9 skilled workers, and the various sums required for buying building materials, paying drivers etc. After October 1976 repayments were due to the Fondo Obrero starting at $20,020 (US $551) a month. The Treasurer estimated that the weekly turnover was $15,000-20,000 (US $413-551) when construction was at full stretch.

**The System of Adjudication**

The adjudication system was laid out in the statutes. On the completion of a given number of houses a raffle would be held, amongst only those members
who had reached a minimum threshold in cash and in hours of work put into the project. The adjudication system also linked the value of labour contributions to the future cost of the house. Article 5 stated these conditions:

1. Those with $4500 (US $124) or more in cash and less than 1000 hours will work at $4.00 an hour (US $0.11) and will amortise the remainder at $300 (US $8.30) a month.

2. Those with less than $4500 (US $124) and more than 1000 hours of work will work at $3 an hour (US $0.08) and will amortise the remainder at $300 (US $8.26) a month.

3. Those with $4500 (US $124) or more, and more than 1000 hours of work will work at $5 an hour (US $0.14) and will amortise the remainder at $300 (US $8.26) a month.

4. Those with neither the minimum hours nor money could not enter the raffle i.e. those who did not have either $4500 (US $124) in cash or 1000 hours.

An example was given by Perchis Giraldo:

Cash Downpayment $4500 (US $124)
1000 hours labour at $5 an hour $5000 (US $137)
Product of raffle $5250 ($30 a ticket) (US $145)
Total $14,750 (US $406)
Value of House $35,000 (US $964)
Total value to be amortised $20,250 (US $558) at $300 (US $8.26) a month.
Economic Articulation

The Acquisition and Development of Land

The mode of land acquisition in Barrio Hernando Velez Marulanda incorporated the interests of landowners, in the form of ground rents into final housing costs. The history of the plot was the history of a *lote de engorde*. Because of the Alfonso Lopez transaction, the landowners saw the value of the plot increased by public investment with no private investment on their part. Thus the *junta* acquired a real land commodity because land rights were transferred, through a cash payment, from the legal owners to the state, and from the state to the *junta*. The land was sold to the Fondo Obrero for $1.3 mills (US $4552) and to the *junta* for the same price (Table 80). Land costs in October 1974 were therefore $39.30m² (US $1.38m²). Taking the total number of houses as 217, each household would pay out $5990 (US $210) for land. The July 1976 estimate of the cost of the ‘finished’ house was $53,183 (US $1465) (including an accredited sweat equity of $15,750, US $434) and thus land costs made up 11.1% of total housing costs (Table 83).

True land costs were however much higher (Table 80). Collective land ownership could only be achieved by borrowing money. The Fondo Obrero advanced a loan of $1.22 mills (US $42,177) at 12% annual interest, and the *junta* advanced $80,000 (US $2801) as a downpayment. The debt was declared dead for two years, and thereafter (October 1976) was to be amortized over a 15 year period. The *junta* was thus confronted with monthly repayments for land plus interests starting at $20,020 (US $551) in October 1976, and terminating with $7,898 in September 1989. Interests on the original loan of $1.22 mills amounted
to $944,146 (US $33059) or $4350 (US $152) per household - 8.2% of estimated total housing costs at the July 1976 figure. This meant that total land costs (land plus interests) amounted to $2,224,146, (US 1974 $77,876) or $67.80m² (US 1974 $2.37m²). Each household would have to pay $10,340 (US 1974 $362) to cover land costs amounting to 19.3% of total housing costs. Amortizing the property at the statutory rate ($300 a month) the future houseowner would be paying for the land and the interests on it for the next two years and eleven months. On the other hand the 12% interest was several percentage points below the commercial rate in 1974.

The land development process also came under the influence of commodity processes. Undoubtedly some costs were reduced by using self-help labour to drain and level the land, and by collective materials production. However, finance, materials, skilled labour costs and the maintenance and operating costs of the general networks would have to be borne by the residents. Indeed a World Bank report (1978) recommended that service tariff levels for the local Integrated Urban Project should be ‘sufficient to cover 100% of the costs of the investment.’

The centrality of the site and proximity to the Otun would make connections to the city’s systems relatively inexpensive, but this was offset in part by site difficulties. These included large areas with slopes exceeding 15°, large concentrations of boulders, an exposed water table on parts of the terraces, slope erosion, and riverside flooding in the wet season.

Some economic advantages in the land development process were associated with state participation. The redesignation of the area as a Zone of Progressive Residence permitted the possibility of progressive services and infrastructure provision and thus lower immediate costs, whilst the absence of a
profit and the absorption of legal transfer costs by the Fondo Obrero undoubtedly represented a subsidy in comparison with normal commercial procedures.

However, the very fact that the state and the junta had to act legally when acquiring land, exposed the settlers to financial burdens and delays derived from complex laws and the inefficiency and politicking of the bureaucracies responsible for their implementation. Thus land development did not start until April 1975, almost five years after the group first began to organize.21

**The Provision of Construction Materials**

It proved difficult to arrive at an exact calculation of building materials costs in the project.22 Table 81 gives a breakdown of building materials costs for a single house between July 1975 and July 1976. In current pesos the cost of materials increased by 30.7% from $14,602 in July 1975 to $19,084 in July 1976. In terms of constant 1975 pesos, building materials costs increased from $14,602 to $15,810, that is by 8.3% above the rate of general price inflation. How can the magnitude of these costs be explained? In part the explanation lies in a design that demanded the use of industrial materials, which excluded the use of artisanal materials and whose specifications were wasteful of expensive materials. The design also prohibited the incremental on-site improvement and replacement of materials during occupation. Similarly the construction system gave a very slow construction rate, thereby exposing project members to the effects of inflation in building materials prices.

The cooperative self-help system did allow certain economies to be made in building materials costs. Thus the on-site production of cement blocks and sewage pipes resulted in a cheaper product than their market equivalents. Each brick cost 43 centavos to produce, and the price of a market equivalent was $1.60.
Access to free supplies of sand, gravel and bamboo also resulted in considerable savings. Again the system of collective financing allowed (theoretically at least) for the advance purchase of commercial materials at cheaper prices.

Nonetheless these benefits were negated by the overwhelming dependence of the designs on expensive industrial materials. Table 82 shows that asbestos-cement, iron and cement alone made up three quarters (74.9%) of these costs in July 1976. The next most important element, wood, was purchased in a manufactured form (20.8%), and the most significant element in the remaining 5% - PVC piping - was also from an industrial source. This dependence forced the builders to compete with higher income groups in building materials markets. Real increases in materials costs of 8.3% p.a. were a major problem given the slowness in the construction rate (at 1975-76 rates it would take 10 years to build the settlement). The dependence on industrial materials also subjected the construction process to national and regional production bottlenecks, and to transport difficulties given that their production occurred outside of the city.23

Given these difficulties the principal strategy adopted was to substitute materials. Designs were modified to achieve maximum economies in the use of asbestos-cement, and to substitute wooden elements with cement-based ones. In some cases this was successful. A method was discovered of replacing asbestos-cement cowls with a light cement block; internal wooden beams were replaced by pre-stressed concrete (a saving of $500 per house); wooden stairs were replaced with a cement block structure (saving $200 per house), and in July 1976 the replacement of wooden floors with a lightweight cement block was expected to save $600 per house. Attempts were also made to economize on cement blocks by
eliminating the vertical columns and the *atico* modification, and by merging the upstairs windows.\textsuperscript{24}

However all attempts to reduce the cost of the most significant element - the roof - failed. An early attempt to change the design to economize on asbestos-cement sheet actually increased costs and forced a reversion to the original design.\textsuperscript{25} Attempts to substitute asbestos-cement with a cement tile produced on-site, were abandoned because of the structural difficulties involved in changing the roof support structure and strengthening the foundations.

There was little that could be done to reduce the effect of these increases in building materials prices. Members could work harder to achieve a faster construction rate, but this was constrained by the need to earn a living and was impeded by state restriction of on-site residence. They could buy more materials in advance, but this was impeded by cash flow problems and insufficient capital. The only significant solution would have been radical changes in the design and construction system in ways that permitted the use of traditional materials and a system of incremental improvement during residence. The opposition of the municipal authorities to such a fundamental change was made known every time it was suggested in the General Assembly.

Thus the project certainly did not realize the economies achieved in the use of building materials by the artisanal form.

**The Organization of the Construction Process**

Some distinct advantages can be identified in the organization of the labour process when comparison is made with the artisanal form. The use of standardized materials, the increased division of labour, and the use of uniform designs and plans probably by themselves contributed to an increased labour
productivity when compared to the artisanal alternative. Again the cooperative nature of the labour process allowed the building skills that already existed in the community to be shared collectively, whilst the SENA training programme produced skills to meet construction needs and future employment opportunities, and avoided the widespread contracting of skilled labour characteristic of the artisanal form. Moreover the participating agencies were legally compelled to absorb the indirect administrative and labour costs involved in the provision of plans and designs, legal assistance, technical assistance, training facilities and machinery and equipment. These ‘hidden’ costs were considerable and included legal costs and taxes involved in the transfer of land ownership, professional salaries and wages, and the depreciation costs of tools and equipment.

Again the on-site production of building materials permitted economies of scale, whilst collective financing permitted advanced and bulk-buying. The cooperative system also made possible social welfare, mutual aid, and shared work arrangements that produced indirect but significant savings. Thus the guarding of the junta’s property was carried out by the residents’ committee; there were collective eating arrangements during the Sunday convités, there was an insurance scheme; there were collective endeavours to eliminate illiteracy; collective sports competitions were organized, and there were several mutual aid committees. The cooperative nature of the project also guaranteed that everybody worked on community facilities, and contrasted with family-based systems where community endeavors tended to flag after individual houses were completed.

There were numerous difficulties involved in the attempt to calculate exactly the value of the self-help labour component and its contribution to housing costs. Table 83 gives only tentative estimates. Fieldwork confirmed that all
members (175) had worked the compulsory 6 hour weekly minimum and given 175 members the total minimum labour input required to build the 20 houses in the period April 1975-July 1976 can be roughly calculated. On his basis the community contributed a minimum of 63,000 hours of self-help labour in the construction of 20 houses. If following the statutes we give a 'sweat equity' value of $5 an hour, a monetized value of $315,000 or $15,750 (US 1976 $434) per house can be calculated. If this value is aggregated with the other housing costs (land, interests, building materials and paid labour costs) it represented 29.6% of total housing costs (Table 83).

Estimating the savings on paid labour attributable to the use of existing and acquired building skills was also difficult. Between April 1975-July 1976 the settlement paid out $163,000 (US 1976 $4489) in direct labour payments or $8,100 (US $223) a house, 15.2% of the total cost. This was well below contract labour costs for state conventional housing but probably more than the wage labour costs in artisanal housing. However, it should be remembered that all those employed were project members and in a sense were paying themselves.

It proved impossible to calculate the precise value of the 'hidden costs' absorbed by the participating agencies. In state conventional projects these costs were variously estimated at 18-20% of total housing costs, and given the large number of technical and administrative personnel involved in the project this proportion could even be higher.

Numerous diseconomies associated with state intervention could also be identified, but which were again extremely difficult to evaluate in financial terms. The most serious was the prohibition of full on-site residence. Here the project's legality put the member at a significant disadvantage in relation to
artisanal building.

First, it prevented the capitalization of rents being paid for residence elsewhere, dramatically increasing the proportion of the household budget allocated to housing and creating a chronic shortage of funds for the construction process. Table 137 shows that 37.1% of the sample were paying between $200 and $500 (US $8-$14) a month for existing accommodation, a further third (33.3%) between $500-1000, and 14.8% over a $1000 (US $28) a month. Table 147 shows a quarter of the sample paying between 10-20% of their monthly income on rent, a half between 20-49%, a quarter over 50%. An average rent of $555 a month was calculated.

Second, the prohibition of on-site residence was also in part responsible for low productivity rates and a lengthening of the construction period; it prevented a more flexible labour regime, and a more even distribution of work over the week; it entailed extra costs and time in making several trips to the barrio; it discouraged the further development of cooperative economies (consumer cooperatives, collective purchases of drugs) and it impaired the development of community sentiment.

Finally, the general efficiency of the labour process and the construction rate were impaired through administrative participation in the project. Thus the separation of the consumer from the design process and inadequate knowledge of the site by those responsible increased costs and slowed down the construction rate. Moreover, the construction rate was frequently slowed down by bureaucratic and politically-motivated delays in the delivery of auxilios; and interbureaucratic rivalries caused tensions within the project.
The System of Financing

The state intervened to supplement income-based funds by extending loans and *auxilios* as both producer and consumer credits.

The financial contribution of project members was difficult to assess and the data in Table 84 should be taken as no more than rough estimates. About $1 mills was contributed to project finances from initial downpayments, weekly payments, rents, profits from sale of building materials and interests on bank deposits. This amounted to roughly one third of the total funds allocated to the project up to July 1976.

The remaining two thirds came from state agencies, the greater part as loans. Although the state could diminish the costs of this credit through interest rate subsidies, these rates remained closely geared to those in the market. Servicing of the Fondo Obrero loan alone amounted to $944,146. The same considerations governed the Caja Agraria loan, and the projected World Bank loan to expand the building materials cooperative.

The other principal source of finance was *auxilios* which contributed $440,000 (US 1976 $12,118) to project funds up to July 1976 (Table 85). The size of this sum reflected the political influence of the community at the urban level, but the *auxilio* system was generally inadequate as a method of financing self-help housing. Constant doubt about the sums available as a result of the politicking accompanying the division of the national budget led to tension in the project.

The bureaucratic and political machinations surrounding the Departmental distribution of funds led to frequent discrepancies between their official and actual distribution, and the resulting shortage of funds slowed down the construction rate. Thus the *junta* failed to receive two auxilios of $150,000 each that had been
promised in the 1974 lists of Gabriela Zuleta and Oscar Velez Marulanda until November 1975, and then only after a lengthy correspondence with Bogota.

**Housing Consumption and Exchange**

Given the difficulties in estimating project housing costs the data in Table 83 should be taken as tentative estimates of the cost of one of the twenty houses nearing completion in July 1976. What is striking is the high housing cost even when a 'sweat-equity' of 29.6% of these costs is discounted. Moreover, this figure does not take account of substantial hidden costs; the fact that future housing costs will be even higher because of variable site conditions and real increases in materials prices; that the house was delivered in an *obra negra* form whose full completion will add another 15-20% to these costs; and that infrastructure and service were costs not included.

A major reason for high construction costs was slowness in the construction rate due to shortages of capital, and inefficiency and waste in designs, plans and the construction process. In artisanal building the construction rate could be geared closely to budgetary fluctuations, an impossibility in projects of this type. The high housing costs in the project were derived from the fact that it encouraged maximum exposure to commodity markets for land, building materials and finance and minimum access to petty commodity forms of cheapening construction costs. Project members were therefore highly exposed to external market forces and their only responses to unfavourable trends were to work harder, introduce economies in materials use and to lower standards.

When costs were matched against consumption characteristics, the problem appeared more serious. Almost one third (29.4%) of sample households had monthly incomes below $1000 (US $27) and two thirds (64.7%) below $1500 (US.$409
However, 11.8% of households had a monthly income of over $2500 (US $68). The low income levels indicated that a substantial proportion of the sample would have difficulty sustaining payments for the house. The survey (Table 86) also revealed that over a half (52.9%) had not yet accumulated the initial downpayment of $4500 (US 1975 $137), and were therefore not eligible for the distribution procedures. This downpayment was increased to $6000 (US $165) in July 1976 and there were suggestions for a further increase to $8000 (US $220) because of severe capital shortages. Thus the role of the initial downpayment in excluding lowest income groups from housing access seemed to be a growing possibility within the project, brought on by low incomes, high building costs and shortages of capital.

A major disadvantage of cooperative self-help building in comparison to artisanal family-based systems lay in the problem of housing distribution. In the latter case each household established *de facto* possession of a specific lot from the start of the construction process. In the co-operative system, where everybody was building everybody else’s house there was no prior knowledge of ownership. Moreover the cooperative construction process was necessarily sequential (ie. all houses were not being built simultaneously) and final costs were costs of the settlement not merely the house. Consequently uncertainty existed over the individual’s financial obligations, and a need emerged for an adjudication system that plainly laid out the distribution rules, and amortization conditions. The project’s adjudication system fulfilled neither of these conditions. Distribution was by raffle, eligibility for which was limited to those credited with a minimum in cash and working hours ($4500 and 1000 hours).

Several difficulties can be identified with this system. First, it impeded cash
investment as those who already had $4500 in the project fund were reluctant to invest more until after they received the house. Second, the system did not seem to allow for the fact that the first houses built would be significantly cheaper than the last. Third, given this situation the stimulus to work more than the minimum hours after the house was occupied would also drop.

Again the system penalized those who worked harder, merely because they had less capital invested. Those who reached the money ($4500) but not the labour threshold (1000 hours) got more per hour ($4) than those who worked hard, but who had insufficient capital ($3 an hour). The system was quite obviously weighted in favour of those with more money. Over half of the sample (52.9%) in July 1976 had not yet accumulated the $4500 downpayment (Table 86).

The situation was aggravated by economic inequalities amongst project members and by the fact that the more recent members recruited by the Directorate (with a downpayment of $6000) tended to be better-off but had less hours to their credit. With the widespread practice of buying and selling hours (which to a poor man was worth $3 per hour, and to the buyer $4 or $5) newcomers with more capital and less hours could acquire equal rights to the acquisition of the houses. A member with $2000 and 2500 hours to his credit had the same aggregate value ($9500) as the member with $4500 and 1000 hours. He therefore had to work an extra 1500 hours to make up a capital difference of $2500.

One house out of the 20 nearing completion had already been raffled on the day work started, and another was voted to the barrio leader - leaving 18 houses to be distributed. Because of these irregularities, and because only 14 members had achieved both the money and work thresholds, there was strong
pressure in the General Assembly to change the rules. The adjudication system
had by now become the cause of serious internal tension forcing the Planning
Department to suspend the adjudication process in June 1976, and submit it to the
Municipal Housing Committee for approval.

This account shows the difficulties involved in housing distribution in
cooperative self-help systems. The key issue was of course a system of sequential
occupation in the context of a slow construction rate, significant income
inequalities, high inflation rates and paternalistic favouritism.

**Ideological Articulation**

The defects in the plans and designs were directly related to the commodity
status of housing and settlement goods; to separation of self-help builders from
control over the design process; to the ideological conceptions of the designer of
the consumers’ housing needs; to the income levels available for housing and to
the imposition of the minimum norms embodied in the municipal codes.

The participation of project members in the design and planning process
was confined to the choice between predetermined alternatives, and formal
consultation through the Directorate with architects and planners, rather than
through active grass-roots involvement. These professionals worked with
inadequate socio-cultural and economic data and with an insufficient knowledge of
site conditions. The effect was to expose the community to a design and planning
ideology that had serious effects on production and consumption processes, and to
isolate it from artisanal models and construction techniques. The need felt by the
state for uniformity; adherence to municipal planning regulations; and the
utilization of standardized building materials, prefabricated components and
shared structural components (terracing) resulted in the imposition of a standard design model on a heterogeneous population with great variations in housing needs, income levels, household size etc. This contrasted with artisanal designs which were finely-tuned to these variations. It was also doubtful whether some of the houses could be built on parts of the site without serious changes to the plans and designs.

Even more serious was the failure to incorporate the progressive development procedures typical of the artisanal form. The temporary shelters that this system needed would have been in open breach of the municipal codes that the state felt obliged to follow. Even the progressive development procedures rejected by Giraldo bore little relationship to those of the artisanal form, because they involved the construction of the most expensive elements first, and the cheaper elements later.

A design was produced by State architects that was the result of an adherence to a design ideology rationalizing the requirements of industrial and manufactured housing, and a substantial ignorance of the socio-economic conditions of the residents and specific site difficulties. The design did not result in low cost housing, but was rather the lower cost production of high cost housing. The need to abide by minimum standards and the middle class architectural values of the designers resulted in an ambitious design that far exceeded the needs of the majority of families.

This fact did not escape project members who estimated the market value of the completed houses at $100,000 (US $2754). They also recognized the economic advantages that could be derived from the large space standards of the house - this indeed was probably the principal reason why this particular design
was accepted. It was rapidly discovered that with a few structural alterations (moving the door, changing the windows, turning the stairs around) that the design could easily be converted into a two family solution with the top floor for rent. 58.8% of the sample indicated that they were thinking of renting out the second floor. Thus what started out as a maximum solution for one family would end up as a minimum solution for two families (64m² for the downstairs family, and 48m² for the tenant). The social desirability of creating rental submarkets in schemes of this type was highly questionable. It was not difficult to foresee the tensions that might arise if occupants of adjudicated houses started taking in tenants, whilst other members continued to live outside the settlement because of slowness in the construction rate.

The overly grand nature of the design was also directly responsible for extra costs in materials; an extra expenditure of labour, and slowness in the construction rate. Again the internal design showed no sensitivity to the critical economic linkages involved in low-income housing consumption - there was no space available for horticulture and the keeping of animals, and there was no consideration of the use of the house as a place of employment.

The result was acquiescence to a design model for a conventional house which made no particular allowance for the problems of self-help building. A simpler design that allowed for lower skill levels would have been a more efficient use of human resources.

These problems can be observed in the changes that the community made to the designs. In 9 out of the 20 houses there were changes to the original facades in the design. For reasons linked to local and artisanal conceptions of the 'ideal' housing form, members decided to add the traditional atico to the facades
to conceal the roofing materials, provide a more impressive facade and allow geometrical compositions traditionally used by owners to individualize their property. The ensuing construction problems showed quite clearly that the designs were not based on their experience and abilities.

Similar criticisms can also be directed at the settlement plans which incorporated the ideological values embodied in the municipal codes, though some specifications were clearly illegal (Table 79). A principal consideration of the plan was to extend the urban road system, but with little concern for topographical difficulties. The first houses were built on the slope between the terraces where land development was slowed by the presence of boulders; and a large proportion of the public area was laid out on land more suitable for rapid construction (Map 18).

Political Articulation

The demands of the junta were articulated by the local state and party system in ways that institutionalized ‘traditional’ mechanisms of access to public resources as a means of political mobilization. Three themes emerge in discussing political articulation in Barrio Hernando Velez Marulanda. First there was the way in which the barrio was related to the broader political articulation of the low income settlement process at the urban level through caciquismo, patron-clientage and ventajismo. Second, there were the political dimensions of Acción Comunal membership. Third, there were the effects of political articulation on social organization and the construction process.

1. Although the original neighbourhood committee was relatively independent of institutionalized structures, it was quickly drawn into the web of
competing factional rivalries associated with the city’s low income settlement process. The origins of the project can be traced back to a political necessity - the use of state resources by the Duque group as a means of politically co-opting potential invasion groups already being organized by the opposition in the western inquilinato zone. Referring to the broader urban model (Model 2, Diagrams 16 and 17) the project can be seen as an attempt to integrate the group’s demands within the political structures of the status-quo, through the encouragement of clientist relations. State resources were used in the project to politically advance the governing party at the expense of the opposition (ventajismo).

It is relatively easy to identify caciquismo and the chain of patron-client relations outlined for the city in Model 1 (Diagram 15) within the project.

At the top of the chain, stood the cacique Camilo Mejia Duque anxious to build up political support in the in exchange for ‘privileged’ access to the institutional resources that he could manipulate in the party organization; municipal administration; the municipal council and its dependencies; the departmental administration and assembly; the national government and Congress, and the local branches of the national decentralized agencies.

The sub-cacique who dealt immediately with the demands of the members was Hernando Velez Marulanda, after whom the junta was named. Although there was a pragmatic element in the evolution of the municipal housing plan concept, the principal elements were formulated by Hernando Velez Marulanda. Between 1972 and late 1974 continuing Duque patronage was represented at sub-cacique level by Gabriela Zuleta. During this period Acción Comunal status was acquired (October 1972) and auxilios received from Duque representatives. By March 1974 the Fondo Obrero had acquired the land, and had extended a loan to
the junta for its purchase.

However, in August 1974 the Oscar Velez Marulanda faction managed to topple the Duque faction from power in the municipal administration. Although there was a brief come-back by the Duque faction between March and November 1975, thereafter, the Liberal Integration Front took control of the municipal administration. With further development of the housing plan heavily dependent on the municipal administration, the shift of allegiance of the project from one cacique to another was a logical move, facilitated by Zuleta's defection to the Liberal Integration Front in December 1974 (Diagram 15). Thereafter the housing project developed under Oscar Velez Marulanda's patronage.

The third and vital link in the patron-client hierarchy was the political lieutenant. In the settlement this role was played by Perchis Giraldo, a political freebooter with charisma, energy and organizational skills, compensated by a certain moral turpitude. It would be difficult to underestimate the control that Giraldo exercised over the project from its early foundation until his disappearance in June 1976. He was directly responsible for its daily affairs and the identification of its demands. He used his connections with the caciques and their placemen in the state apparatus and his own patronage to exercise control over the political and social life of the project. He ruled the barrio with an iron fist, engineered the expulsion of troublesome members, and vetted the entry of new ones. He was not elected to formal leadership preferring to act through his 'nominees' on the Junta Directiva and the working committees.

By linking itself with the cacique of the governing faction in exchange for political support the project was able to enter into the relations of ventajismo established at the city level in Model 3 (Diagram 18). In this context the barrio
received more assistance from the various state agencies than almost any other in Pereira.

2. The second way the project was politically articulated was through its integration into the vertical and hierarchical structures of the Acción Comunal system. Two distinct benefits can be identified with membership. First the acquisition of legal status (without specifically-defined boundaries) was undoubtedly an important stimulus to the community, and a precondition for technical and administrative assistance from other institutions. Second, membership also permitted the junta to receive financial loans, grants, and auxilios from several sources.

Taken together these institutional arrangements resulted in undoubted benefits in terms of the flow of goods and services to the project. However, given the nature of these arrangements as institutional forms of satisfying demands, in the context of all-pervasive systems of patron-clientage, and ventajismo, it would be a mistake to associate the self-help activities in the project with autonomy in decision-making or dweller control. Rather the project's history revealed the advantages to the state and the political parties in extending these arrangements. They were an effective means of co-opting potential invasion groups in inner city areas; they defused opposition by using privileged access to state resources as means of political co-option and control; they integrated the project with urban planning goals, they achieved a measure of political stability by institutionalizing patron-client relationships, and they permitted tokenism as a form of distributing goodwill, propagating the state's version of legitimacy and allowing the state, local factions and caciques to get the public credit for the self-help labour of project members.

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High levels of institutional involvement resulted in a considerable loss of community control over planning and design, the organization of the labour process and resource allocation, and introduced the complications associated with the formalized relations within and between the participating institutions. Thus lack of flexibility in the municipal apparatus (DAPM); its emphasis on legality and strong supervisory functions; political influences on its activities, and delays in carrying out its obligations led to inadequate consultation, a constant interference in internal affairs, and construction rate largely dictated by bureaucratic delay and restrictions.

3. Although the Acción Comunal system yielded some advantages in the organization of the construction process, it also revealed several organizational weaknesses. The organizational structure tended to formalize rather than impede the development of patron-client relations. The system of concentrating power on three members of the Junta Directiva (President, Vice President and Secretary) effectively gave power to a clique who were themselves in a patron-client relationship with Perchis Giraldo. Several legal mechanisms allowed the consolidation of their power including suspension procedures to oust political rivals and the packing of the Junta Directiva with political allies through creating new working committees whose presidents had a seat on it.

A principal instrument used to formalize patron-client relationships was the auxilio system. Although auxilios were the principal source of financing for the project they provided an irregular supply of funds. Lack of a clear definition of the amounts of money available and delays in their distribution led to internal tensions and often slowed down the construction rate. The project was also affected by a typical feature of the auxilio system - the embezzlement of funds by
the Congressmen who promised them, and by members of the Junta Directiva who received them. The project became involved in the web of embezzlement set up by Gabriela Zuleta, the exposure of which resulted in a national scandal and her flight from the country in 1976. There were constant allegations of fraud and misuse of community funds against the Junta Directiva. The Departmental Controller twice investigated the accounts; there were 5 treasurers in a period of 4 years, and one was openly accused of embezzling $2000. On the conclusion of the study (July 1976) Perchis Giraldo himself was being sought by the police after disappearing with two blank cheques drawn on the project's account.

In this chapter we have constructed a case study of state self-help building in Barrio Hernando Velez Marulanda. In Part Three we shall attempt to analyze all the empirical data presented in Part Two in the light of the theoretical propositions outlined in Part One.
Notes for Chapter Eight


2. In the late Sixties both national and municipal legislation governing the sale of urban land, and the legal and planning norms for urban development was tightened up. Law 66 of 1968 subjected potential developers to closer legal and financial monitoring by the Superintendency of Banks; and in the same year Pereira's municipal codes were comprehensively overhauled, and a new system of land zoning was introduced. The area in and around the lot was classified as a R 3U zone - a residential zone of high density, single or two family housing. Under these zoning regulations minimum densities of 50-90 houses a hectare and minimum plot sizes of 120m² were stipulated, as were strict controls over the areas to be left for the provision of roads and green spaces, whilst the provision of urban services was taken as a precondition for sale.

3. Barrio San Camilo consisted of 204 houses built through mutual aid self-help, but the 174 *ranchos* demolished housed a population of 277 families, leaving a substantial proportion of the community homeless.

4. Here some 200 families, largely from the cemetery area invaded municipal and privately-owned lands bordering the river, between calles 37 and 43. The Duque administration realizing the political delicacy of the situation had to tread carefully. It quickly arrived at an arrangement with the two owners of the invaded properties to purchase the land for subsequent sale to the invaders. In this way it avoided the politically damaging use of police force to evict the invaders. At the same time they were fully aware of the political significance of these events and *El Diario* constantly denounced the political opposition's role in promoting invasions - so much so that at one stage the mayor threatened he would invoke a state of siege in order to prevent it from happening again (*El Diario* Jan 27th 1972). The response of the Liberal Integration Front was to use its majority in the council (through the *Bloque Cívico*) to force the Governor and the mayor to resign on February 4th 1972.

5. Several interviewees confirmed this story recounting how they had to wait too long for eligibility for the ICT projects, and the difficulties of raising the initial downpayments required. One of these *fundadores* recounted proudly how she had been at the first meeting of the group and had paid 50 centavos towards the purchase of the group's account books.

6. Although he was the brother of Duque's arch rival Oscar Velez Marulanda, he was a staunch supporter of Mejia Duque, a municipal councillor and a member of the House of Representatives. Hernando Velez Marulanda died in 1972, but the arrangements he established with the settlement were posthumously honoured by the Duque faction.

7. A list of the addresses of the founders obtained from the application form of the group for *Acción Comunal* status in 1972 revealed their high concentration in this area.
The question emerges here of whether the members of the project can be called a 'community'. Our usage is in line with Ruth Glass's (Durant 1939) definition 'a territorial group of people with a common mode of living, striving for a common objective'. It is clear that the original nucleus of project members (*fundadores*) was a community in these terms. Only if the territorial requirement is understood in the sense of 'residential group' could they be excluded from this definition. Project members described themselves as a community, and legally were constituted as such by their Acción Comunal statutes.

8. On August 6th 1973 the President of the *junta* wrote to the Director of the Municipal Planning Department enquiring about a plot of land in Barrio El Vergel in the south of the city. The letter is interesting insofar as it openly confirmed the patronage that the junta was receiving from the Mejía Duque camp '...since our benefactors, and more concretely the Liberal Party Directorate over which presides the Honourable Senator Camilo Mejía Duque have asked us for this document' (Municipal Correspondence 1973).

9. One of the owners, Gilberto Castaño Robledo was a former Governor of Risaralda and at the time of the survey was Head of Risaralda’s Social Services Department. In the late Seventies when Mejía Duque died he was to take his place as the Official Liberal cacique.

10. One interviewee claimed that he managed to get on the plan only through the help of his brother who had been working on the political campaign of the Oscar Velez Marulanda faction in the April mitaca elections. Another, a single woman with four children who joined the project in July 1975 told how she had been forced to leave rented accommodation in Barrio Cuba, and how the local Liberal Directorate (which was now staunchly pro-Oscar Velez Marulanda) offered her a place on the project if she could raise $6000. She managed to obtain the money from the local Evangelists.

11. The legality of this act was doubtful and seems to have been facilitated by the lack of precise a definition of the jurisdictional limits (*radio de acción*) of the *junta*.

12. The architect, Diego Londono claimed that the *junta* selected the plans because of the large lot sizes, the separation of the shower from the wash basin, and the flexibility allowed in the design for the use of the second floor.

13. The preliminary designs which were made strictly in accordance with the R3U zoning specifications, laid out 169 somewhat larger lots in 16 blocks, but under protest from the community and in breach of current minimum norms, the final plan squeezed in another 48 lots by reducing lot sizes in 17 blocks and by reducing public and communal areas. However, serious doubt must be expressed as to whether some of the houses can be built, given the insensitivity of existing plans to the topographical difficulties of certain parts of the site.

14. The design allowed for the collective construction of part of the first and second floor which would in the first stage provide the basic nucleus of services and two bedrooms. In the second and third stages the dining room and more bedrooms would be constructed by the individual families, until the complete
After the completion of research there was a proliferation of self-help housing plans in the city. By June 1977 there were 11 such plans in operation: Barrios Hernando Velez Marulanda, Chico Restrepo, Cuba, La Dulcera, Ormaza 2, Salvador Allende, La Ribera, La Betulia, Hilario Lopez, San Jose and Libiate.

Thus Article 12 of Acuerdo 77 of December 1975 stated 'The Municipal Planning Department and the Fondo Obrero will give free technical assistance to these communities in design, financial studies, selection of building materials and housing construction'.

In addition Decretos 115 and 117 also gave the Municipal Planning Office considerable powers of intervention into the internal affairs of the housing programme in regulating and supervising the finances of the project, and in guaranteeing that the statutes of adjudication and amortisation were equal for all members. Article 13 of Acuerdo 77 1977 also gave a strong interpretation of the powers of the Municipal Planning Department in self-help projects aimed at improving public services.

A newspaper report of the official ceremony initiating construction activities on the site reveals the extent of the settlement's institutional links. ‘Attending the event were Maria Isabel Mejía Marulanda, Mayoress of Pereira; Francisco Londoño Marulanda, Director of the Municipal Planning Department; Guillermo Botero, Manager of the ICT; Jairo Melo, Manager of SENA; Alvaro Guitierrez, Dean of the Faculty of Architecture, UN Manizales; Santiago Moreno representative of the Ministry of Government, Department of Community Development; Enio Quiceno Regional Promoter of Acción Comunal; Jaime Ramirez SENA sociologist, and Jorge Riviera Farfan assessor of the National Director of SENA' (El Diario April 21st 1975).

The function of this committee was clearly outlined in its statutes ‘to represent the interests of all those members of the JAC who have satisfied the conditions of membership to the project; to coordinate the technical, financial and organizational assistance from the various state bodies who are participating in the project; to determine and enforce the labour regime agreed upon by its members; to programme the committee and contract those skilled workers who are needed to build the houses; to coordinate the flow of resources (tools, labour, finance, construction materials) in a way that maximizes the efficiency of the construction process; and to distribute the houses once they have been built amongst those members who have satisfied the conditions of entry into the adjudication process.’

All hours of accredited labour on the project by members were accumulated and divided collectively, thus cushioning those who were old, sick or widowed.

At the time of the survey, SENA and DAPM with the consultation of OFISEL were making a feasibility study for expanding the capacity for on-site production of construction materials, using World Bank financing for the development of the Neighbourhood Development Centre, and Integrated Urban Project in the area. The OFISEL study suggested that the junta should receive a
grant and loans amounting to $8.8 mills for investment in three cooperative
enterprises producing bricks, cement blocks and cement bricks.

21. Thus it took a year to get personeria juridica (October 1972); another year
passed before the Fondo Obrero was formed (September 1973); still another seven
months before it bought the land (March 1974) and a further six months before
the plot was legally transferred to the junta. Thus land development did not start
until April 1975, almost five years after the group first began to organize.

From the point of view of an original fundador, this politicking and concern
for legality did not get him very far. He was entirely aware of the fact some five
years earlier other families, who were living under similar conditions in the same
area (San Camilo) and who took the illegal path (El Triunfo/La Gaitan), already
had a home in a recognized settlement, whilst he was still in the preliminary
stages of building a house which in all probability he would not occupy for
another 5 to 10 years and which he would still have to pay for after occupation.

22. First, the book-keeping system of the Builders Committee was relatively
casual. However these figures were cross-checked with information on local
prices for building materials from other sources, and they show a remarkable
degree of compatibility.

Second, because not all the houses were being built simultaneously,
conclusions were drawn only from the costs of those houses already completed. It
is not unreasonable to expect that the first houses built may be more expensive
than those built later through lack of experience; inadequate training and mistakes
in design, part or all of which could be rectified as construction proceeded. On
the other hand, there were considerable topographical variations over the site, and
though those houses completed were certainly not sited on the areas with the least
topographical difficulties, there was every reason to believe that those to be built
later, on the backslopes would be considerably more expensive. Moreover, and
most important of all, the slow rate of construction and use of industrialized
building materials exposed the community to real increases in prices of building
materials. As the cost of the house to the individual member consisted of a part
of the cost of all the houses in the settlement, the figures may well represent a
serious underestimate of the final costs of building materials for the individual
member. Similarly the project involved not merely the construction of the house
but also of collective facilities and infrastructure and this sum also had to be
amortized by the individual member.

Finally, it should also be pointed out that under the terms of Acuerdo 115
the houses will be delivered to individual members in the obra negra form, and as
a consequence the figures given do not represent the final building materials costs
to individual members. These further costs would include - electrical and sanitary
installations, various finishing materials and operations (plastering, painting, laying
of tiles), back door, glass for windows, etc. In 1976 prices, these could amount to
another $8 - $10,000 (US $220-$275) in building materials costs.

23. On August 23rd 1975 the manager of the Pereira branch of the BCH
complained of the difficulties of obtaining building materials from Cartago, La
Virginia and Manizales and asked the authorities 'to adopt drastic measures to
control the constant and exorbitant increases in the prices of construction
materials' (El Diario August 24th 1975).
24. The latter change however was criticized for interfering with the use value of the second floor which was planned to be divisible into four separate rooms.

25. By using a sloping roof, a saving of $1257 on asbestos-cement roofing sheets and $600 on cowls was achieved - a considerable economy. However, this gave rise to serious construction problems that forced the community to go back to the original designs. Insufficient building skills, in accommodating changes in the specifications of materials and designs led to a miscalculation of roof areas which resulted in water running down the walls off the roof which in turn necessitated the purchase of expensive asbestos-cement gutters that had to be installed inside the house.

26. First, because the project was as yet unfinished, the average number of hours needed to build each house could not as yet be calculated. The only calculations of labour input that could be made were from the labour contributions to the construction of the first 20 houses. These however cannot be accurately generalized for future construction because it is likely that inefficiency derived from lack of familiarity with the designs, initial problems in the organization of the labour process, the absence of building skills etc. would be reduced as construction proceeded. Second, because the system of 'sweat equity' credits individuals for work that was carried out collectively, and because there was a fluctuating membership in the project with some members starting work later than others, it proved very difficult to arrive at anything except a rough estimate of the number of hours put into the construction of the houses. Third, not all of the labour credited to the members was labour that directly contributed to the house because it also included work carried out in the various committees in the organization of social, cultural and administrative activities. Fourth, it is extremely difficult to separate out, in detail, benefits derived from an increased division of labour, from the specific diseconomies derived from the way in which this division of labour is organized. Finally, as we have seen the project also involved the self-production and assembly of construction materials, that involved a considerable saving in building materials costs, but the exact calculation of the financial values of this contribution also proved impossible to calculate, but was obviously of a large magnitude.

27. The daily rate for a peón raso in the construction sector in Pereira in 1975 was $35 a day, for an 8 hour day.

28. Although this estimate might be an accurate minimum labour contribution, the true figure is probably considerably higher. The survey showed that over a half (52.9%) of the sample worked on average between 6-10 hours a week on the project, but that some 41.2% worked more than 10 hours. Virtually a third of the sample worked between 11 and 30 hours a week. One head of household who entered the project in October 1974 claimed that he had already accumulated 7000 hours and two others had over 5000 hours to their credit. These higher figures are of course quite possible given the ability of other members of the household to accredit work to the head of the household's total, and because of the high rates of unemployment and underemployment characteristic of the community. The true figure for the value of the self-help labour component therefore probably lies nearer to a third of the total than to a quarter of the total cost of the house.
29. Some indication may be given from the fact that SENA estimated that the cost of four instructors to train the community in building skills and carpentry came to $224,000 (US $6800) in 1975 in labour costs alone.

30. Nevertheless through a series of adept moves the community was able to build 17 ranchos on-site that housed 25 families despite frequent visits from the police, constant pressure from Planning Office inspectors, and politically-motivated complaints from neighbouring settlements.

31. Inadequate attention was paid in the plans to variations in slope, subsurface distribution of rocks, and water, etc.

32. Thus the $692,753 (US 1976 $19,079) shown as the sum contributed by initial downpayments to community funds is an estimate based on the sample of 34 heads of households who were asked how much they had paid of their initial downpayment into the community accounts. On top of this sum the community also contributed $28,000 a month from the compulsory weekly payments of $40, and $4000 a month from the rents paid by the on-site rancho dwellers. Unfortunately information on the income derived from the sale of building materials and from interests on monies in bank accounts could not be obtained. Because the amount charged for the weekly payments and rents has constantly increased, it proved impossible to work out exactly how much had been contributed in this way.

33. Those who worked hard and had the capital got the best deal. Let us take three situations:

   A. $4500 + 1000 hours at $5 per hour = $9500 aggregate value.

   B. $4500 + 62 1/2 hours at $4 per hour = $4750 aggregate value.

   C. $1750 + 1000 hours at $3 per hour = $4750 aggregate value.

Thus despite the fact that C worked just as hard as A, for the lack of $2750 he only obtained half of the aggregate value of A. On the other hand B who had $4500 only had to work 62 1/2 hours to be in the same situation as C.
PART THREE

CONCLUSIONS
Chapter Nine

CONCLUSIONS: ARTICULATION AND THE LIMITS OF STATE SELF-HELP HOUSING PROJECTS

INTRODUCTION

In Part One it was argued that the domination of capitalist structures in Latin American social formations was exercised through the articulation process. The state played a key role in this process through policies aimed at destroying the independent reproduction of pre-capitalist structures in order to guarantee markets, means of production and labour power for the capitalist mode. The process involved the embryonic development of capitalist relations of production and technology, but pre-capitalist relations of production were generally modified rather than eradicated. This process stood as a structural obstacle to the development of the productive forces on a scale necessary to solve burgeoning economic and social problems.

Part One also identified the relationship between development strategies and urban housing policies in Latin America within the terms of reference of articulation theory. A theoretical framework was elaborated that identified the three specific forms of housing production (industrial, manufactured and artisanal). It was argued that in its 'pure' form artisanal production was a non-capitalist process, based on the fullest expression of the self-help principle. However, the artisanal form, particularly in urban areas, no longer appeared in its
'pure' form given its articulation by capitalist economic, political and ideological structures. Economically this articulation was achieved at all three moments of the commodity cycle through an uneven process of incorporation of non-capitalist activities into commodity markets and the transformation of productive relations and forces within the form. Thus it involved the increased use of tools and raw materials that were purchased as commodities, the introduction of a greater division of labour; and the development of commodity markets in land, labour power, housing and finance. However the artisanal form was not eradicated but rather reproduced given the supply-side difficulties involved in moving from 'formal' to 'real' subsumption under conditions of peripheral capitalist development; and the demand-side difficulties derived from low income exclusion from industrial and manufactured housing markets as a result of high rates of unemployment and underemployment and low returns to labour. The particular combination of capitalist and non-capitalist conditions, however, meant that the articulated or 'real' artisanal form remained accessible to low income groups.

It was argued that state policies could not get beyond capitalist relations of production and exchange, though they were capable of producing secondary modifications in these structures. State conventional housing programmes had as their goal the production, exchange, and consumption of housing through the market, and the capitalist structures of production. They thus involved the production and consumption of commodities; the generation and appropriation of ground rents; the purchase of wage labour; the payment of interest to finance capital, and the fixing of prices in the same way as in the private sector (with a certain scope for subsidies). The same considerations were also true for state interventions into the self-help housing process.
With the collapse of conventional housing policies in the late Sixties interest shifted to Self-Help Housing Theory. The ability of many squatters to build housing significantly below the costs of their state 'equivalents', had led the Self-Help School to advocate incorporating the principles and practices of self-help building into an institutional framework backed by state organization, resources and legislation. Principles identified for incorporation were a self-help labour contribution; reductions in standards; progressive development procedures; and the encouragement of non-commodified or petty commodity modes of housing consumption. These principles were to be operationalised in the context of productivity and efficiency gains derived from the introduction of a more marked capitalist division of labour; developed commodity and financial markets; more efficient technology and construction methods; and prefabricated and standardized materials. The resulting policies it was argued would reduce costs, improve affordability and expand output. Two forms of state self-help housing interventions resulted: self-help housing projects, and slum and squatter upgrading projects.

This argument was then examined in the terms of reference of articulation theory. Here the self-help argument was understood as postulating that the further articulation of the artisanal form by the capitalist mode that occurred in state projects would produce housing that was cheap enough to be made accessible to wide segments of the population.

This view was contested and it was argued rather that the articulation process involved in state self-help housing did not and could not provide housing to low-income groups at costs that were cheaper or even the same as those involved in the only alternative available to them outside of renting - artisanal building. Once self-help housing activities were propelled by state intervention
into further subsumption by capitalist economic, political and ideological structures, these articulations appeared as limits to the further development of the productive forces on the scale necessary to deal adequately with the housing problem. The consequence was that though state self-help housing costs might be cheaper than the ‘conventional’ predecessor (which was never a real alternative for low income groups) the state could only provide self-help housing that was more expensive than the artisanal alternative.

The fundamental question that arose out of the scrutiny of self-help housing theory and practice by articulation theory was therefore: can the cost reductions which are achieved through the use of self-help practices in the artisanal form be repeated or improved upon in state self-help housing projects, and if so are they sufficiently large to bridge the gap between housing needs and housing supply? In Part One doubt was thrown on both of these possibilities. The ‘affordability’ of artisanal solutions, it was argued, was achieved by avoiding or minimizing the resident’s exposure to capitalist interests in the production and exchange process. State self-help housing projects were cheapened (in relation to the ‘conventional’ alternative) by the adoption of artisanal practices including reductions in the participation of wage labour; by the reduction in the quantity and standards of goods and services delivered, and by the staged incidence of housing costs (through progressive development). However, in comparison to artisanal housing, the projects involved increased costs derived from: the increased quantities of wage labour used; higher prices for land and its development; higher cost building materials, and increased exposure to interest rates, administrative costs, taxes, and legal fees. State projects also incorporated indirect costs derived from ideological and political considerations. It was argued
that the resulting reductions in housing costs compared to state conventional housing were insufficient to permit most low income groups access to the product without a major growth in their absolute and relative income shares.

The differences between state self-help housing projects and artisanal housing, it was argued, were derived from their different conditions of articulation. The theoretical section concluded by postulating the specific conditions of economic, political and ideological articulation characteristic of state self-help housing projects.

The empirical analysis in Part Two proceeded to examine these two types of self-help housing activities in Pereira, Colombia at both an urban and settlement level and their conditions of economic, political and ideological articulation. We can now identify the limits of state self-help housing projects as a solution to the low income housing problem by comparing the conditions of articulation existing in the two forms using empirical evidence from Pereira.

ECONOMIC ARTICULATION AND THE LIMITS OF STATE SELF-HELP PROJECTS

The Production of Housing

The Acquisition and Development of Land

In the Part One it was argued that the artisanal mode of land acquisition arose because low income groups were excluded from formal land markets by rapidly escalating land values, low incomes and discriminatory municipal codes. The artisanal form was confined to areas regarded as unsuitable by the industrial and manufactured forms. Pereira's public and private conventional housing projects were universally located on land that was relatively easy to build on (interfluvial *mesetas* and river terraces) that was near more socially-desirable sites
Artisanal building was largely confined to those areas considered undesirable or excessively costly for other types of residential development - river valley bottoms and slopes liable to flooding, erosion and landslides; public land lining the city's railways; roadside verges; small interstitial developments within city; and land near socially-undesirable sites (cemeteries, slaughter houses, prisons, asylums etc.). In most cases the land occupied was national or municipal property though in some cases squatter settlements developed on private property. These settlements were incorporated into the urban land market though the development of formal and informal markets for land, improvements and property; through the subsequent provision of services and infrastructure; through state efforts at regularization of tenure in squatter eradication and upgrading programmes; and through conversion of settlements into state self-help housing plans.

Elsewhere cadastral data revealed marked and growing inequalities in the pattern of urban land ownership and widespread land speculation. By the early Seventies over half of the city's land was in the hands of a very small proportion of owners. Between 1968 and 1973 official land values in the city increased by 56.1% in real terms, an average annual rate of increase of 9.4%. However, land values in some peripheral and central areas doubled in real terms over the period, and unofficial land values were variously estimated at two to four times the level of official values. On the western periphery coffee fincas and sugar estates were transferred into the hands of state agencies and consortia of land speculators and

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developers. Here increases in raw land costs were a major reason for low-income exclusion from state projects - by 1976 the cheapest ICT and Fondo Obrero housing solutions in the area required minimum household incomes that were twice as high as the city average.

Land development costs on the periphery were an even greater reason for low income exclusion. In 1976 these amounted to $123.70m² (US $3.41m²) in the projected ICT Aeropuerto development; and $270.00m² (US $7.44m²) in the Fondo Obrero Villa Alicia project. Developed land costs were estimated at 30 to 40% of the total costs of housing produced by both agencies.

It was also argued that land developed by the artisanal form was accessible to low income groups because of its illegal nature (invasion, below market prices for illegal land sales, absence of service costs, non-payment of taxes) and because it could be adjusted to fluctuations in the family budget. The study revealed the restricted incidence of 'pure' artisanal conditions involving de facto land occupation for self-consumption without money transactions taking place. The dominant mode of acquisition was one where the artisanal form articulated by the capitalist land market, acquired land as a real commodity and generated potential or real commodities from the residents' land-valorizing activities. The Pereira study revealed that illegal land transactions were the most common mode of land acquisition for artisanal building. Profits from land sales in progressive and professional invasions were used either to improve existing housing or were captured by those with properties elsewhere in the city. It was precisely the right to profits through the illegal subdivision and sale of invaded land that was responsible for the formation of El Plumon and many railway settlements. The widespread use of the compra de mejora enabled the seller to transfer rights to
improvements outside of the issue of land ownership for sums in excess of the value of improvements.

However, the conditions governing artisanal land acquisition and development and specifically recognition within the price of sub-optimal site conditions; the lack of tenure security (and the accompanying inability to raise collateral); and the absence or low levels of service and infrastructure provision all kept the land accessible to low income groups. In 1976 in El Plumon, land values were running at between four and a half to nine times less than in the surrounding legal land market.

Different conditions of articulation governed the mode of land acquisition in the city's state self-help housing projects. Here it was possible to talk of a 'real' land commodity. The mode of land acquisition and development involved the consumption of commodities, the payment of ground rents, interests, taxes and the purchase of wage labour.

In state self-help housing projects 'raw' land was purchased in the formal land market as a commodity by the state; and in squatter upgrading projects land markets were transformed from the informal to the formal market through land regularization credits, home improvement loans, the development of services etc. The articulation process governing these markets were clearly different to those governing artisanal activities, or rather represented an acceleration of the capitalist consolidation of land markets.

Debates on the relationship between legal rights to transferable private property and commodity processes have tended to centre on the beneficial effects on the resident's ability to raise collateral, acquire services and his increased propensity to invest in property. Less attention has been focused on the fact that
the granting of legal tenure in self-help housing and upgrading projects involved
the expansion and consolidation of the urban land market, and the exposure of
residents to speculative processes. The consequence was that project residents
were confronted with extra costs not encountered in the artisanal form, derived
from payment of legal rents to landowners; interests to finance capital and taxes
to the local state. Thus if the state post-facto legalized a squatter settlement or
unimproved subdivision (as in an upgrading project) it facilitated the penetration
of commodity relations in land where hitherto they did not exist or more
commonly where they were underdeveloped (albeit at lower prices precisely
because they were illegal). If it legalized these lands before possession (as in
state self-help housing projects) it merely responded to the market valuation of
lands which the artisanal builder otherwise would have invaded or bought illegally
(at lower prices). Thus the legalization of land and its commercial payment could
exclude low income groups and aggravate the condition of those within the
projects. Gentrification and the growth of rental markets were clearly related to
these difficulties.

The Hernando Velez Marulanda study showed that the mode of land
acquisition exposed the community to land speculation and landed interests in the
form of ground rents. It is difficult to compare raw land costs for artisanal and
state self-help projects given differences in prices relating to conditions other than
legality (e.g. physical site conditions). Nonetheless the sums being exchanged for
land in the Hernando Velez Marulanda and ICT Otun self-help projects were
equivalent to between 14.9 months and 11.5 months rent using a typical monthly
rent of $400 in 1976. Evidence from the El Plumon survey indicated that land
costs were covered by a payment equivalent to two and a half to four months rent.
Another significant characteristic of state self-help housing and upgrading projects was the exposure of residents to interest rates derived from purchase through credit. In Hernando Velez Marulanda these amounted to $4350 - 8.2% of the total value of the house in July 1976. The significance of this cost element clearly depended on the relationship between interest rates and inflation over the amortization period and on the levels of subsidies granted on these rates. Problems of decapitalization limited the degree of variance from the commercial rate. In 1976 state loans carried annual interest rates ranging from 12% (Hernando Velez Marulanda) to 14% (ICT Otun), and in the ICT projects a 5% annual increment on monthly payments was introduced to counteract inflation. Clearly the burden of these payments was not encountered in the artisanal form.

An appreciation of the differences in the land development process has to recognize the different relationship between raw and developed land costs in the three cases of artisanal building, upgrading and self-help housing projects.

In artisanal settlements, raw land costs were low relative to those of land development in part because of illegality and site difficulties. However, this had little effect on residents' entry costs to land because the costs of land development entered not as initial but as intermediate or final costs. Services were not usually acquired until legality of tenure was established, and then arrangements were made with the appropriate municipal agencies for their financing and installation. An immediate effect of service provision was of course to articulate these areas more closely with the broader urban land market.

Similar considerations also governed upgrading projects but here the state intervened systematically to secure rapid incorporation of artisanal land markets into the formal urban land market. Loans were extended to cover land costs...
derived from state intervention (land regularization credits, home improvement loans, installation loans etc.). The resulting burden of tariffs, property taxes, interest rates and loan repayments could prove prohibitively high for low income groups, and as the Seventies progressed there was an increased reluctance by the utility agencies to offer subsidies, in part because of World Bank pressures. The effect of self-help labour contributions in reducing land development costs in the city's ICT upgrading projects was minimal being confined to elementary tasks involving unskilled labour (drainage, levelling, enclosure, ditch-digging), whilst the installation of general networks and individual connections for services was contracted out by the agency.

In the city's self-help housing projects on the other hand both raw land and land development costs appeared as initial costs to the resident, and again were met by interest-bearing loans. The high costs of providing fully-serviced land before residence constituted a serious obstacle to low income groups wishing to enter or remain in these projects. In ICT sites and services and minimum solutions in Barrio Otun in 1976 the ratio of raw land to land development costs was 1:2.6. Land development costs constituted 65.3% of total housing costs in simple sites and services solutions; 35.8% to 37.3% in the serviced site and sanitary core options, and between 22.2% to 27.0% in the various minimum solutions options. The principal determinant of land development costs was the proximity of the site to existing primary and secondary service and infrastructure networks. Consequently the tendency observed in Pereira for state self-help housing projects to move to progressively more peripheral locations may have been a response to cheaper raw land costs, but it also implied that land development costs would constitute a high proportion of total housing costs.
Given the significance of land development costs for low income affordability it was notable that in ICT self-help housing projects two of the three strategies recommended for reducing costs - a self-help labour contribution and the principle of progressive development - were not applied to the land development process. In municipal self-help housing projects the possibilities of using cooperative self-help labour in land development were being explored including, in the Hernando Velez Marulanda case, the collective on-site production of materials needed for service provision.

Thus the conditions of articulation governing land provision in state self-help projects confronted potential residents with costs derived from land speculation and land development. These costs were a serious obstacle to low income accessibility and a major reason for the upmarket movement of state housing projects. In Pereira the state had only two ways of counteracting this tendency. The first was to increase lot and housing densities thereby spreading the burden of servicing costs. The ICT progressively reduced the lot areas in its self-help housing projects from 140-150m² in the early Sixties, to 100m² in the late Sixties, to 80m² in the mid-Seventies. Questions here emerged concerning the reduced utilities produced by the rapid reduction of per capita space standards. Vertical building was also identified as a means of reducing per capita land consumption rates, and designs for two-storey self-help housing became common in the city after the late Sixties. However the benefits of reduced land costs were minimized by new construction costs derived from the need for deeper foundations, stronger structures, more complicated designs and the lengthening of the construction period.

Attention was also focused on costs derived from the state's need to act
legally in its projects. The complexity of the laws and ordinances governing land, housing and urban development, and the general inefficiency of the bureaucracies responsible for their implementation often resulted in long and costly delays as the example of Hernando Velez Marulanda showed. Legal costs that were unknown or minimal in the artisanal form were generally transferred to the sale price in ICT self-help housing projects (a 2 to 4% levy in ICT projects) although they were absorbed by the state in municipal self-help housing plans.

The Provision of Construction Materials

The Pereira study indicated substantial differences in the articulation processes governing the acquisition of building materials for artisanal builders and state self-help housing projects.

First, most materials used by the artisanal form were not self-produced or 'foraged' throwaways but rather purchased as commodities. Unlike its 'pure' predecessor the 'real' urban artisanal form was articulated by capitalist construction materials markets. In Pereira's squatter settlements cooperative attempts to produce or purchase materials were minimal, largely because the construction process was organized through family-based systems. The use of throwaway materials was also not as common as has been reported for other Colombian cities, and where they were present they were usually purchased as commodities. In explaining the dependence of artisanal builders on diverse building materials markets the successful entry of manufactured, recycled bitumenized cardboard (cartón) into roofing materials markets, and the widespread market availability of bamboo were notable.

The artisanal form was also characterized by a reliance on construction materials that were purchased as commodities from all three forms of production.
In El Plumon 82.5% of houses contained industrial building materials in their roofs or walls; 66.7% manufactured materials and 87.3% artisanal materials. This diversity was largely related to the logic of progressive development, but in the initial stages the high prices of industrial materials either excluded many artisanal builders from these markets or led them to minimize on their use, though some materials (e.g. cement) seemed less indispensable than others. The widespread availability of cheaper artisanal or manufactured materials with considerable qualities of durability and versatility (bamboo, clay tile and timber) was also a pertinent consideration.

Progressive development was clearly an important reason for the widespread diversity in the use of building materials associated with artisanal building in the city. The progressive replacement of temporary for permanent materials involved a movement from artisanal to manufactured or industrial materials. The overall levels of use of different materials and the rate of substitution were dependent on their absolute and relative prices, the amount of disposable household income and the length of residence. The El Plumon study also indicated that the choice of the construction system was in part dependent on the amount of income immediately available for buying the different types of building materials.

The artisanal mode of provision of construction materials contrasted greatly with that in state self-help housing projects. Between 1960-1976 projects in the city were used as a vehicle for permitting or increasing (in upgrading projects) the exposure of residents to commodity markets for industrial and manufactured building materials. This was, achieved through two measures. First, the ICT policy combining compulsory building materials loans and the discouragement of
on-site materials production was identified as a means for expanding industrial and manufactured building materials markets. In family-based projects loans came in the form of building materials whose release, price, volume and quality were determined by the agency. Similar conditions applied to 'mutual aid' projects despite the fact that the cooperative construction system and work regime presented opportunities for on-site materials production. However, in municipal self-help housing plans, state control was limited by Acuerdo 67 (1975) to 'technical assistance in the selection of materials', but subjected to Planning Department approval and governed by the municipal codes. The Hernando Velez Marulanda project, freed of this constraint, was able to organize the on-site production of materials with some success. Cement blocks were produced at about a quarter of the cost of their commercial equivalent, and bulk purchasing of building materials allowed some protection against rapidly-rising prices.

The second measure employed to facilitate the dominance of industrial and manufactured materials in state self-help housing projects was through the imposition of compulsory plans and designs with obligatory materials specifications. These conditions affected all of the ICT's self-help housing projects over the period 1960-76, and after 1970 the whole raison d'être of its 'programme structure' was based on the evolution of a limited range of design models requiring standardized materials. In the Sixties projects, the most common self-help design was a single family, one-storey structure of brick, clay tile and a cement floor. In the mid-Seventies the most common design for serviced sites and minimum solutions was a single family, two-storey structure with brick walls, cement floors and an asbestos-cement roof. In municipal self-help housing plans the community was permitted to choose from a range of plans and designs but in
the Hernando Velez Marulanda case this resulted in a design that maximized the use of industrial materials.

This building materials policy was clearly motivated by the mixed economy philosophy that the state should act as a client to the private 'formal' sector. Officials also argued that the system permitted wholesale purchase at factory-gate prices, and that productivity could be improved and production costs lowered by using standardized and prefabricated materials, components and parts.

These conditions were very different to those in the artisanal form. The most obvious consequence of the total dependence on industrial materials, was the exposure of residents to their high and increasing prices. ICT data for the period Jan. 1974 to July 1976 revealed dramatic real annual rates of increase in the cost of cement (26.9%), asbestos-cement (23.1%) and bricks (23.4%). Building materials costs in Hernando Velez Marulanda were increasing in real terms by 8.3% p.a. over the July 1975 - July 1976 period.

The reasons for rapid increases in building materials costs were complex, but included the increases in middle-income demand for industrial and manufactured building materials associated with the Pastrana Four Strategies policy. Supply-side constraints included oligopolistic price-fixing (particularly in the cement and asbestos-cement industries), administrative and technical inefficiency, and transport difficulties. The failure of state self-help housing projects to implement the principle of progressive substitution of cheaper artisanal for industrial and manufactured materials also meant that whereas these expensive materials appeared as high 'initial' and 'one-off' costs in the projects, in the artisanal form they appeared as 'intermediate' or 'staged' costs.

In the Hernando Velez Marulanda case the responses open to residents to
counter these increased costs were highly restricted: a faster construction rate was constrained by employment considerations and the prohibition of on-site residence; and large scale bulk-buying was constrained by low income levels. Attempts to lessen exposure were limited to modifications in designs and construction methods that reduced required volumes and which substituted higher-priced for lower-priced materials. Thus the absence of a design permitting the incremental replacement of lower for higher priced materials during residence was particularly consequential.

The exclusive use of industrial and manufactured materials also had other economic consequences that were not significant in the artisanal form including: the heavy administrative costs involved in bulk purchasing, diminished utilities derived from the imposition of standardized prefabricated materials and structural parts on heterogeneous populations and variable site conditions; and the discounting of traditional building skills already available in the population. The ability the state to incorporate artisanal materials into its projects, seemed to be dependent on changes in relative prices, and attempts (including policy measures) to improve the quality of artisanal materials.

Organization of the Construction Process

In Part One it was argued that 'pure' artisanal production rested upon self-help building, a form of simple cooperation in which the household provided direct labour where it undertook the administration of resources and the organization of the construction process. Production was realized either through a division of labour, within the family or on a cooperative basis with additional labour being derived from kinship obligations or from non-commodity transactions. However, the articulation process governing the 'real' artisanal form,
imparted a specific set of characteristics to labour relations and markets that was significantly different to those in state self-help housing projects. In some cases wage labour replaced self-help labour completely and capitalist relations of production were well advanced; in others, and more commonly, various combinations of self-help and wage labour were found. The degree to which capitalist relations of production were able to transform the labour process was contingent on the resident’s income level; the market value of the labour power commodity, and the opportunity costs of the resident’s own self-help labour in relation to wage employment. The fundamental feature of this transformation was the partial separation of the owner of the house from the production process through the contracting of ‘informal sector’ wage labour, and through the introduction of an intermediary technical agent (maestro de obra).

These conditions of articulation were identified in the El Plumon survey where 41.4% of houses incorporated the use of wage labour. Exclusive use of wage labour (10.3%) referred to those cases of ‘building to order’ through contract with a building firm. The specific combination of wage and self-help labour (24.1%) varied with the resident’s choice of progressive development model, with the incidence of labour costs during the construction process being a major consideration in this choice. In the most common model - the transformation of a one-storey, clay tile and split-cane shack to a brick and clay tile townhouse - there was a high initial incidence of self-help labour although the distribution of traditional building skills and construction standards was clearly uneven. Skilled wage labour was costly to the resident but could produce distinct benefits derived from professional skill levels, avoidance or correction of design faults and the correct estimate of volumes of materials required.
On the demand side the construction rate, the quality of the product and the relative incidence of self-help and wage labour were an immediate function of the amount of household savings and income, and the length of the period of investment. On the supply side, the relative incidence of wage and self-help labour depended on the physical capacities of the household, the opportunity costs of its own self-help and wage labour, construction sector wage rates and the value of the sweat-equity created. However, in most cases the artisanal builder acted as his own architect, coordinator and supervisor. The absence of traditions of collective labour was noteworthy in Pereira's squatter settlements.

Significant differences emerged between the articulation processes governing the organization of the labour process in state self-housing projects and the artisanal form. State interventions were geared to increasing productivity and the social division of labour, and to generalizing market conditions, i.e. the state was a more developed means for articulating artisanal activities to capitalist relations of production and exchange. State attempts were expressly geared to increasing productivity either by increasing production with the same resources or by maintaining the same production with less resources.

In the former goal emphasis was placed on achieving a 'market determined' rationality in the administration of capital, machinery, raw materials and labour power and in the application of technical advances. However, there were problems in pursuing productivity gains in this way because of demand constraints brought on by low income levels and marked income inequalities; shortages of foreign exchange for expensive but essential imported machinery and equipment; shortages of construction capital derived from high and rising land values; and an oligopolistic price structure in some materials markets that discouraged necessary
Recourse there was therefore made to the second method of achieving productivity gains - to maintain production with less resources. State agencies, calculated that a substantial reduction in construction costs could be achieved by replacing wage labour with self-help labour. This measure it was argued would allow state agencies to increase total output to the extent permitted by savings on wage labour, and it would improve project affordability.

It is debatable whether these two means of achieving productivity gains were not in conflict: the introduction of skilled technical and managerial labour, and the increased use of prefabricated and industrial building materials on the one hand; and the replacement of wage labour by self-help labour on the other. Whilst these measures reduced building costs in relation to state conventional housing, they also involved labour costs that were absent or less significant in the artisanal form. Thus the Pereira data revealed that the reduction of total housing costs was limited by the low level of substitution of contract by self-help labour within the city's projects, and by the incorporation of new costs derived from the introduction of administrative, skilled and technical labour.

In all of the city's ICT self-help projects, land development was the exclusive preserve of contract labour. Again the elimination of paid labour costs embodied in materials prices through on-site production and assembly was absent and even the substitution of paid labour for self-help labour in the construction process was limited. All of the agency's projects allowed for the introduction of paid skilled labour at specific stages and for specific tasks determined by the agency. Conditions in municipal self-help housing plans were somewhat different. In the Hernando Velez project wider levels of use of self-help labour were present.
or contemplated in land development and on-site production of materials. Again its cooperative nature and its organization as a vocational training programme created possibilities for an expanded role for skilled self-help labour in the future.

Thus in comparison to equivalent state conventional housing, the reductions in total housing costs achievable through the substitution of self-help labour for paid manual labour could be considerable. However, in comparison to artisanal building there was a significantly greater development of capital/wage relations in state self-help housing projects. Despite the fact that they excluded wage costs involved in land development and administration, data from Barrio Otun revealed that wage labour constituted between 9.3% and 16.1% of total housing costs in sites and services and minimum solutions. The effect of substituting contract labour by self-help labour in the construction of the sanitary core resulted in a 13.6% reduction in total housing costs for the same solution; and in the construction of the multiple use space to a 17.7% reduction in total housing costs for the same ‘minimum solution’. It was also true, however, that the incidence of self-help labour in municipal housing plans was much higher than in the ICT projects.

The Administrative Process

In Pereira’s squatter settlements it was notable that the artisanal builder usually retained control over the design and planning of the house and settlement and control over the construction process.

This was not the case in Pereira’s state self-help housing projects. Thus ICT projects universally involved the use of professional and technical agents to elaborate plans and designs and supervise the labour and construction process. In many cases the agency also insisted on introducing social workers to organize the
community. A compulsory work regime was established enforced by fines and even expulsion. In the municipal self-help housing plans the residents clearly retained greater powers of control over the labour process and some measure of participation in the design and planning process. However de facto control remained in the hands of the junta directiva rather than the resident household.

Some efficiency and productivity gains from the increased division of labour and the use of technical and managerial skills were recognized in these projects. They included: the introduction of more rational methods of allocating labour power and resources; correct estimates of volumes of materials; avoidance of design and technical faults and standardization of construction procedures. In cooperative projects additional benefits could be achieved through the greater socialization of the production process including: the collective sharing of building skills; the on-site production and bulk purchase of construction materials; welfare benefits derived from mutual aid, insurance, educational and recreational arrangements, and the acquisition of skills marketable outside of the project.

On the other hand, the participation of architects, surveyors, lawyers, engineers, planners, management personnel etc. increased the significance of paid labour costs for total housing costs in comparison to the artisanal form. One of the great paradoxes of state intervention was that the attempt to incorporate the resident's self-help labour into the construction process resulted in increased indirect wage labour costs. In Pereira in the Sixties, administrative costs constituted 14% of total housing costs in ICT esfuerzo propio projects, and a massive 24% in mutual aid projects. By 1976, however, administrative costs in ICT sites and services and minimum solutions were down to a 9.1% surcharge. Legislation governing municipal self-help housing plans obliged participating
agencies to absorb within their budgets all administrative and labour costs involved in the provision of plans and designs and legal and technical assistance. These ‘hidden costs’ were considerable and represented an undoubted benefit to the resident. Of course absorption of these costs represented no savings to the consumer in comparison with the artisanal alternative. Though such concessions might be feasible on a project-by-project basis, serious decapitalization problems would arise if these subsidies were generalized on a large scale.

A number of distinct diseconomies arose out of state administration of the construction process. The inefficient planning of the qualitative and quantitative needs of labour power, materials, tools and finance for each stage in the construction process often resulted in delays and tension between agency and the community. The poor adjudication of contracts could also lead to extra costs derived from bad tendering; technical incompetence in contract specifications; long delays in legal processing, and extra diseconomies associated with the ubiquitous corruption and favouritism. Persistent complaints about ICT self-help housing projects in Pereira included delays in signing contracts and an inadequate and irregular supply of tools, equipment and building materials. The rigid bureaucratic control of the labour regime (e.g. restricting self-help activities to the weekends) could impede the construction rate in ways not encountered in the artisanal form. Often the problem was not confined to the relationship between the project and the local agency but also affected that between branch and central office.

The System of Finance

Given the development of commodity markets in the artisanal form, a close relationship was observed between the level of household income and the rate of
completion of structures. Financing for production was largely derived from household incomes. 80.2% of the El Plumon sample received no external financial assistance for these purposes. Credit for self-help builders was limited to small loans from parents and friends and occasionally from the employer. In settlements organized within the Acción Comunal system, artisanal builders acquired financing for construction and servicing activities through the auxilio and partida systems.

The limited development of credit markets in the artisanal form contrasted with state self-help housing projects. Here the state acted as finance capital by extending producer and consumer credits. Although there was a regular supply of funds which could shorten the construction period, and though the state could diminish credit costs through subsidizing interest rates, in practice state agencies relied on credit from private and state banks and foreign finance capital, transferring the interest rate current in capital markets to the final sale price of the house.

In state self-help projects the accumulation, allocation and recovery of funds was clearly governed by capitalist principles. The bulk of the initial accumulation of funds for ICT projects took place within the state, relieving the residents of much of the burden of savings prior to investment. In the Sixties no initial downpayments were required for self-help housing projects, but by the mid-Seventies initial downpayments of 10% on site and service loans, and between 4% and 10% on minimum solutions were introduced. The local availability of funds was dependent on the composition of the agency's national budget. The study revealed that the ICT's interest in self-help housing programmes was largely prompted by external stimuli and funds: by the Alliance for Progress agencies in
the Sixties and the World Bank in the Seventies. Funds for ICT self-help housing were always dependent on credit, and interest rates were transmitted to residents. Reliance on non-concessional credit increased from around 10% to 50% of the agency's budget between the early Sixties and mid-Seventies and the contribution of residents' repayments to the budget also increased over the period. In municipal self-help housing plans initial accumulation fell more heavily on the residents with initial downpayments, weekly payments and other sources amounting up to one third of total funds. The remainder, again, came from the state through concessional loans for land and equipment, and from an irregular supply of auxilios and partidas.

In the city's ICT projects the state retained exclusive control over the allocation procedures. However, the Pereira office had little influence over these procedures and local self-help activities were thus closely related to national priorities and decisions. Nationally, in 1975 the agency was spending two thirds (64.5%) of its resources on programmes affordable only by those earning $4200 a month and more. Municipal self-help housing plans combined state allocation of loans (generally on the basis of political criteria) with community control over its own contributions. The allocation of auxilios and partidas took place through Acción Comunal structures, but their de facto allocation was in the hands of local political brokers.

State self-help housing projects were also generally governed by strict control over the recovery cycle. Credit conditions on ICT loans were determined by the Bogota office and its projects were not protected from the volatile interest rates of the Seventies. Loans carried annual interest rates based on the average costs of the agency's borrowing requirement (12% p.a. in 1970 and 14% in 1975).
Given rising interest rates, increases in land and building materials costs, and static or slowly-rising incomes in a context of marked income inequality, the ICT attempted to maintain project affordability through subsidizing interest rates, lengthening repayment periods and reducing initial downpayments. However, despite the introduction of cross-subsidization in the late Sixties, and with a rise in its own borrowing costs, the agency was forced to increase the contribution to the budget from its own resources. This meant steady increases in interest rates on self-help programmes; the diversion of an increasing proportion of resources to higher interest middle income programmes; the shortening of amortization periods and the imposition of higher downpayments. Thus between 1960-1976 amortization periods dropped from 20 to 12-15 years; downpayments increased from nothing to 4-10% on sites and services and minimum solutions, and a 5% annual increase on monthly repayments was introduced in 1976 to counteract inflation. Threats of decapitalization constituted a strong constraint on subsidies and the amount of resources available to low income groups.

Thus state self-help housing projects represented a substantial consolidation of capitalist financial markets, and participation in these markets could result in interests constituting a significant proportion of total housing costs, costs which were not encountered at this scale within the artisanal form. Of course this was only true if interest rates stayed ahead of inflation. When they did not the creditworthy state self-help builder had a distinct advantage over the artisanal builder. Again where the artisanal builder was borrowing at higher rates, the advantage again lay with the state self-help builder. However it is difficult to see how any financial system could remain viable given a long-term trend for interest rates to fall below the inflation rate, whilst widespread subsidization of interest
rates for low income groups could lead to decapitalization.

The Exchange and Consumption of Housing

The Pereira materials showed clearly that the articulation of artisanal housing activities by capitalist land, building materials and labour markets meant that access to these goods and services was only achievable through commodity transactions. This access was determined by the degree of stability in the resident's employment, the possibilities of extending the working week, and the level of income available for housing investment. Despite often significant disadvantages (lack of tenure, unstable materials, high densities, overcrowding, low servicing levels etc.) artisanal housing markets generally remained accessible to the city's lowest income groups. Household incomes at the bottom of the city's income distribution profile were very low. Nationally, the minimum daily wage rose from Col. $30 (US $1.05) in 1974, to Col. $40 (US $1.10) in 1976. In terms of constant 1974 pesos, however, it actually fell to $27 over the period. In 1974 over a third of the city's EAP (34.5%) was either unemployed or under-employed, and over a half of the EAP was working in the tertiary or informal sectors. In 1973 three quarters of households (76.5%) in municipal Pereira earned less than $1860 (US $75) a month. Conditions in the city's squatter settlements were even worse, with between 70-80% of the population either economically inactive or unemployed. In five out of six squatter settlements surveyed in 1976 (SENA, Schifter, Burgess) between one half and three quarters of all households had monthly incomes below $1500 (US $41), and between a third and a half of the labour force worked in the generally low-paid informal sector. Data from many
sources also indicated significant income inequalities within the settlements.

The Pereira study showed clearly the significance of commodity transactions for artisanal consumption processes. The incidence of renting and subrenting was significant, particularly in the older settlements. Variations in construction rates and housing quality were in part attributable to the effects of rents and land sales both in terms of those who paid them and those who received them. Speculation in land and improvements within squatter settlements was also often linked to commercial gain by absentee 'owners'. The development of *inquilinato* conditions, and low levels of housing investment within the city's older and more central squatter settlements was particularly notable.

Some economies associated with the mode of consumption of artisanal housing were identified. The combination of the construction process with the simultaneous consumption of the house allowed investments in housing expansion and improvement to be fine-tuned to the changing spatial requirements and income of the household. It often permitted high construction rates in short periods of time; on-site residence permitted flexible expenditures of labour power; space could be set aside in the design to allow supplementary domestic economies (horticulture and animal rearing); and it permitted the use of the house as a workplace and source of income.

The mode of consumption and exchange of state self-help housing differed significantly from that of artisanal housing. Here the production and exchange processes were entirely carried out through capitalist mechanisms, and the house was produced directly as a real housing commodity. Access to the commodity was determined by the residents' capacity to pay. Increases in housing costs relative to incomes resulted in a commodity that became or remained outside of the effective
demand of the majority, and whose output was restricted because attempts to retain affordability by subsidization were contained by threats of decapitalization. In 1970 an ICT self-help minimum solution (with 30m² built area) in the city cost $16,000, (US $838) accessible it was claimed to those with monthly incomes exceeding $880 (US $46). Yet in 1970 55% of the branch’s applicants were earning less than $500 (US $26) a month. In 1973 a minimum solution was available for households with monthly incomes above $2000 (US $81), yet in that year 76.5% of households earned less than $1860 (US $75) a month. Thus during this period the cheapest ICT self-help housing on offer was not accessible to between a half and three quarters of households in the city. In 1976 the simplest site and services solution in Barrio Otun cost $17,996 (US $496), theoretically accessible to those with monthly incomes of $1400, but output was minuscule. The greater part of self-help output in the barrio consisted either of serviced lots with sanitary cores which cost between $31,517 and $36,475 (US $867-$1004), almost twice as much, or of minimum solutions costing from $43,569 to $52,945 (US $1120-$1458). These projects were clearly affordable only by a small proportion of those living in artisanal settlements.

The limited output of ICT self-help housing in the Seventies reflected the structural determinants of the relationship between affordability, cost recovery and replicability already discussed. In 1975 only 1.3% of the agency’s national investment in new housing stock went on sites and services programmes, whilst almost two thirds (64.5%) went to programmes with no self-help components (basic, intermediate and maximum solutions) and were accessible only to those households with monthly incomes exceeding $4200.

Entry into municipal self-help housing plans was clearly mediated by
political factors. Here too the high housing costs in Hernando Velez Marulanda were already causing concern about affordability and cost recovery. The role of the initial downpayments system as a barrier to low income access appeared to be a growing possibility in the project brought on by low incomes, high building costs and capital shortages. Moreover these total costs were for an unfinished house, they excluded land development costs and they concealed substantial ‘hidden costs’ that threatened the large scale replicability of the projects.

The restricted accessibility of low income groups to ICT self-help housing projects was compounded by rigid economic thresholds for entry, prohibitive downpayment requirements, and the insistence on regular monthly repayments. In Barrio Hernando Velez Marulanda the housing distribution system was a source of considerable tension in a context of slow construction rates and marked social inequalities.

Although most self-help housing projects in Pereira in the mid-Seventies fell outside of the effective demand of the low income majority, it would be interesting to know if there was any significant change in low income accessibility to these projects over the long term period 1960-76. Were the Alliance for Progress projects in the city in the early Sixties genuinely accessible to the poor, or did they end up in the hands of the better-off as a result of selection criteria or middle class encroachment? Did the gap between production costs and effective demand for these projects widen over the period? These questions are very difficult to answer in the absence of detailed data from the early period on costs and affordability, and given the growing lack of project comparability due to significant reductions in space and material standards. Certainly census data on early ICT self-help housing projects indicated that the settlements predominantly
housed blue and white collar groups whose employment and income levels were
one step above those of the city's poor majority. An ICT survey carried out in
Barrio Cuba in 1975, fifteen years after construction started, revealed that a third
of the sample had purchased their house from a person other than the ICT, and
noted that many houses had been sold 'two, three or four or more times'.

IDEOLOGICAL ARTICULATION AND THE LIMITS OF STATE SELF-HELP
HOUSING PROJECTS

The Pereira study revealed major differences between the processes of
ideological articulation governing artisanal and state self-help housing. These
processes were examined in relation to the principle of private property;
ideological aspects of standards, housing designs and settlement plans; and the
question of urban social segregation.

Ideology and Private Property

The Pereira study showed that artisanal building generally involved the
transfer of land from the public domain to the realm of transferable private
property. In the Seventies squatting on private land became more common, and
here land was transferred within the private domain, with the local state
facilitating the transfers. Artisanal building thus expanded the realm of private
property in land and housing. Examples existed of settlements that achieved rapid
legality of tenure either because the landowners and the state wanted to avoid
expensive civil proceedings and political difficulties, or through state efforts to
upgrade and legalize existing settlements. Elsewhere the full legal integration of
artisanal land and housing markets was a lengthy affair achieved only after
progressive development to legally-required levels, or after the revision of these
standards.

The Colombian legal system was highly flexible in accommodating the economic articulation process (particularly the commodification of land and property). There was the widespread use of a range of inferior and superior legal instruments that conferred greater or lesser rights to land and improvements before full legality (a registered title deed) was achieved. By staggering the achievement of full legality over time, and according to variations in particular circumstances, the legal structures of the capitalist mode could accommodate the conflicts associated with widespread illegal settlement and maintain some order in the transition to full integration with private property structures.

The widespread use in the city's squatter settlements of the *compra de mejora* to transfer rights to improvements outside of the issue of land ownership produced a measure of tenure security with its attendant economic benefits, and involved the legal recognition of the development of commodity relations in land despite the fact that ownership titles were not officially involved.

The issue of legality of tenure played an important role in the consciousness of artisanal builders. In general a tension was identified between the individual consciousness appropriate to private property, and the collective consciousness necessary for the defence of this property and future settlement improvements. In the city's mass invasions, collective consciousness was initially stronger than in progressive invasions based on sale by *compra de mejora*. Immediate entry into land and property markets generated tensions associated with speculative transactions. Moreover patterns of social inequality and uneven physical development in the context of an exclusive concern with family-based systems of progressive development combined to discourage cooperative forms of
social behaviour.

The state drew numerous economic benefits from the institutionalization of private property in its self-help housing and upgrading projects including eligibility for taxes. There were also important ideological ramifications and some differences with the ideological articulation processes associated with the artisanal form. In the city's projects land acquisition involved the immediate granting of full tenure rights (on mortgage) to settlers, rather than the 'sequenced' legality of the artisanal form over time. Although land was directly transferred from the public to private domain in some projects, the state generally acquired land through the commercial land market.

The state also sought to expand private homeownership as an ideological buttress for an economic system based on transferable private property rights. In Part One we identified the continuity of interest within the history of the Self-Help Movement in the generalization of the principle of private property. The empirical materials indicated that in mutual aid and cooperative projects, tensions generally arose over private appropriation of houses which had been produced collectively. On the other hand family-based systems reflected social inequalities and stunted the collective consciousness necessary for obtaining subsequent settlement improvements.

Ideology and Designs, Plans and Standards

The analysis of housing designs in Barrio El Plumon, in a pattern that was widely observed throughout the city's squatter settlements, revealed evidence of the ideological reconstruction accompanying the economic articulation of the artisanal form by the capitalist mode. It revealed two distinct ideological
influences on housing designs. Many houses used rural artisanal models, materials, techniques and skills to produce designs strongly influenced by peasant value systems. On the other hand, many houses in the city's squatter settlements clearly reproduced the formal elements of urban housing ideology in their construction methods, preference for 'modern' materials and designs and adherence to the signs and symbols of urban value systems. The El Plumon study revealed a process of transformation from one design type to the other which can be interpreted in terms of ideological articulation. The artisanal builder formulated his housing needs according to the process of cultural and ideological reconstruction that accompanied his entry into urban capitalist society. The process was reflected in progressive development procedures where distinct models were evolved allowing a transformation of housing built using traditional design models, materials and techniques to modern urban townhouses based on modern materials and design features. However, given the necessary resources, the artisanal builder could also use progressive development that at all stages conformed to urban housing models and ideologies. This ideological articulation accompanied the broader articulation of artisanal activities to capitalist land, building materials and financial markets. However, it was also argued that design preferences were not merely explicable at an individual ideological level. The financial constraint determined the rate of transformation and the choice of progressive development model.

The Pereira study also indicated that the degree of separation of the consumer from the design and planning process was a crucial determinant of the relationship between ideology, design, housing needs and use-values in the artisanal form. In most cases the resident maintained a large measure of control
over the definition of need and the design process. A wide range of utilities could be extracted from the house because of this control including: the flexibility to improve housing according to changes in household income and spatial needs; direct occupation during construction to allow the capitalization of rents; the consumption of the house as a workplace and source of rental income, and the incorporation of domestic economies into housing designs.

However the analysis of designs used in Pereira’s state self-help housing projects revealed very different conditions of ideological articulation. Here the state provided designs that rationalized the requirements of industrial building materials and systems, and which adhered to minimum standards embodied in the municipal codes. The result was the imposition of a design ideology which, despite embodying higher building, materials and servicing standards, ignored the transitional role of artisanal models, materials, techniques and skills in the progressive development process. This effectively isolated the projects from the numerous benefits and use values associated with the artisanal form.

In the city’s projects the design and planning functions were taken out of control of the resident. ICT residents were confronted with a fixed design (from Bogota) and mobilized to realize it without consultation or modification. In the city’s municipal self-help housing plans, an element of consultation through the community development structures was achieved, but even here participation was restricted to the choice between a range of pre-determined alternatives elaborated by professionals.

A major effect of the separation of the resident from the design process in the city’s ICT projects was the production of uniform design models specifically geared to maximizing the use of industrial, standardized materials and techniques.
The result was the delivery of a limited range of models to a heterogeneous population with great variations in housing needs, income levels, and household size. Similar considerations governed the design process in Hernando Velez Marulanda but here the combination of the middle class architectural values of the designer and adherence to minimum standards resulted in a design that far exceeded the immediate needs of the majority of project households, resulting in extra materials costs and labour expenditures, and slowness in the construction rate.

Designs often showed a serious insensitivity to, or ignorance of the critical linkages involved in low income housing consumption - with no capacity for the subletting of space; no space for horticultural activities; restrictions on the keeping of animals; and restrictions on the use of the house as a place of employment. The separation of design function from the self-help builder in state projects also led to restrictions on the social and technical utility of the house. Internal designs based on middle class conceptions of housing need were often alien to cultural traditions of housing consumption.

Much of the ideological content in design and planning concepts was derived from adherence to the minimum standards embodied in the city's municipal codes which demanded compliance with precise specifications of areas, materials, dimensions, construction methods and standards, and absolute levels of service provision. The mandatory nature of these standards clearly made artisanal progressive development procedures illegal. The failure of artisanal builders to implement these standards undoubtedly created serious diseconomies at the urban and settlement level including high levels of public investment for future rationalization, and the increased exposure of residents to the hazards of fire,
structural safety, public hygiene, flooding, erosion and pollution. However, it was also true that non-compliance lowered costs, and often allowed the artisanal builder to acquire a greater immediate housing utility.

In Part One the relationship between minimum standards and the broader ideological value system associated with modernization architectural and planning practices was identified. The Pereira study revealed that the state was compelled to build its self-help housing and upgrading projects to these ideologically-determined and legally-defined standards. The result was higher quality construction, service levels and general living conditions in these projects in comparison with settlements produced by artisanal building. On the other hand compliance with these standards undoubtedly increased costs in relation to artisanal practices limiting affordability and overall levels of output.

By the early Seventies the city's state agencies recognized that building or rebuilding settlements on the basis of accepted minimum standards led to prohibitively high unit costs and represented a waste of scarce resources. The ICT formulated lower specifications for its housing designs and settlement plans, and in 1976 increases in zonal population and housing densities were written into the municipal codes. In 1975 a step was also made towards the recognition of standards as guides towards the staged achievement of reformulated minimum goals, with the establishment of Zones of Progressive Residence within the city's planning codes.

Although these measures probably had some effect in holding unit costs in check, it was difficult to see how building to even these reformulated standards could parallel the economies achieved by artisanal builders through non-compliance. Equally as serious, the principal consideration in the
reformulation of design and planning standards was to reduce land, built area and service consumption levels through the encouragement of higher densities. Although reduced standards could improve project affordability they could also result in serious constraints on the use-values provided.

Ideology and Urban Social Segregation

The Pereira study also indicated that through their adherence to minimum standards and tight selection procedures, state self-help housing projects responded to and reinforced the system of urban social segregation. Insistence on a given level and stability of incomes tended to create one class settlements minimizing the economic advantages derived from multi-class residence in the artisanal form. The fact that the projects were only directed at those groups with a certain level and stability of income created a danger that these groups could be 'creamed off' and lower income groups spatially isolated from the trickle-down effects of their incomes.

POLITICAL ARTICULATION AND THE LIMITS OF STATE SELF-HELP HOUSING

In Part One the critical role of the state in advancing the articulation process was identified. It was argued that articulation also involved a 'formal subsumption' of the political and ideological structures associated with pre-capitalist modes and forms of production. Both of these features were identified for all types of self-help activities in the political models presented for Pereira in Part Two. The study indicated that state interventions into the self-help housing process aimed at integrating the communities involved into the political structures of the state and party system, and at articulating 'pre-capitalist'
mechanisms of access to public resources as a means of political mobilization. In the case of artisanal activities the domination-repression functions of the state were exercised in those conjunctures where low income urban demands either went beyond these parameters or as a response to conflicts within them. State self-help housing projects were identified specifically as realizing the domination-integration functions of the state and as an institutional means for satisfying urban demands. The historical origins and characteristics of *ventajismo, caciquismo* and systems of patron/clientage were related to the nature of the state in dependent capitalist social formations, and to the issue of the political articulation.

The Pereira study revealed that both state self-help projects and artisanal activities could best be understood in terms of a broader model of the urban low income settlement process. It indicated the futility of discussing the political process as something separate from the urban process and of analyzing spatial structures without being aware of the effect of political processes on these structures. The study thus revealed the weakness of theoretical attempts to explain the origins of squatter movements in *inquilinato* areas purely in terms of changing individual priorities for location, tenure and amenity. The empirical analysis showed clearly that the low income settlement process and the level, timing and spatial allocation of urban goods and services were quite obviously contingent, amongst other factors, on the political affiliations of the settlements. It also showed that it was an error to study state self-help housing projects and community development systems as if they were technically-neutral solutions standing above or outside of political structures and processes.

Three forms of political articulation were identified with state interventions into self-help housing activities.
The first was the use of state resources for partisan political purposes through a complex interaction of extended patron/client linkages, the governing party and the state. The institutional political system in Pereira was based on caciquismo and hierarchical patron/clientage networks that exchanged political loyalty for access to the resources of the patron, political party and the state. State power was persistently used in the city's low income settlements to advance the political cause of the governing party (or rather faction) at the expense of the opposition. In pursuit of this goal access to land, housing, technical assistance, finance, services etc. was selectively determined by the political allegiance of the settlements and the possibilities of co-option. A range of integrating and repressive measures was identified for achieving this goal in the city, whose choice and implementation was dependent on the strength of popular mobilization, the clash of conflicting interests and other conjunctural circumstances (e.g. the availability of land, the size of the invasion, proximity to elections etc.). A number of models were presented which revealed that it was virtually impossible to discuss any aspect of the low income settlement process in Pereira without reference to the struggles of the rival Liberal Party caciques for control of the local state apparatus and the opportunities for satisfying urban demands according to traditional mechanisms of ventajismo and patron-clientage.

In the city's municipal self-help housing plans the residents were bound to the city's institutional political structures in an integrated and organized fashion. The promise of a self-help housing plan was used by the governing party factions to co-opt potential or actual invasion groups organizing in the city, with pre-election periods being a particularly sensitive time for these negotiations. The plans clearly permitted tokenism as a form of distributing good will, propagated
the state's version of legitimacy, and allowed the state, local party factions and the caciques to get the credit for the unpaid labour of the settlers. Although the status of the ICT as a national agency isolated its self-help housing projects from many of these local political influences, they were also important mechanisms for articulating the residents' demands to the political structures and culture of the capitalist mode: they gave some measure of political stability by promoting owner occupancy; they articulated settlers' demands with the institutions of the local state and national specialist agencies; they propagated the state's version of legitimacy and they gave a large measure of control to the agency to define or redefine urban needs through their control over the design, planning, production and exchange processes.

A second type of political articulation occurred through the integration of the settlement organizations into the vertical and hierarchical structures of the national community development system. In Part Two we traced the origins and rapid expansion of Acción Comunal in the city in the Sixties. By the mid-Seventies the majority of the city's settlements, were formally integrated into the system, though the significance of the juntas varied from settlement to settlement.

The granting of legal identity which accompanied membership was recognized by settlers as bestowing a measure of public recognition. Moreover, legal identity was also a precondition for the receipt of a wide range of assistance from local state bodies and in the case of El Plumon also provided the necessary legal pretext for public service provision. Most important it made the juntas eligible to receive financial assistance through loans, auxilios and partidas.

From the state's viewpoint the hierarchical and centralized administrative
structure of Acción Comunal in combination with the partida/auxilio system could be used to articulate local self-help activities and community resources towards national planning decisions and development priorities. The Acción Comunal system could thus be seen as an attempt to assert a measure of national political control over local grass-roots political forces and local caciques by establishing direct links between the juntas and national decision-makers. However, despite some successes (such as the dismantlement of the JAC Central) this strategy was impeded by the system's weak institutional resistance to the penetration of patron-client relations. In Pereira the system was used as a local source of patronage by national political figures, and despite its formally democratic structure it was unable to prevent the articulation of the juntas by the networks of patron/client relations that linked the political parties, local caciques and barrio leaders. Indeed, in both Barrios El Plumon and Hernando Velez Marulanda the organizational structures of the juntas tended to formalize rather than or transcend these relations by concentrating power in the Junta Directiva. This body monopolized relations with participating bodies and its members were generally clients of local sub-caciques and caciques, benefiting personally from their position and this patronage.

Although auxilios and partidas were undoubtedly significant for individual projects such as Hernando Velez Marulanda, at the urban level sums were limited in relation to need. The supply of funds was irregular, and complicated by the politicking surrounding their allocation and distribution. Although the fiscal procedures were laid down in Acción Comunal statutes, de facto control lay with the Junta Directiva and a typical feature of the auxilio/partida system was the embezzlement of funds by Congressmen who promised them, and the barrio
leaders who received them.

The two forms of political articulation processes outlined above were clearly associated with both artisanal activities and self-help housing projects. Other articulation processes can be identified that were specifically characteristic of state self-help housing projects.

First, the Pereira materials showed clearly that the nature, scale and timing of ICT commitments to self-help projects can only be fully understood in the context of international economic and political forces. There has been considerable discussion in recent years of the political significance of the periodic sponsorship of self-help housing by international lending agencies, and the relative significance that should be attached to ‘internal’ and ‘external’ factors in explaining the phenomenon at the local level. Whatever the case the fact that international political and economic processes were significant for the scale, type and incidence of self-help housing investments, and for a wide range of organizational, design and financial features in project implementation does indicate that a global perspective is important in understanding the nature of the articulation processes that govern them. However, municipal self-help housing plans were the product of local initiatives to address the housing problem.

The Pereira study also revealed that state self-help housing and upgrading projects had important political/administrative functions as instruments of regulation and control over the urban development process. ICT projects were an attempt to assert a degree of control for national institutions over the local urban development process. As such, serious political differences between local interests and branch activities were a periodic occurrence, as indeed were differences between the local branch and the central office over implementation procedures.
Again both ICT self-help housing and upgrading projects and municipal self-help housing plans through their design and planning specifications and adherence to municipal codes also revealed their character as corrective mechanisms with regulatory functions. An important goal of these projects was thus to increase densities; to rationalize their plans both internally and in relation to the city; and to integrate settlement life with the institutional structures of the local state.

At the settlement level, the city’s self-help housing projects revealed that it would be a mistake to associate the self-help activities of the settlers with any broader concept of autonomy in decision-making or ‘dweller control’. Although the distribution of decision-making power amongst the state, community and family varied greatly according to the nature of the projects (family-based self-help, mutual aid, squatter upgrading, integrated urban projects, municipal self-help housing plans) in general the settlement organization was converted into a state intermediary for the organization of construction processes in which ideological and political manipulation, and the subordination of spontaneous forms of organization was the rule. In municipal self-help housing plans such as Hernando Velez Marulanda the projects generally became enmeshed in a web of politicking both within and between bureaucracies. In ICT projects which were centralized and highly bureaucratic, institutional control permeated all aspects of the programme.

In assessing these projects there were clearly possibilities for greater decentralization, less bureaucratic rivalry, a more efficient and flexible organization of the construction process, less standardization in plans and designs and improvements in the flow of financial and physical resources. However, there also seemed to be structural limits on the ability of state to make any meaningful
progress towards real autonomy in its self-help housing projects given the high levels of centralization and bureaucracy characteristic of the dependent capitalist state, and the fact that the administration of the individual project reflected the degree of bureaucratic centralization in the state apparatus.

Significant developments have occurred in state self-help housing in Latin America and the Third World since the mid-Seventies, but the nature and limits of state interventions continues to remain a contentious question. It is hoped that this thesis has helped to throw some light on this question, and will be of use to others interested in carrying out research into this important development issue.
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THE STATE AND SELF-HELP BUILDING IN PEREIRA, COLOMBIA

VOLUME TWO

RODNEY DURRANT BURGESS

Thesis Submitted for Examination for the Degree of
Doctor of Philosophy

UNIVERSITY OF LONDON
## CONTENTS

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IN LATIN AMERICA AND COLOMBIA 1950 AND 1970

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<td>Population (mills.)</td>
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<tr>
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Source: Gwynne (1985) Tables 3.2 and 3.3

TABLE 2
THE GROWTH OF MANUFACTURING OUTPUT AND EMPLOYMENT
IN LATIN AMERICA 1963-69

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<th>Country</th>
<th>Growth of Annual Manufacturing Output (%)</th>
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<td>Colombia</td>
<td>5.9</td>
<td>2.8</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>8.9</td>
<td>2.8</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>1.7</td>
<td>3.3</td>
</tr>
<tr>
<td>Ecuador</td>
<td>11.4</td>
<td>6.0</td>
</tr>
<tr>
<td>Panama</td>
<td>12.9</td>
<td>7.4</td>
</tr>
</tbody>
</table>

Source: Morawetz (1974) Table 1
### TABLE 3
EMPLOYMENT AND UNEMPLOYMENT IN LATIN AMERICA
1960 - 1990

<table>
<thead>
<tr>
<th>Year</th>
<th>Employment (mills)</th>
<th>Unemployment (mills)</th>
<th>Unemployment (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>66.8</td>
<td>3.3</td>
<td>4.7</td>
</tr>
<tr>
<td>1970</td>
<td>83.6</td>
<td>4.5</td>
<td>5.1</td>
</tr>
<tr>
<td>1973</td>
<td>89.2</td>
<td>5.8</td>
<td>6.1</td>
</tr>
<tr>
<td>1980 (est)</td>
<td>106.9</td>
<td>6.6</td>
<td>5.8</td>
</tr>
<tr>
<td>1990 (est)</td>
<td>140.1</td>
<td>8.1</td>
<td>5.5</td>
</tr>
</tbody>
</table>

Source: Sabolo (1975) Table 3 and Appendix

### TABLE 4
INCOME DISTRIBUTION IN LATIN AMERICA
(\% NATIONAL INCOME)

<table>
<thead>
<tr>
<th>Country</th>
<th>Highest 20% A.</th>
<th>Lowest 40% B.</th>
<th>Ratio A/B.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>66.6</td>
<td>7.0</td>
<td>9.5</td>
</tr>
<tr>
<td>Mexico</td>
<td>57.7</td>
<td>9.9</td>
<td>5.8</td>
</tr>
<tr>
<td>Argentina</td>
<td>50.3</td>
<td>14.1</td>
<td>3.6</td>
</tr>
<tr>
<td>Peru</td>
<td>61.0</td>
<td>7.0</td>
<td>8.7</td>
</tr>
<tr>
<td>Venezuela</td>
<td>54.0</td>
<td>10.3</td>
<td>5.2</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>54.8</td>
<td>12.0</td>
<td>4.6</td>
</tr>
<tr>
<td>Chile</td>
<td>51.4</td>
<td>13.4</td>
<td>3.8</td>
</tr>
</tbody>
</table>

Source: Todaro (1985, 149) Table 5.4
### TABLE 5
**SIZE AND GROWTH OF URBAN POPULATION IN LATIN AMERICA 1950-2000**

<table>
<thead>
<tr>
<th>Year</th>
<th>Urban Population (mills)</th>
<th>% Urban/Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>67.5</td>
<td>25.1</td>
</tr>
<tr>
<td>1960</td>
<td>106.6</td>
<td>32.8</td>
</tr>
<tr>
<td>1970</td>
<td>162.4</td>
<td>37.8</td>
</tr>
<tr>
<td>1975</td>
<td>198.4</td>
<td>40.5</td>
</tr>
<tr>
<td>1980 (est.)</td>
<td>240.6</td>
<td>65.4</td>
</tr>
<tr>
<td>1990 (proj.)</td>
<td>343.3</td>
<td>N.D.</td>
</tr>
<tr>
<td>2000 (proj.)</td>
<td>466.2</td>
<td>75.7</td>
</tr>
</tbody>
</table>

Source: Todaro (1985:249) Table 9.1

### TABLE 6
**RATE OF GROWTH OF POPULATION IN LATIN AMERICA 1950-2000 (%)**

<table>
<thead>
<tr>
<th>Period</th>
<th>Rate of Natural Increase Total Population</th>
<th>Rate of Growth Urban Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950-60</td>
<td>2.7</td>
<td>5.8</td>
</tr>
<tr>
<td>1960-70</td>
<td>2.8</td>
<td>5.2</td>
</tr>
<tr>
<td>1970-80</td>
<td>2.7</td>
<td>4.8</td>
</tr>
<tr>
<td>1980-90</td>
<td>2.7</td>
<td>4.3</td>
</tr>
<tr>
<td>1990-2000</td>
<td>2.5</td>
<td>3.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bogota</td>
<td></td>
<td>7.7</td>
<td>11.7</td>
<td>0.0</td>
</tr>
<tr>
<td>Rio de Janeiro</td>
<td></td>
<td>4.5</td>
<td>19.0</td>
<td>8.9</td>
</tr>
<tr>
<td>Buenos Aires</td>
<td></td>
<td>4.2</td>
<td>12.1</td>
<td>9.3</td>
</tr>
<tr>
<td>Sao Paulo</td>
<td></td>
<td>5.6</td>
<td>25.8</td>
<td>10.7</td>
</tr>
<tr>
<td>Mexico City</td>
<td></td>
<td>6.4</td>
<td>31.0</td>
<td>11.9</td>
</tr>
</tbody>
</table>

### TABLE 8
**INCIDENCE OF SLUMS AND SQUATTER SETTLEMENTS IN SELECTED CITIES OF LATIN AMERICA**

<table>
<thead>
<tr>
<th>Country</th>
<th>City</th>
<th>Slums and Squatter Setts. as % Urban Population</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>Rio de Janeiro</td>
<td>30</td>
<td>1970</td>
</tr>
<tr>
<td></td>
<td>Belo Horizonte</td>
<td>14</td>
<td>1970</td>
</tr>
<tr>
<td></td>
<td>Recife</td>
<td>50</td>
<td>1970</td>
</tr>
<tr>
<td></td>
<td>Porto Alegre</td>
<td>13</td>
<td>1970</td>
</tr>
<tr>
<td></td>
<td>Brasilia</td>
<td>41</td>
<td>1970</td>
</tr>
<tr>
<td>Chile</td>
<td>Santiago</td>
<td>25</td>
<td>1964</td>
</tr>
<tr>
<td>Colombia</td>
<td>Bogota</td>
<td>60</td>
<td>1969</td>
</tr>
<tr>
<td></td>
<td>Cali</td>
<td>30</td>
<td>1969</td>
</tr>
<tr>
<td></td>
<td>Buenaventura</td>
<td>80</td>
<td>1969</td>
</tr>
<tr>
<td>Ecuador</td>
<td>Guayaquil</td>
<td>49</td>
<td>1969</td>
</tr>
<tr>
<td>Guatemala</td>
<td>Guatemala City</td>
<td>30</td>
<td>1971</td>
</tr>
<tr>
<td>Honduras</td>
<td>Tegucigalpa</td>
<td>25</td>
<td>1970</td>
</tr>
<tr>
<td>Mexico</td>
<td>Mexico City</td>
<td>46</td>
<td>1970</td>
</tr>
<tr>
<td>Panama</td>
<td>Panama City</td>
<td>17</td>
<td>1970</td>
</tr>
<tr>
<td>Peru</td>
<td>Lima</td>
<td>40</td>
<td>1970</td>
</tr>
<tr>
<td></td>
<td>Arequipa</td>
<td>40</td>
<td>1970</td>
</tr>
<tr>
<td></td>
<td>Chimbote</td>
<td>67</td>
<td>1970</td>
</tr>
<tr>
<td>Venezuela</td>
<td>Caracas</td>
<td>40</td>
<td>1969</td>
</tr>
<tr>
<td></td>
<td>Maracaibo</td>
<td>50</td>
<td>1969</td>
</tr>
<tr>
<td></td>
<td>Barquisimeto</td>
<td>41</td>
<td>1969</td>
</tr>
<tr>
<td></td>
<td>Ciudad Guayana</td>
<td>40</td>
<td>1969</td>
</tr>
</tbody>
</table>

Source: Grimes (1976) Table 1.7
### TABLE 9: POPULATION GROWTH IN THE MUNICIPALITY OF PEREIRA 1870-1973 (MUNICIPALITY)

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1870</td>
<td>633</td>
</tr>
<tr>
<td>1905</td>
<td>19,036</td>
</tr>
<tr>
<td>1912</td>
<td>18,500</td>
</tr>
<tr>
<td>1918</td>
<td>24,500*</td>
</tr>
<tr>
<td>1928</td>
<td>50,060*</td>
</tr>
<tr>
<td>1938</td>
<td>60,492</td>
</tr>
<tr>
<td>1951</td>
<td>115,342</td>
</tr>
<tr>
<td>1964</td>
<td>118,365</td>
</tr>
<tr>
<td>1973</td>
<td>210,543</td>
</tr>
</tbody>
</table>

**Sources:** DANE National Census  
* Local Census

### TABLE 10: ANNUAL POPULATION GROWTH RATES IN THE MUNICIPALITY OF POPULATION PEREIRA 1938-73 (%)

<table>
<thead>
<tr>
<th></th>
<th>1938-51</th>
<th>1951-64</th>
<th>1964-73</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipality</td>
<td>5.1</td>
<td>3.8</td>
<td>1.2</td>
</tr>
<tr>
<td>Urban</td>
<td>7.2</td>
<td>5.2</td>
<td>1.9</td>
</tr>
<tr>
<td>Rural</td>
<td>0.9</td>
<td>2.4</td>
<td>-1.3</td>
</tr>
</tbody>
</table>

**Sources:** DANE National Census (1938; 1951; 1964; 1973).
TABLE 11: POPULATION GROWTH IN PEREIRA 1938-73

<table>
<thead>
<tr>
<th>Year</th>
<th>Municipal Pop.</th>
<th>Urban Pop.</th>
<th>% Total</th>
<th>Rural Pop.</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1938</td>
<td>60,492</td>
<td>30,762</td>
<td>50.9</td>
<td>29,730</td>
<td>49.1</td>
</tr>
<tr>
<td>1951</td>
<td>115,342</td>
<td>76,262</td>
<td>66.1</td>
<td>39,080</td>
<td>33.9</td>
</tr>
<tr>
<td>1964</td>
<td>188,365</td>
<td>147,480</td>
<td>78.3</td>
<td>40,878</td>
<td>21.7</td>
</tr>
<tr>
<td>1973</td>
<td>210,543</td>
<td>174,128</td>
<td>82.7</td>
<td>36,415</td>
<td>17.3</td>
</tr>
</tbody>
</table>

Sources: DANE National Census (1938; 1951; 1964; 1973)

TABLE 12: POPULATION GROWTH IN THE PEREIRA - DOSQUEBRADAS METROPOLITAN AREA 1951-73

<table>
<thead>
<tr>
<th></th>
<th>1951</th>
<th>1964</th>
<th>1973</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pereira</td>
<td>76,262</td>
<td>147,480</td>
<td>174,128</td>
</tr>
<tr>
<td>Dosquebradas</td>
<td>-1</td>
<td>11,315^2</td>
<td>37,788</td>
</tr>
<tr>
<td>TOTAL</td>
<td>76,262</td>
<td>158,795</td>
<td>211,916</td>
</tr>
</tbody>
</table>

Source: DANE National Census 1951, 1964, 1973

1. No data are available for Dosquebradas for 1951 but the urban population was undoubtedly very small.

2. Estimate of CEDE (1967).
TABLE 13: AVERAGE BIRTH RATES AND DEATH RATES IN PEREIRA 1954 - 1969 (MUNICIPALITY) (Per Thousand)

<table>
<thead>
<tr>
<th>Years</th>
<th>Birth Rate</th>
<th>Death Rate</th>
<th>Rate of Natural Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1954-61</td>
<td>46.65</td>
<td>17.80</td>
<td>28.87</td>
</tr>
<tr>
<td>1962-69</td>
<td>39.13</td>
<td>11.50</td>
<td>27.63</td>
</tr>
</tbody>
</table>

Source: 1. CEDE (1967: 96)
2. DANE (1975)

TABLE 14: RURAL MIGRATION TO URBAN PEREIRA 1964

<table>
<thead>
<tr>
<th>Origin of Population</th>
<th>Population</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Born in Municipality</td>
<td>66,902</td>
<td>45.4</td>
</tr>
<tr>
<td>Born in Antiguo Caldas</td>
<td>46,430</td>
<td>31.5</td>
</tr>
<tr>
<td>Born in Other Departments</td>
<td>33,742</td>
<td>22.9</td>
</tr>
<tr>
<td>Born Outside Country</td>
<td>413</td>
<td>0.2</td>
</tr>
<tr>
<td>Total</td>
<td>147,487</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: DANE National Census (1964)
### TABLE 15: RURAL MIGRATION TO URBAN PEREIRA 1973

<table>
<thead>
<tr>
<th>Origin of Population</th>
<th>Population</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Born in Antiguo Caldas</td>
<td>131,841</td>
<td>77.7</td>
</tr>
<tr>
<td>Born in Other Departments</td>
<td>37,144</td>
<td>21.9</td>
</tr>
<tr>
<td>Born in Other Countries</td>
<td>573</td>
<td>0.3</td>
</tr>
<tr>
<td>No Information</td>
<td>64</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>169,622</td>
<td>100.0</td>
</tr>
</tbody>
</table>


### TABLE 16: SEXUAL COMPOSITION OF THE POPULATION OF PEREIRA 1964 AND 1973 (% Total Population)

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>48.1</td>
<td>47.4</td>
</tr>
<tr>
<td>Women</td>
<td>51.9</td>
<td>52.6</td>
</tr>
<tr>
<td>Difference Women/Men</td>
<td>+ 3.8</td>
<td>+ 5.2</td>
</tr>
</tbody>
</table>

Source: DANE National Census (1964; 1973)

DANE (1974:26)
### TABLE 17: AGE DISTRIBUTION OF URBAN POPULATION OF PEREIRA, 1951, 1964, 1973 (% Total)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>1951</th>
<th>1964</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-15</td>
<td>38.4</td>
<td>42.2</td>
</tr>
<tr>
<td>16-59</td>
<td>57.0</td>
<td>52.9</td>
</tr>
<tr>
<td>60 + more</td>
<td>4.6</td>
<td>4.9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age Group</th>
<th>1973</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-11</td>
<td>29.8</td>
</tr>
<tr>
<td>12-64</td>
<td>65.1</td>
</tr>
<tr>
<td>65 + more</td>
<td>3.4</td>
</tr>
<tr>
<td>No Information</td>
<td>1.7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.0</td>
</tr>
</tbody>
</table>

DANE: National Census (1951; 1964; 1973)
### TABLE 18: ECONOMICALLY ACTIVE POPULATION IN THE MUNICIPALITY OF PEREIRA 1938-74 (% Total Population)

<table>
<thead>
<tr>
<th>Year</th>
<th>EAP/Total Pop.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1938</td>
<td>47.8</td>
</tr>
<tr>
<td>1951</td>
<td>34.6</td>
</tr>
<tr>
<td>1964</td>
<td>30.1</td>
</tr>
<tr>
<td>1973</td>
<td>32.6</td>
</tr>
<tr>
<td>1974</td>
<td>38.4</td>
</tr>
</tbody>
</table>

Source: DANE National Census (1938; 1951; 1964; 1973)

DANE (1974)

**NOTE:** The 1938 Census defined the EAP lower limit as 14 years and more; 1973 census as 10 years and more. 1974 figure refers to Urban EAP.

### TABLE 19: DISTRIBUTION OF THE ECONOMICALLY ACTIVE POPULATION BY ECONOMIC SECTOR IN THE MUNICIPALITY OF PEREIRA (MUNICIPALITY) 1973

<table>
<thead>
<tr>
<th>Economic Sector</th>
<th>% Total EAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRIMARY SECTOR</td>
<td></td>
</tr>
<tr>
<td>Agriculture</td>
<td>17.2</td>
</tr>
<tr>
<td>Mining</td>
<td>0.2</td>
</tr>
<tr>
<td>SECONDARY SECTOR</td>
<td>28.3</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>23.2</td>
</tr>
<tr>
<td>Construction</td>
<td>4.9</td>
</tr>
<tr>
<td>Public Utilities</td>
<td>0.2</td>
</tr>
<tr>
<td>TERTIARY SECTOR</td>
<td></td>
</tr>
<tr>
<td>Commerce &amp; Finance</td>
<td>11.2</td>
</tr>
<tr>
<td>Transport &amp; Communications</td>
<td>4.2</td>
</tr>
<tr>
<td>Services</td>
<td>20.7</td>
</tr>
<tr>
<td>Others</td>
<td>0.3</td>
</tr>
<tr>
<td>NOT SPECIFIED</td>
<td>17.9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: DANE National Census (1973)
## TABLE 20: MANUFACTURING EMPLOYMENT IN METROPOLITAN PEREIRA 1970-74

<table>
<thead>
<tr>
<th>Sector</th>
<th>1970</th>
<th>1974</th>
<th>1970-74</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer Goods Sector</td>
<td>6,738</td>
<td>10,160</td>
<td>3,422</td>
<td>75.8</td>
</tr>
<tr>
<td>Intermediate Goods Sector</td>
<td>972</td>
<td>1,344</td>
<td>372</td>
<td>8.3</td>
</tr>
<tr>
<td>Capital Goods Sector</td>
<td>592</td>
<td>1,311</td>
<td>719</td>
<td>15.9</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>8,302</td>
<td>12,815</td>
<td>4,513</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Metropolitan Pereira consists of the municipalities of Pereira, Dosquebradas and Santa Rosa de Cabal.

Source: DANE (1974)

## TABLE 21: MONTHLY FAMILY INCOMES OF APPLICANTS FOR ICT HOUSING. PEREIRA BRANCH 1970

<table>
<thead>
<tr>
<th>Level of Income (Col. $)</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 500</td>
<td>55.5</td>
</tr>
<tr>
<td>501 - 1000</td>
<td>35.3</td>
</tr>
<tr>
<td>1001 - 1500</td>
<td>6.9</td>
</tr>
<tr>
<td>1501 - 2000</td>
<td>1.5</td>
</tr>
<tr>
<td>2001 - 2500</td>
<td>0.4</td>
</tr>
<tr>
<td>2501 - 3000</td>
<td>0.1</td>
</tr>
<tr>
<td>3001 + more</td>
<td>0.3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: 1970 US $1.00 = Col. $19.09

Source: ICT Pereira (1970)
TABLE 22: HOUSEHOLD INCOMES IN THE MUNICIPALITY OF PEREIRA 1973 (% Total Households)

<table>
<thead>
<tr>
<th>Level of Income (Col.$)</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 154</td>
<td>6.9</td>
</tr>
<tr>
<td>155 - 464</td>
<td>28.3</td>
</tr>
<tr>
<td>465 - 929</td>
<td>25.2</td>
</tr>
<tr>
<td>930 - 1859</td>
<td>16.1</td>
</tr>
<tr>
<td>1860 - 2789</td>
<td>5.4</td>
</tr>
<tr>
<td>2790 - 3719</td>
<td>2.4</td>
</tr>
<tr>
<td>3720 + more</td>
<td>4.3</td>
</tr>
<tr>
<td>No Response</td>
<td>11.4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: 1973 US $1.00 = Col. $24.77
Source: Compiled from DANE National Census (1973)
<table>
<thead>
<tr>
<th>Year</th>
<th>Floors</th>
<th>Permanent Walls</th>
<th>Permanent Roof</th>
<th>Transitory Walls</th>
<th>Transitory Roof</th>
<th>No.</th>
<th>% Total</th>
<th>No.</th>
<th>% Total</th>
<th>No.</th>
<th>% Total</th>
<th>No.</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1973</td>
<td>974</td>
<td>97.8</td>
<td>97.0</td>
<td>94.9</td>
<td>91.6</td>
<td>1.3</td>
<td>329</td>
<td>3.9</td>
<td>10260</td>
<td>98.9</td>
<td>10260</td>
<td>3.9</td>
<td>10260</td>
</tr>
<tr>
<td>1974</td>
<td>2.2</td>
<td>2.9</td>
<td>2.8</td>
<td>1.1</td>
<td>2.9</td>
<td>1.3</td>
<td>601</td>
<td>97.4</td>
<td>601</td>
<td>97.4</td>
<td>601</td>
<td>97.4</td>
<td>601</td>
</tr>
<tr>
<td>1975</td>
<td>87</td>
<td>2.9</td>
<td>2.9</td>
<td>1.9</td>
<td>3.9</td>
<td>1.9</td>
<td>76</td>
<td>99.2</td>
<td>76</td>
<td>99.2</td>
<td>76</td>
<td>99.2</td>
<td>76</td>
</tr>
<tr>
<td>1976</td>
<td>1139</td>
<td>99.2</td>
<td>99.2</td>
<td>99.2</td>
<td>99.2</td>
<td>3.3</td>
<td>298</td>
<td>96.7</td>
<td>298</td>
<td>96.7</td>
<td>298</td>
<td>96.7</td>
<td>298</td>
</tr>
<tr>
<td>1977</td>
<td>9362</td>
<td>99.0</td>
<td>99.0</td>
<td>99.0</td>
<td>99.0</td>
<td>3.3</td>
<td>1879</td>
<td>96.7</td>
<td>1879</td>
<td>96.7</td>
<td>1879</td>
<td>96.7</td>
<td>1879</td>
</tr>
</tbody>
</table>

Source: Dane National Housing Census (1971-1973)

Table 23: Predominant Materials in Floors, Walls and Roofs of Housing Stock in Urban Perisha 1971-73
### TABLE 24: HOUSING TYPES IN URBAN PEREIRA 1964

<table>
<thead>
<tr>
<th>Housing Type</th>
<th>% Total Housing Stock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent House</td>
<td>40.1</td>
</tr>
<tr>
<td>Chozas and Similar</td>
<td>32.4</td>
</tr>
<tr>
<td>Caves, Tents and Similar</td>
<td>0.5</td>
</tr>
<tr>
<td>Apartments</td>
<td>22.4</td>
</tr>
<tr>
<td>Collective Housing</td>
<td>0.7</td>
</tr>
<tr>
<td>Unoccupied Housing</td>
<td>3.9</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100.0</strong> (20,272)</td>
</tr>
</tbody>
</table>

Source: DANE National Housing Census (1964)

### TABLE 25: HOUSING TYPES IN URBAN PEREIRA 1973

<table>
<thead>
<tr>
<th>Housing Type</th>
<th>% Total Housing Stock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent House</td>
<td>80.5</td>
</tr>
<tr>
<td>Rooms</td>
<td>2.5</td>
</tr>
<tr>
<td>Chozas and Similar</td>
<td>3.3</td>
</tr>
<tr>
<td>Houses of Throwaways</td>
<td>---</td>
</tr>
<tr>
<td>Apartments</td>
<td>7.4</td>
</tr>
<tr>
<td>Inquilinatos</td>
<td>3.9</td>
</tr>
<tr>
<td>Under Construction</td>
<td>2.4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100.0</strong> (26,629)</td>
</tr>
</tbody>
</table>

Source: DANE National Housing Census (1973)
### TABLE 26: LEVELS OF OVERCROWDING IN URBAN PEREIRA  
1951 - 1973 (% Total Housing Stock)

<table>
<thead>
<tr>
<th>Persons Per Room</th>
<th>1951</th>
<th>1964</th>
<th>1973</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 3</td>
<td>97.0</td>
<td>73.3</td>
<td>74.0</td>
</tr>
<tr>
<td>3 or More</td>
<td>3.0</td>
<td>26.7</td>
<td>24.7</td>
</tr>
<tr>
<td>No Response</td>
<td>--</td>
<td>--</td>
<td>1.3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

(10,220) (19,328) (31,797)

Sources: DANE National Housing Census (1951; 1964; 1973)

Note: 1951 data refer to Total Family Housing; 1964 to Total Occupied Family Housing; 1973 to Total Households

### TABLE 27: CONDITIONS OF TENANCY IN URBAN PEREIRA  
1951-1973 (% Total Housing Stock)

<table>
<thead>
<tr>
<th></th>
<th>1951</th>
<th>1964</th>
<th>1973</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner Occupation</td>
<td>44.8</td>
<td>42.4</td>
<td>39.0</td>
</tr>
<tr>
<td>Under Rent</td>
<td>53.0</td>
<td>52.0</td>
<td>54.0</td>
</tr>
<tr>
<td>Other Forms</td>
<td>2.2</td>
<td>5.6</td>
<td>7.0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

(10,219) (19,328) (31,797)

Source: DANE National Housing Census (1951; 1964; 1973)

Note: 1973 data refer to Households.
### TABLE 28: HOUSING AND SERVICES IN URBAN PEREIRA 1951-73 (% Total Housing Stock)

<table>
<thead>
<tr>
<th>Service</th>
<th>1951</th>
<th>1964</th>
<th>1973</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without Water</td>
<td>6.0</td>
<td>51.7</td>
<td>3.5</td>
</tr>
<tr>
<td>Without Sewerage</td>
<td>10.5</td>
<td>48.6</td>
<td>6.4</td>
</tr>
<tr>
<td>Without Electricity</td>
<td>9.4</td>
<td>49.3</td>
<td>3.0</td>
</tr>
<tr>
<td>Total Housing</td>
<td>10,220</td>
<td>19,388</td>
<td>31,797</td>
</tr>
</tbody>
</table>

Source: DANE National Housing Census (1951; 1964; 1973)

Note: 1973 data refers to Households

### TABLE 29: THE QUANTITATIVE HOUSING DEFICIT OF THE MUNICIPALITY OF PEREIRA 1964-73

<table>
<thead>
<tr>
<th></th>
<th>1964</th>
<th>1973</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population</td>
<td>147,487</td>
<td>174,128</td>
</tr>
<tr>
<td>Number of Families</td>
<td>25,625</td>
<td>35,501</td>
</tr>
<tr>
<td>Number of Available Houses</td>
<td>20,272</td>
<td>26,633</td>
</tr>
<tr>
<td>Housing Deficit</td>
<td>5,353</td>
<td>8,868</td>
</tr>
<tr>
<td>Population affected by Housing Deficit</td>
<td>30,810</td>
<td>43,496</td>
</tr>
<tr>
<td>% Population affected by Deficit</td>
<td>20.9</td>
<td>25.0</td>
</tr>
</tbody>
</table>

Sources: CENAC (1976). DANE data
### TABLE 30: THE QUANTITATIVE HOUSING DEFICIT OF URBAN PEREIRA 1951-74

<table>
<thead>
<tr>
<th>Year</th>
<th>Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951</td>
<td>1342</td>
</tr>
<tr>
<td>1957</td>
<td>5447</td>
</tr>
<tr>
<td>1963</td>
<td>8010</td>
</tr>
<tr>
<td>1970</td>
<td>8086</td>
</tr>
<tr>
<td>1973 (proj.)</td>
<td>9592</td>
</tr>
<tr>
<td>1974 (proj.)</td>
<td>10,163</td>
</tr>
</tbody>
</table>

Sources: ICT (1970a)

### TABLE 31: THE QUALITATIVE AND TOTAL HOUSING DEFICIT OF PEREIRA (MUNICIPALITY) 1964-73

<table>
<thead>
<tr>
<th>Year</th>
<th>1964</th>
<th>1973</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantitative Deficit</td>
<td>5353</td>
<td>8868</td>
</tr>
<tr>
<td>Chozas and Similar</td>
<td>6683</td>
<td>882</td>
</tr>
<tr>
<td>Rooms</td>
<td>N.D.</td>
<td>674</td>
</tr>
<tr>
<td>Inquilinatos</td>
<td>N.D.</td>
<td>1029</td>
</tr>
<tr>
<td>TOTAL DEFICIT</td>
<td>12,036</td>
<td>11,453</td>
</tr>
<tr>
<td>Population Affected by Deficit</td>
<td>87,567</td>
<td>74,880</td>
</tr>
<tr>
<td>% Affected/Total Population</td>
<td>59.4</td>
<td>43.0</td>
</tr>
</tbody>
</table>

Source: CENAC (1976)
<table>
<thead>
<tr>
<th></th>
<th>1964</th>
<th>1973</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantitative Deficit</td>
<td>5353</td>
<td>8868</td>
</tr>
<tr>
<td>Number of Overcrowded House</td>
<td>3805</td>
<td>3640</td>
</tr>
<tr>
<td><strong>TOTAL DEFICIT</strong></td>
<td>9158</td>
<td>12,508</td>
</tr>
<tr>
<td>Population Affected by Deficit</td>
<td>66,628</td>
<td>81,778</td>
</tr>
<tr>
<td>% Affected/Total Population</td>
<td>45.2</td>
<td>47.0</td>
</tr>
</tbody>
</table>

Source: CENAC (1976)
<table>
<thead>
<tr>
<th>Level of Income (Col. $)</th>
<th>% Housing Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 479</td>
<td>50.9</td>
</tr>
<tr>
<td>480 - 800</td>
<td>22.0</td>
</tr>
<tr>
<td>801 - 1441</td>
<td>15.8</td>
</tr>
<tr>
<td>1442 - 2000</td>
<td>4.9</td>
</tr>
<tr>
<td>2001 - 3202</td>
<td>3.5</td>
</tr>
<tr>
<td>3203 and more</td>
<td>2.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level of Incomes</th>
<th>% Total Applicants</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 500</td>
<td>55.5</td>
</tr>
<tr>
<td>501 - 1000</td>
<td>35.3</td>
</tr>
<tr>
<td>1001 - 1500</td>
<td>6.9</td>
</tr>
<tr>
<td>1501 - 2000</td>
<td>1.5</td>
</tr>
<tr>
<td>2001 - 3000</td>
<td>0.5</td>
</tr>
<tr>
<td>3000 and more</td>
<td>0.3</td>
</tr>
</tbody>
</table>

Note: 1970 US $1.00 = Col. $19.09

Source: ICT (1970a)
<table>
<thead>
<tr>
<th>Category of Lot</th>
<th>% of Total</th>
<th>% of Total</th>
<th>% of Total</th>
<th>% of Total</th>
<th>% of Total</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 - 300 m²</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300 - 750 m²</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>750 - 5000 m²</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Table 34: Land distribution and ownership in urban periphery 1960 and 1971
<table>
<thead>
<tr>
<th>Address</th>
<th>Value $ 1968</th>
<th>Value $ 1973</th>
<th>Value $ 1973 in $ 1968</th>
<th>% Increase in Value in $ 1968</th>
<th>% Average Annual Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>K8 Calle 19</td>
<td>1300</td>
<td>3300</td>
<td>1904</td>
<td>46.5</td>
<td>7.8</td>
</tr>
<tr>
<td>K8 Calle 20</td>
<td>1100</td>
<td>3200</td>
<td>1846</td>
<td>67.8</td>
<td>11.3</td>
</tr>
<tr>
<td>K9 Calle 16</td>
<td>1000</td>
<td>2400</td>
<td>1385</td>
<td>38.5</td>
<td>6.4</td>
</tr>
<tr>
<td>K9 Calle 16</td>
<td>1000</td>
<td>1500</td>
<td>865</td>
<td>-13.5</td>
<td>-2.3</td>
</tr>
<tr>
<td>K7 Calle 20</td>
<td>900</td>
<td>3000</td>
<td>1731</td>
<td>92.3</td>
<td>15.4</td>
</tr>
<tr>
<td>K10 Calle 17</td>
<td>900</td>
<td>1200</td>
<td>692</td>
<td>-23.1</td>
<td>-3.9</td>
</tr>
<tr>
<td>K8 Calle 4</td>
<td>500</td>
<td>1700</td>
<td>981</td>
<td>96.7</td>
<td>16.0</td>
</tr>
<tr>
<td>K8 Calle 24</td>
<td>450</td>
<td>1600</td>
<td>923</td>
<td>105.0</td>
<td>17.5</td>
</tr>
<tr>
<td>K7 Calle 24</td>
<td>400</td>
<td>1500</td>
<td>865</td>
<td>116.0</td>
<td>19.3</td>
</tr>
<tr>
<td>K7 Calle 14</td>
<td>400</td>
<td>1300</td>
<td>750</td>
<td>87.5</td>
<td>14.6</td>
</tr>
<tr>
<td>K8 Calle 13</td>
<td>400</td>
<td>1100</td>
<td>635</td>
<td>58.7</td>
<td>9.8</td>
</tr>
<tr>
<td>K7 Calle 25</td>
<td>350</td>
<td>1400</td>
<td>808</td>
<td>130.8</td>
<td>21.8</td>
</tr>
<tr>
<td>K7 Calle 13</td>
<td>350</td>
<td>1300</td>
<td>750</td>
<td>114.2</td>
<td>19.0</td>
</tr>
<tr>
<td>K12 Calle 21</td>
<td>50</td>
<td>550</td>
<td>317</td>
<td>534.0</td>
<td>89.0</td>
</tr>
<tr>
<td>K14 Calle 19</td>
<td>50</td>
<td>600</td>
<td>346</td>
<td>592.0</td>
<td>98.7</td>
</tr>
<tr>
<td>K13 Calle 14</td>
<td>140</td>
<td>380</td>
<td>219</td>
<td>56.4</td>
<td>9.4</td>
</tr>
<tr>
<td>K6 Calle 11</td>
<td>130</td>
<td>450</td>
<td>260</td>
<td>100.0</td>
<td>16.7</td>
</tr>
<tr>
<td>K6 Calle 10</td>
<td>110</td>
<td>400</td>
<td>231</td>
<td>110.0</td>
<td>18.3</td>
</tr>
<tr>
<td>K9 Calle 11</td>
<td>110</td>
<td>360</td>
<td>208</td>
<td>89.0</td>
<td>14.8</td>
</tr>
<tr>
<td>Av. Turbay Calle 31</td>
<td>100</td>
<td>360</td>
<td>208</td>
<td>108.0</td>
<td>18.0</td>
</tr>
<tr>
<td>Av. Turbay Calle 35</td>
<td>90</td>
<td>340</td>
<td>196</td>
<td>118.0</td>
<td>19.7</td>
</tr>
<tr>
<td>Av. Mosquera Calle 2</td>
<td>80</td>
<td>140</td>
<td>81</td>
<td>-1.3</td>
<td>-0.2</td>
</tr>
<tr>
<td>Av. Turbay Calle 41</td>
<td>80</td>
<td>310</td>
<td>179</td>
<td>124.0</td>
<td>20.7</td>
</tr>
<tr>
<td>K10 Calle 27</td>
<td>80</td>
<td>280</td>
<td>162</td>
<td>103</td>
<td>17.2</td>
</tr>
</tbody>
</table>
## TABLE 35: INCREASES IN LAND VALUES OF SELECTED CADAstral POINTS IN URBAN PEREIRA

1968 AND 1973 (Continuation)

<table>
<thead>
<tr>
<th>Address</th>
<th>Value $</th>
<th>Value $</th>
<th>Value of 1968</th>
<th>% Increase in Value</th>
<th>% Average Annual Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Av. del Rio Calle 12</td>
<td>70</td>
<td>200</td>
<td>115</td>
<td>64.3</td>
<td>10.7</td>
</tr>
<tr>
<td>K13 Calle 7</td>
<td>70</td>
<td>150</td>
<td>87</td>
<td>24.3</td>
<td>4.1</td>
</tr>
<tr>
<td>Puente Mosquera</td>
<td>60</td>
<td>250</td>
<td>144</td>
<td>140.0</td>
<td>23.3</td>
</tr>
<tr>
<td>K19 Calle 21</td>
<td>60</td>
<td>210</td>
<td>121</td>
<td>102.0</td>
<td>17.0</td>
</tr>
<tr>
<td>Av. Turbay Calle 50</td>
<td>60</td>
<td>295</td>
<td>170</td>
<td>183.3</td>
<td>30.6</td>
</tr>
<tr>
<td>K5 Calle 31</td>
<td>50</td>
<td>200</td>
<td>115</td>
<td>130.0</td>
<td>21.7</td>
</tr>
<tr>
<td>K17 bis Calle 21</td>
<td>50</td>
<td>220</td>
<td>127</td>
<td>154.0</td>
<td>25.7</td>
</tr>
<tr>
<td>Av. Sautander Calle 2E</td>
<td>40</td>
<td>140</td>
<td>81</td>
<td>102.5</td>
<td>17.1</td>
</tr>
<tr>
<td>K23 Calle 11</td>
<td>40</td>
<td>160</td>
<td>92</td>
<td>130.0</td>
<td>21.7</td>
</tr>
<tr>
<td>K20 bis Calle 20</td>
<td>40</td>
<td>150</td>
<td>87</td>
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### TABLE 36: LAND VALUES AND LAND DEVELOPMENT COSTS IN THREE LOCATIONS IN PEREIRA IN 1975 (Col. $)

<table>
<thead>
<tr>
<th>Location</th>
<th>Raw Land $ m(^2)</th>
<th>Development Costs $ m(^2)</th>
<th>Urbanized Land Costs $ m(^2)</th>
</tr>
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<tbody>
<tr>
<td>Villa Alicia</td>
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<td>180</td>
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<td>20</td>
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<td>63</td>
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Source: Fondo Obrero (1975)

### TABLE 37: BREAKDOWN OF COSTS OF FONDO OBRERO HOUSING SOLUTIONS IN THREE LOCATIONS IN PEREIRA IN 1975 (Col. $)

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<thead>
<tr>
<th></th>
<th>Villa Alicia</th>
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<th>La Palmera</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Value $ % Total</td>
<td>Value $ % Total</td>
<td>Value $ % Total</td>
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<tr>
<td>Cost of Raw Land</td>
<td>7,290 11.8</td>
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<tr>
<td>Cost of Developing Land</td>
<td>14,580 23.6</td>
<td>24,300 36.8</td>
<td>5,103 8.9</td>
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<tr>
<td>Cost of Constructing House</td>
<td>40,000 64.6</td>
<td>40,000 60.7</td>
<td>40,000 69.9</td>
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<tr>
<td>TOTAL COSTS PER SOLUTION</td>
<td>61,870 100.0</td>
<td>65,920 100.0</td>
<td>57,253 100.0</td>
</tr>
<tr>
<td>Initial Downpayment</td>
<td>9,280</td>
<td>9,888</td>
<td>8,587</td>
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<tr>
<td>Monthly Repayment (1st year)</td>
<td>855</td>
<td>902</td>
<td>787</td>
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Note: 1975 US $1.00 = Col. $32.94

Source: Fondo Obrero (1975)
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<th>Description</th>
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<th>% Total</th>
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<tr>
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<td>Land Development (water, sewerage, electricity access)</td>
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Note: 1976 US $1.00 = Col. $36.31
Source: World Bank (1978:43)
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<td>133.3</td>
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<td>133.3</td>
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<td>Wood</td>
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<td>Sands &amp; Gravels</td>
<td>100</td>
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<td>155.5</td>
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<tr>
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<td>119.4</td>
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<td>Glass</td>
<td>100</td>
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<td>141.7</td>
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<td>Paints</td>
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<td>193.9</td>
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<td>Metal Frames</td>
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<tr>
<td>Plumbing &amp; Fittings</td>
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<td>104.0</td>
<td>104.0</td>
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<tr>
<td>TOTAL</td>
<td>100</td>
<td>128.5</td>
<td>147.2</td>
<td>171.5</td>
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</table>

| National Consumer Price Index| 100       | 126.0     | 147.7     | 163.0     |

Source: ICT (1976d)
### TABLE 40: INDEX OF CONSTRUCTION COSTS OF URBANIZATION WORKS AND ELECTRICAL NETWORKS IN PEREIRA 1974-1976

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<td>112.1</td>
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Source: ICT (1976d)
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<td>1955</td>
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Note: A.D. Direct Administration; C.D. Direct Contract; Coop. Cooperative; P. 3. Three Party Cofinanced Contract; P.P.L. Loans to Lotowners; P.T. Workers' Plan; O.S. Other System.

Source: ICT (1976e)
### Table 42: Consumption of Land in State Conventional Housing in Pereira 1953-1976

<table>
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<tr>
<th>Year</th>
<th>Lot Area $m^2$</th>
<th>Persons per House 1973</th>
<th>Per Capita Space rates $m^2$</th>
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<td>141</td>
<td>5.5</td>
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<td>Bavaria 1968</td>
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<td>25.6</td>
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<td>5.5</td>
<td>25.3</td>
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<td>El Vergel 1965</td>
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<tr>
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<td>115</td>
<td>6.4</td>
<td>18.0</td>
</tr>
<tr>
<td>I de Mayo 1976</td>
<td>115</td>
<td>6.4</td>
<td>18.0</td>
</tr>
<tr>
<td>Alfonso Lopez 1964</td>
<td>108</td>
<td>6.4</td>
<td>16.9</td>
</tr>
<tr>
<td>El Vergel 1968</td>
<td>90</td>
<td>5.9</td>
<td>15.3</td>
</tr>
<tr>
<td>Cuba 4 1970</td>
<td>112</td>
<td>7.4</td>
<td>15.1</td>
</tr>
<tr>
<td>Cuba 5 1972</td>
<td>112</td>
<td>7.4</td>
<td>15.1</td>
</tr>
<tr>
<td>El Jardin 1 1972</td>
<td>92</td>
<td>6.4</td>
<td>14.4</td>
</tr>
<tr>
<td>El Jardin 1 1973</td>
<td>92</td>
<td>6.4</td>
<td>14.4</td>
</tr>
<tr>
<td>El Jardin 1 1973</td>
<td>92</td>
<td>6.4</td>
<td>14.4</td>
</tr>
<tr>
<td>El Jardin 4 1976</td>
<td>87</td>
<td>6.4</td>
<td>13.6</td>
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<td>Cuba 5 1972</td>
<td>95</td>
<td>7.4</td>
<td>12.8</td>
</tr>
<tr>
<td>Otun 1 1973</td>
<td>78</td>
<td>6.4</td>
<td>12.2</td>
</tr>
<tr>
<td>Otun 1 1973</td>
<td>78</td>
<td>6.4</td>
<td>12.2</td>
</tr>
<tr>
<td>Otun 2 1975</td>
<td>78</td>
<td>6.4</td>
<td>12.2</td>
</tr>
<tr>
<td>Otun 2 1975</td>
<td>78</td>
<td>6.4</td>
<td>12.2</td>
</tr>
<tr>
<td>Otun 4 1976</td>
<td>78</td>
<td>6.4</td>
<td>12.2</td>
</tr>
<tr>
<td>Jardin 2 1975</td>
<td>76</td>
<td>6.4</td>
<td>11.9</td>
</tr>
<tr>
<td>Cuba 6 1976</td>
<td>85</td>
<td>7.4</td>
<td>11.5</td>
</tr>
<tr>
<td>I de Feb 1 1968</td>
<td>69</td>
<td>6.1</td>
<td>11.3</td>
</tr>
<tr>
<td>I de Feb 2 1968</td>
<td>69</td>
<td>6.1</td>
<td>11.3</td>
</tr>
<tr>
<td>I de Feb 3 1973</td>
<td>69</td>
<td>6.1</td>
<td>11.3</td>
</tr>
<tr>
<td>I de Feb 4 1975</td>
<td>69</td>
<td>6.1</td>
<td>11.3</td>
</tr>
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</table>


Source ICT (1976e)
### TABLE 43: STATE SELF-HELP HOUSING PROJECTS IN PEREIRA 1960-1976

<table>
<thead>
<tr>
<th>ICT SELF-HELP PROJECTS</th>
<th>Year</th>
<th>No. of Houses</th>
<th>1973 Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boston</td>
<td>1960</td>
<td>339</td>
<td>2,464</td>
</tr>
<tr>
<td>Cuba 1</td>
<td>1961</td>
<td>564</td>
<td>4,512</td>
</tr>
<tr>
<td>Cuba 2</td>
<td>1962</td>
<td>651</td>
<td>5,208</td>
</tr>
<tr>
<td>Cuba 3</td>
<td>1967</td>
<td>381</td>
<td>3,048</td>
</tr>
<tr>
<td>Kennedy</td>
<td>1962</td>
<td>327</td>
<td>2,448</td>
</tr>
<tr>
<td>San Luiz Gonzaga</td>
<td>1967</td>
<td>118</td>
<td>688</td>
</tr>
<tr>
<td>Carreros</td>
<td>1969</td>
<td>60</td>
<td>520</td>
</tr>
<tr>
<td>Otun 3</td>
<td>1975</td>
<td>178</td>
<td>1,140 (1975)</td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
<td></td>
<td>2618</td>
<td>20,028</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ICT SQUATTER ERADICATION PROJECTS</th>
<th>Year</th>
<th>No. of Houses</th>
<th>1973 Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Camilo</td>
<td>1968</td>
<td>206</td>
<td>1,170 (1972)</td>
</tr>
<tr>
<td>Cuba Carrilera</td>
<td>1969</td>
<td>6</td>
<td>40</td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
<td></td>
<td>212</td>
<td>1,210</td>
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</table>

<table>
<thead>
<tr>
<th>MUNICIPAL SELF-HELP HOUSING PLANS</th>
<th>Year</th>
<th>No. of Houses</th>
<th>1973 Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hernando Velez Marulanda</td>
<td>1972</td>
<td>175</td>
<td>1,313 (1976)</td>
</tr>
<tr>
<td>Salvador Allende</td>
<td>1975</td>
<td>96</td>
<td>614 (1975)</td>
</tr>
<tr>
<td>La Dulcera</td>
<td>1975</td>
<td>100</td>
<td>640 (1975)</td>
</tr>
<tr>
<td>Chico Restrepo</td>
<td>1976</td>
<td>30</td>
<td>200 (1976)</td>
</tr>
<tr>
<td>Jose Hilaire Lopez</td>
<td>1976</td>
<td>50</td>
<td>320 (1976)</td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
<td></td>
<td>451</td>
<td>3,087</td>
</tr>
</tbody>
</table>

**TOTAL** 3281 24,325

Sources: ICT (1976e)  
DANE (1973) Barrio Census Returns  
Other population estimates various sources.
<table>
<thead>
<tr>
<th>COLONO BARRIOS</th>
<th>PROGRESSIVE OR PROFESSIONAL INVASIONS</th>
<th>MASS INVASIONS</th>
<th>NO INFORMATION</th>
</tr>
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<tbody>
<tr>
<td>La Churria</td>
<td>Cuba Carrilera</td>
<td>Isla de Cuba</td>
<td>Berlin</td>
</tr>
<tr>
<td>Zea</td>
<td>El Plumon 1</td>
<td>Gaitan</td>
<td>Venecia</td>
</tr>
<tr>
<td>America</td>
<td>Ormaza</td>
<td>El Triunfo</td>
<td>Centenario</td>
</tr>
<tr>
<td>Consota</td>
<td>Charco Negro</td>
<td>Risaralda</td>
<td>Mejia Robledo</td>
</tr>
<tr>
<td>Granada</td>
<td>San Francisco</td>
<td>Salazar Robledo</td>
<td></td>
</tr>
<tr>
<td>La Avenosa</td>
<td>San Juan de Dios</td>
<td>El Plumon 2</td>
<td></td>
</tr>
<tr>
<td>La Dulcera</td>
<td></td>
<td>Cuba Carrilera 2</td>
<td></td>
</tr>
<tr>
<td>Turin</td>
<td></td>
<td>Cuba Carrilera 3</td>
<td></td>
</tr>
<tr>
<td>El Infierno</td>
<td></td>
<td>Salvador Allende</td>
<td></td>
</tr>
<tr>
<td>El Hoyo</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buenos Aires</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naranjitos</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Otun</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>El Balso</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>La Capilla</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alto Bonito</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Zone 1</td>
<td>Zone 2</td>
<td></td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>--------</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>western zone</td>
<td>Eastern Zone</td>
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</tr>
<tr>
<td>Total Pop.</td>
<td>24,746</td>
<td>24,596</td>
<td></td>
</tr>
<tr>
<td>Housing Stock</td>
<td>2,898</td>
<td>2,678</td>
<td></td>
</tr>
<tr>
<td>% Housing Without Tenure</td>
<td>76</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>% Housing Without Water</td>
<td>-</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>% Housing Without Sewerage</td>
<td>13</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>% Housing to be Eradicated</td>
<td>6</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Land Regularization Credits</td>
<td>2,190</td>
<td>431</td>
<td></td>
</tr>
<tr>
<td>Housing Improvement Loans</td>
<td>1,133</td>
<td>932</td>
<td></td>
</tr>
<tr>
<td>Sites and Services (relocation)</td>
<td>471</td>
<td>188</td>
<td></td>
</tr>
</tbody>
</table>

Note: See Map 8 for Location
TABLE 46: NEW HOUSING STOCK BUILT BY ICT IN URBAN PEREIRA 1942 - 76

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Houses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1942-52</td>
<td>287 (est.)</td>
</tr>
<tr>
<td>1953</td>
<td>215</td>
</tr>
<tr>
<td>1954</td>
<td>24</td>
</tr>
<tr>
<td>1955</td>
<td>96</td>
</tr>
<tr>
<td>1956</td>
<td>18</td>
</tr>
<tr>
<td>1957</td>
<td>-</td>
</tr>
<tr>
<td>1958</td>
<td>-</td>
</tr>
<tr>
<td>1959</td>
<td>-</td>
</tr>
<tr>
<td>1960</td>
<td>339</td>
</tr>
<tr>
<td>1961</td>
<td>587</td>
</tr>
<tr>
<td>1962</td>
<td>1285</td>
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<tr>
<td>1963</td>
<td>100</td>
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<tr>
<td>1964</td>
<td>54</td>
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<tr>
<td>1965</td>
<td>61</td>
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<tr>
<td>1966</td>
<td>204</td>
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<tr>
<td>1967</td>
<td>631</td>
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<tr>
<td>1968</td>
<td>258</td>
</tr>
<tr>
<td>1969</td>
<td>55</td>
</tr>
<tr>
<td>1970</td>
<td>92</td>
</tr>
<tr>
<td>1971</td>
<td>-</td>
</tr>
<tr>
<td>1972</td>
<td>126</td>
</tr>
<tr>
<td>1973</td>
<td>576</td>
</tr>
<tr>
<td>1974</td>
<td>-</td>
</tr>
<tr>
<td>1975</td>
<td>767</td>
</tr>
<tr>
<td>1976</td>
<td>454</td>
</tr>
<tr>
<td>TOTAL</td>
<td>6229</td>
</tr>
</tbody>
</table>

Note: Does not include houses built as part of eradication programmes, nor housing built by the branch outside of the city.

Source: ICT Pereira (1976e)
<table>
<thead>
<tr>
<th>Year</th>
<th>Total Housing (1)</th>
<th>ICT Housing Stock (2)</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951</td>
<td>10,220</td>
<td>287</td>
<td>2.8</td>
</tr>
<tr>
<td>1964</td>
<td>20,272</td>
<td>3005</td>
<td>14.8</td>
</tr>
<tr>
<td>1973</td>
<td>26,633</td>
<td>6229</td>
<td>23.4</td>
</tr>
</tbody>
</table>

Sources: 1951: DANE Census  
ICT (1976e)
<table>
<thead>
<tr>
<th>Costs</th>
<th>Serviced Lot Only</th>
<th>Serviced Lot Plus SC by Resident</th>
<th>Sanitary Core SC by ICT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Land</td>
<td>4,608</td>
<td>4,608</td>
<td>4,608</td>
</tr>
<tr>
<td>Urbanization (1)</td>
<td>11,752</td>
<td>11,752</td>
<td>11,752</td>
</tr>
<tr>
<td>Sanitary Core (2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- materials</td>
<td></td>
<td>12,292</td>
<td>12,292</td>
</tr>
<tr>
<td>- labour</td>
<td></td>
<td>-</td>
<td>4,507</td>
</tr>
<tr>
<td>ICT Overheads and Technical Assistance</td>
<td>1,636</td>
<td>2,865</td>
<td>3,316</td>
</tr>
<tr>
<td>TOTAL COST</td>
<td>17,996</td>
<td>31,517</td>
<td>36,475</td>
</tr>
<tr>
<td>Cash deposit</td>
<td>1,800</td>
<td>1,800</td>
<td>3,648</td>
</tr>
<tr>
<td>Loan</td>
<td>16,196</td>
<td>29,717</td>
<td>32,827</td>
</tr>
</tbody>
</table>

Note: (1) Includes water, electricity, sewerage and access.
(2) Includes WC, shower, kitchen and party walls.
(3) 1976 US $1.00 = Col. $36.31

TABLE 49: COSTS OF MINIMUM SOLUTIONS IN BARRIO OTUN 1976 (Col. $)

<table>
<thead>
<tr>
<th>Costs Per Lot</th>
<th>Minimum Unit and Sanitary Core by Resident. A.</th>
<th>Minimum Unit by Resident, Sanitary Core by ICT. B.</th>
<th>Minimum Unit and Sanitary Core by ICT. C.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Land</td>
<td>4,608</td>
<td>4,608</td>
<td>4,608</td>
</tr>
<tr>
<td>Urbanization (1)</td>
<td>11,752</td>
<td>11,752</td>
<td>11,752</td>
</tr>
<tr>
<td>Sanitary Core</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- materials (2)</td>
<td>12,292</td>
<td>12,292</td>
<td>12,292</td>
</tr>
<tr>
<td>- labour</td>
<td></td>
<td>4,507</td>
<td>4,507</td>
</tr>
<tr>
<td>Multiple Use Space</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- materials (3)</td>
<td>10,956</td>
<td>10,956</td>
<td>10,956</td>
</tr>
<tr>
<td>- labour</td>
<td></td>
<td>-</td>
<td>4,017</td>
</tr>
<tr>
<td>ICT's overheads and technical assistance</td>
<td>3,961</td>
<td>4,412</td>
<td>4,813</td>
</tr>
<tr>
<td>TOTAL COST</td>
<td>43,569</td>
<td>48,527</td>
<td>52,945</td>
</tr>
<tr>
<td>Cash Deposit</td>
<td>1,800</td>
<td>3,648</td>
<td>5,295</td>
</tr>
<tr>
<td>Loan</td>
<td>41,769</td>
<td>44,879</td>
<td>47,660</td>
</tr>
</tbody>
</table>

Note: (1) Water, electricity, sewerage, drainage and access routes.
(2) Includes shower, wc, kitchen and party walls.
(3) A subdivisible shelter suitable for immediate occupancy.
(4) 1976 US $1.00 = Col. $36.31

TABLE 50: ICT HOUSING OUTPUT BY OPERATIONAL SYSTEM 1942-1976

<table>
<thead>
<tr>
<th>Operational System</th>
<th>National 1942-67(A)</th>
<th>Rizal 1942-67(B)</th>
<th>Manila 1953-76(C)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Self Help Building (AC)</td>
<td>57,916</td>
<td>45.0</td>
<td>2,313</td>
</tr>
<tr>
<td>Direct Contract (CD)</td>
<td>42,674</td>
<td>33.1</td>
<td>714</td>
</tr>
<tr>
<td>Loans to Lot Owners (PPL)</td>
<td>8,680</td>
<td>6.7</td>
<td>580</td>
</tr>
<tr>
<td>Cofinanced Contract (P3)</td>
<td>7,924</td>
<td>6.1</td>
<td>164</td>
</tr>
<tr>
<td>Workers Plan (PT)</td>
<td>5,213</td>
<td>4.1</td>
<td>238</td>
</tr>
<tr>
<td>Cooperative Housing</td>
<td>1,431</td>
<td>1.1</td>
<td>442</td>
</tr>
<tr>
<td>Slum Eradication (ET)</td>
<td>1,362</td>
<td>1.1</td>
<td>142</td>
</tr>
<tr>
<td>Others</td>
<td>3,601</td>
<td>2.8</td>
<td>32</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>128,801</td>
<td>100.0</td>
<td>4,625</td>
</tr>
</tbody>
</table>

Sources: A and B: Pardo (1976:534)  
C: ICT (1976e)
### TABLE 51: URBAN HOUSING CONSTRUCTION BY THE PEREIRA BRANCH OF THE ICT 1953-1976

<table>
<thead>
<tr>
<th>Year</th>
<th>Self-Help Construction</th>
<th>Direct Contract</th>
<th>Slum Erad.</th>
<th>P3</th>
<th>PPL</th>
<th>PT</th>
<th>Coop.</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1953</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>215</td>
<td></td>
<td>-</td>
<td>215</td>
</tr>
<tr>
<td>1954</td>
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<td>-</td>
<td>-</td>
<td>24</td>
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<td>-</td>
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<tr>
<td>1955</td>
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<td>1956</td>
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<td>1957</td>
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<td>1958</td>
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<td>1959</td>
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<td>1960</td>
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<td>-</td>
<td>339</td>
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<td>1961</td>
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<td>-</td>
<td></td>
<td></td>
<td>-</td>
<td>587</td>
</tr>
<tr>
<td>1962</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>702</td>
<td>145</td>
<td>215</td>
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<td>6280</td>
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**Note:** P3: Three Party Cofinanced Contract; PPL: Loans to Lotowners; PT: Workers' Plan; Coop.: Cooperative.

**Source:** ICT (1976e)
TABLE 52: HOUSING PRODUCED BY ICT USING SELF-HELP SYSTEMS
PEREIRA 1960-1975

<table>
<thead>
<tr>
<th>Settlement</th>
<th>System</th>
<th>Year</th>
<th>No. of Houses</th>
<th>Area of Lot m²</th>
<th>Value of House $/m²</th>
<th>1960 Prices</th>
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<tr>
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<td>EP</td>
<td>1960</td>
<td>339</td>
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<td>168.3</td>
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<td>Otun 3</td>
<td>EP</td>
<td>1975</td>
<td>178</td>
<td>77.8</td>
<td>40,000</td>
<td>82.4</td>
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TOTAL: 2830

Note: EP: Family-based Self-Help; AM: Mutual Aid; ND: No data.

Source: ICT (1976e)
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<tr>
<th>Subprogramme</th>
<th>Investment $ millions</th>
<th>% Total</th>
<th>Affordable by those with monthly family incomes of (Col. $ 1976)</th>
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<td>Serviced Lots</td>
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<td>34.2</td>
<td>1400-1600</td>
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<tr>
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<td>254.9</td>
<td>20.7</td>
<td>4200-5000</td>
</tr>
<tr>
<td>Intermediate Solution</td>
<td>241.1</td>
<td>19.6</td>
<td>5000-7000</td>
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<td>24.2</td>
<td>7000 + more</td>
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Source: World Bank (1978)
<table>
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<th>Public Services Corporation</th>
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Sources: 1. 1960-70 Municipal Planning Department (1970:214)  
2. 1971 Londoño Bolívar (1972)  
<table>
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<th>No. of JACs Formed</th>
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Source: DIGIDEC (1976)
# TABLE 56: DATE OF FORMATION AND POPULATION OF SETTLEMENT JUNTAS OF ACCION COMUNAL IN URBAN PEREIRA

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<th>Settlement Junta</th>
<th>Date of Formation</th>
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<td>9408</td>
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<td>Canarte</td>
<td>May 1963</td>
<td>2430</td>
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<tr>
<td>Berlin</td>
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<td>March 1963</td>
<td>598</td>
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<td>Boston</td>
<td>Sept. 1963</td>
<td>2762</td>
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<td>Kennedy</td>
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<td>3976</td>
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<td>Sept. 1965</td>
<td>5976</td>
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<td>2885</td>
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<td>4299</td>
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<td>ND</td>
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<td>La Dulcera</td>
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<td>Belalcazar</td>
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<td>538</td>
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<td>Zea</td>
<td>Aug. 1970</td>
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<td>Sta. Teresita</td>
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<td>1º de Febrero</td>
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<td>Jesus Buena Esperanza</td>
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<td>Corocito</td>
<td>Apr. 1975</td>
<td>7150</td>
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Sources:  
A. DIGIDEC (1976)  
B. DAPM (1974:5-7) 1973 Census returns  
1. ICT (1972)  
2. Included in total for El Triunfo  
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**San Joseph**
May 1971
San Francisco
Feb. 1971
Catholic hitin
June 1968

**Cuba**
Feb. 1971
San Juan de Dios
Sept. 1972
El Progreso

**Chihuahua Restrepo**
Oct. 1973
Los Alacranes
July 1968

**La Victoria**
May 1967
El Quiroga

**San Rafael**
May 1971
San Camillo

**I de Esteros**
Oct. 1972
Par del Alto

**Kentucky**
June 1964
Barrio

**Estonia**
Nov. 1973
Canete

**Boston**
Sept. 1966
Bolivar

**America**
Dec. 1965
Afonso Lopez

**Table 57: Parishes and Auxiliaries to Acción Comunal Juntas in Urban Perú**

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<th>Apr</th>
<th>May</th>
<th>Jun</th>
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**San Jose**
May 1971
San Francisco
Feb. 1971
Catholic hitin
June 1968

**Cuba**
Feb. 1971
San Juan de Dios
Sept. 1972
El Progreso

**Chihuahua Restrepo**
Oct. 1973
Los Alacranes
July 1968

**La Victoria**
May 1967
El Quiroga

**San Rafael**
May 1971
San Camillo

**I de Esteros**
Oct. 1972
Par del Alto

**Kentucky**
June 1964
Barrio

**Estonia**
Nov. 1973
Canete

**Boston**
Sept. 1966
Bolivar

**America**
Dec. 1965
Afonso Lopez
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</tr>
</tbody>
</table>
## TABLE 58: DEPARTMENTAL AUXILIOS TO ACCION COMUNAL JUNTAS IN URBAN PEREIRA 1974

<table>
<thead>
<tr>
<th>Settlement Junta</th>
<th>Total $ Col.</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zea</td>
<td>15,000</td>
<td>Housing Programme</td>
</tr>
<tr>
<td>Paz del Rio</td>
<td>15,000</td>
<td>Housing Plan</td>
</tr>
<tr>
<td>Cuba</td>
<td>25,000</td>
<td>Various Works, Sewerage and Water</td>
</tr>
<tr>
<td>Alfonso Lopez</td>
<td>5,000</td>
<td>Various Works</td>
</tr>
<tr>
<td>San Camilo</td>
<td>5,000</td>
<td>Community Centre</td>
</tr>
<tr>
<td>Boston</td>
<td>40,000</td>
<td>Paving</td>
</tr>
<tr>
<td>Kennedy</td>
<td>15,000</td>
<td>Paving</td>
</tr>
<tr>
<td>Venecia</td>
<td>3,000</td>
<td>Various Works</td>
</tr>
<tr>
<td>Salazar Robledo</td>
<td>5,000</td>
<td>Communal Centre</td>
</tr>
<tr>
<td>H. V. Marulanda</td>
<td>10,000</td>
<td>Housing Plan</td>
</tr>
<tr>
<td>San Juan de Dios</td>
<td>5,000</td>
<td>Various Works</td>
</tr>
<tr>
<td>America</td>
<td>10,000</td>
<td>Various Works</td>
</tr>
<tr>
<td>El Progreso</td>
<td>10,000</td>
<td>Various Works</td>
</tr>
<tr>
<td>Berlin</td>
<td>5,000</td>
<td>Various Works</td>
</tr>
<tr>
<td>Pereira</td>
<td>5,000</td>
<td>Various Works</td>
</tr>
<tr>
<td>Camilo Mejia Duque</td>
<td>5,000</td>
<td>Various Works</td>
</tr>
<tr>
<td>El Triunfo</td>
<td>10,000</td>
<td>Various Works</td>
</tr>
<tr>
<td>Santander</td>
<td>5,000</td>
<td>Various Works</td>
</tr>
<tr>
<td>San Francisco</td>
<td>5,000</td>
<td>Various Works</td>
</tr>
<tr>
<td>Charco Negro</td>
<td>5,000</td>
<td>Various Works</td>
</tr>
</tbody>
</table>

**TOTAL** 203,000

Source: DIGIDEC (1976)
TABLE 59: NATIONAL AND DEPARTMENTAL AUXILIOS TO JUNTAS OF ACCION COMUNAL OF URBAN
PEREIRA BY USE 1971, 1974, 1976

<table>
<thead>
<tr>
<th>Type of Use</th>
<th>National Auxilios 1971 $</th>
<th>National Auxilios 1974 $</th>
<th>Departmental Auxilios 1974 $</th>
<th>National Auxilios 1976 $</th>
<th>Total $</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Various Works</td>
<td>160,000</td>
<td>460,000</td>
<td>83,000</td>
<td>1,665,000</td>
<td>2,368,000</td>
<td>39.7</td>
</tr>
<tr>
<td>Housing Plans</td>
<td>-</td>
<td>50,000</td>
<td>40,000</td>
<td>640,000</td>
<td>730,000</td>
<td>12.2</td>
</tr>
<tr>
<td>Housing Improvements</td>
<td>4,000</td>
<td>-</td>
<td>-</td>
<td>190,000</td>
<td>194,000</td>
<td>3.3</td>
</tr>
<tr>
<td>Electricity, Water, and Sewerage</td>
<td>25,000</td>
<td>5,000</td>
<td>15,000</td>
<td>140,000</td>
<td>185,000</td>
<td>3.1</td>
</tr>
<tr>
<td>Sports and Recreation</td>
<td>2,060</td>
<td>5,000</td>
<td>-</td>
<td>100,000</td>
<td>107,060</td>
<td>1.8</td>
</tr>
<tr>
<td>Pavements, repairs</td>
<td>80,000</td>
<td>45,000</td>
<td>55,000</td>
<td>190,000</td>
<td>370,000</td>
<td>6.2</td>
</tr>
<tr>
<td>Pavements, repairs footpaths</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Construction and Repair of Schools</td>
<td>113,450</td>
<td>23,000</td>
<td>-</td>
<td>60,000</td>
<td>196,460</td>
<td>3.3</td>
</tr>
<tr>
<td>Provision of Health Posts</td>
<td>50,000</td>
<td>20,000</td>
<td>-</td>
<td>-</td>
<td>70,000</td>
<td>1.2</td>
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<tr>
<td>Police Station</td>
<td>77,200</td>
<td>10,000</td>
<td>-</td>
<td>-</td>
<td>87,200</td>
<td>1.5</td>
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<tr>
<td>Construction of Bridges</td>
<td>-</td>
<td>500,000</td>
<td>-</td>
<td>-</td>
<td>500,000</td>
<td>8.4</td>
</tr>
<tr>
<td>Construction of Market Places</td>
<td>450,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>450,000</td>
<td>7.5</td>
</tr>
<tr>
<td>Land Regularization Credits</td>
<td>-</td>
<td>25,000</td>
<td>-</td>
<td>20,000</td>
<td>45,000</td>
<td>0.8</td>
</tr>
<tr>
<td>Cooperatives</td>
<td>15,000</td>
<td>-</td>
<td>-</td>
<td>50,000</td>
<td>65,000</td>
<td>1.1</td>
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<tr>
<td>Cultural</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>20,000</td>
<td>20,000</td>
<td>0.3</td>
</tr>
<tr>
<td>Construction and Repair of Community Centres</td>
<td>20,000</td>
<td>38,000</td>
<td>10,000</td>
<td>140,000</td>
<td>208,000</td>
<td>3.5</td>
</tr>
<tr>
<td>Disaster Funds</td>
<td>-</td>
<td>50,000</td>
<td>-</td>
<td>-</td>
<td>50,000</td>
<td>0.8</td>
</tr>
<tr>
<td>Others</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>20,000</td>
<td>20,000</td>
<td>0.3</td>
</tr>
<tr>
<td>Junta Central</td>
<td>300,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>300,000</td>
<td>5.0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1,246,720</strong></td>
<td><strong>1,231,000</strong></td>
<td><strong>203,000</strong></td>
<td><strong>3,235,000</strong></td>
<td><strong>5,965,710</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source: DIGIDEC (1976)
### TABLE 60: CONDITIONS OF TENURE (EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>'Own Property'</td>
<td>28</td>
<td>96.6</td>
</tr>
<tr>
<td>Rented</td>
<td>1</td>
<td>3.4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>29</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Note: Refers to all respondent households.*

### TABLE 61: LEGAL RIGHTS OF TENURE (EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without Title</td>
<td>14</td>
<td>50.0</td>
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<tr>
<td>Compra de Mejora</td>
<td>14</td>
<td>50.0</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>28</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Note: One Household was Renting*

### TABLE 62: SUBRENTING OF SPACE (EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrimados</td>
<td>5</td>
<td>17.2</td>
</tr>
<tr>
<td>Renters</td>
<td>1</td>
<td>3.4</td>
</tr>
<tr>
<td>None</td>
<td>23</td>
<td>79.4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>29</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Note: Refers to all respondent households.*
TABLE 63: DISTRIBUTION OF LOT AREAS (EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th>Area (m²)</th>
<th>Number</th>
<th>% Total</th>
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</thead>
<tbody>
<tr>
<td>Less than 35</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>35 - 45</td>
<td>5</td>
<td>17.2</td>
</tr>
<tr>
<td>46 - 55</td>
<td>3</td>
<td>10.3</td>
</tr>
<tr>
<td>56 - 65</td>
<td>1</td>
<td>3.5</td>
</tr>
<tr>
<td>66 - 75</td>
<td>9</td>
<td>31.0</td>
</tr>
<tr>
<td>76 - 85</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>86 - 95</td>
<td>5</td>
<td>17.2</td>
</tr>
<tr>
<td>96 - 105</td>
<td>2</td>
<td>6.9</td>
</tr>
<tr>
<td>106 - 115</td>
<td>1</td>
<td>3.5</td>
</tr>
<tr>
<td>116 - 125</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>126 - 135</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>136 - 145</td>
<td>2</td>
<td>6.9</td>
</tr>
<tr>
<td>146 - 155</td>
<td>1</td>
<td>3.5</td>
</tr>
<tr>
<td>TOTAL</td>
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<td>100.0</td>
</tr>
</tbody>
</table>

Note: Min.: 35.2m²; Max.: 155m²; Average: 76.6m²
Refers to all respondent households.
<table>
<thead>
<tr>
<th>Built Area (M²)</th>
<th>Number</th>
<th>% Total</th>
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</thead>
<tbody>
<tr>
<td>10 - 20</td>
<td>4</td>
<td>13.8</td>
</tr>
<tr>
<td>21 - 30</td>
<td>5</td>
<td>17.2</td>
</tr>
<tr>
<td>31 - 40</td>
<td>7</td>
<td>24.1</td>
</tr>
<tr>
<td>41 - 50</td>
<td>3</td>
<td>10.3</td>
</tr>
<tr>
<td>51 - 60</td>
<td>6</td>
<td>20.7</td>
</tr>
<tr>
<td>61 - 70</td>
<td>2</td>
<td>6.9</td>
</tr>
<tr>
<td>71 - 80</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>81 - 90</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>91 - 100</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>101 - 110</td>
<td>1</td>
<td>3.5</td>
</tr>
<tr>
<td>111 - 120</td>
<td>1</td>
<td>3.5</td>
</tr>
<tr>
<td>TOTAL</td>
<td>29</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Min.: 16.8m²; Max.: 112m²; Average: 43.4m²
Refers to respondent households.
TABLE 65: BUILT AREA AS A PROPORTION OF LOT AREA  
(EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th>Built Area As % Lot Area</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 10</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>10 - 20</td>
<td>1</td>
<td>3.5</td>
</tr>
<tr>
<td>21 - 30</td>
<td>2</td>
<td>6.9</td>
</tr>
<tr>
<td>31 - 40</td>
<td>2</td>
<td>6.9</td>
</tr>
<tr>
<td>41 - 50</td>
<td>8</td>
<td>27.6</td>
</tr>
<tr>
<td>51 - 60</td>
<td>5</td>
<td>17.2</td>
</tr>
<tr>
<td>61 - 70</td>
<td>2</td>
<td>6.9</td>
</tr>
<tr>
<td>71 - 80</td>
<td>5</td>
<td>17.2</td>
</tr>
<tr>
<td>81 - 90</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>91 - 100</td>
<td>3</td>
<td>10.3</td>
</tr>
<tr>
<td>100 + more</td>
<td>1</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>29</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Refers to respondent households.
### TABLE 66: PER CAPITA SPACE RATES (LAND) (EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th>Land (m²) Per Capita</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 5</td>
<td>2</td>
<td>6.9</td>
</tr>
<tr>
<td>6 - 10</td>
<td>8</td>
<td>27.6</td>
</tr>
<tr>
<td>11 - 15</td>
<td>10</td>
<td>34.6</td>
</tr>
<tr>
<td>16 - 20</td>
<td>5</td>
<td>17.3</td>
</tr>
<tr>
<td>21 - 25</td>
<td>1</td>
<td>3.4</td>
</tr>
<tr>
<td>26 - 30</td>
<td>1</td>
<td>3.4</td>
</tr>
<tr>
<td>31 - 35</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>36 - 40</td>
<td>1</td>
<td>3.4</td>
</tr>
<tr>
<td>41 - 45</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>46 - 50</td>
<td>1</td>
<td>3.4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>29</td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Note: Refers to respondent households.

### TABLE 67: PER CAPITA SPACE RATES (BUILT AREA) (EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th>Built Area (m²) Per Capita</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 5</td>
<td>8</td>
<td>27.6</td>
</tr>
<tr>
<td>6 - 10</td>
<td>17</td>
<td>58.7</td>
</tr>
<tr>
<td>11 - 15</td>
<td>1</td>
<td>3.4</td>
</tr>
<tr>
<td>15 - 20</td>
<td>1</td>
<td>3.4</td>
</tr>
<tr>
<td>20 and more</td>
<td>2</td>
<td>6.9</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>29</td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Note: Refers to respondent households.

Average number of persons per house: 6.45
**TABLE 68: NUMBER OF PERSONS PER BEDROOM (EL PLUMON SURVEY)**

<table>
<thead>
<tr>
<th>Number of Persons Per Bedroom</th>
<th>Number of Cases</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>1 to less than 2</td>
<td>2</td>
<td>5.7</td>
</tr>
<tr>
<td>2 to less than 3</td>
<td>7</td>
<td>20.0</td>
</tr>
<tr>
<td>3 to less than 4</td>
<td>7</td>
<td>20.0</td>
</tr>
<tr>
<td>4 to less than 5</td>
<td>8</td>
<td>22.8</td>
</tr>
<tr>
<td>5 to less than 6</td>
<td>5</td>
<td>14.3</td>
</tr>
<tr>
<td>6 to less than 7</td>
<td>1</td>
<td>2.9</td>
</tr>
<tr>
<td>7 to less than 8</td>
<td>4</td>
<td>11.4</td>
</tr>
<tr>
<td>8 to less than 9</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>9 to less than 10</td>
<td>1</td>
<td>2.9</td>
</tr>
<tr>
<td>10 to less than 11</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>11 and more</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>35</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*Note:* Refers to all resident households.  
Min. number of persons per house: 3; Max.: 14;  
Average: 6.45
### TABLE 69: PREDOMINANT MATERIALS IN THE FLOOR (EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th>Material</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bamboo</td>
<td>9</td>
<td>31.0</td>
</tr>
<tr>
<td>Cement</td>
<td>7</td>
<td>24.1</td>
</tr>
<tr>
<td>Wood</td>
<td>6</td>
<td>20.7</td>
</tr>
<tr>
<td>Earth</td>
<td>6</td>
<td>20.7</td>
</tr>
<tr>
<td>Baldosin</td>
<td>1</td>
<td>3.5</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>29</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Note: Refers to respondent households.

### TABLE 70: PREDOMINANT MATERIALS IN THE WALLS (EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th>Material</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Split Cane</td>
<td>15</td>
<td>51.7</td>
</tr>
<tr>
<td>Bahareque</td>
<td>7</td>
<td>24.1</td>
</tr>
<tr>
<td>Brick</td>
<td>6</td>
<td>20.7</td>
</tr>
<tr>
<td>Carton</td>
<td>1</td>
<td>3.5</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>29</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Note: Refers to respondent households.

### TABLE 71: PREDOMINANT MATERIALS IN THE ROOF (EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th>Material</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clay Tile</td>
<td>18</td>
<td>62.0</td>
</tr>
<tr>
<td>Carton</td>
<td>7</td>
<td>24.1</td>
</tr>
<tr>
<td>Eternit</td>
<td>1</td>
<td>3.5</td>
</tr>
<tr>
<td>Zinc</td>
<td>2</td>
<td>6.9</td>
</tr>
<tr>
<td>Throwaways</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>Cement Slab</td>
<td>1</td>
<td>3.5</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>29</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Note: Refers to respondent households.
### Table 72: Predominant Materials in Front Walls (El Plumon Census)

<table>
<thead>
<tr>
<th>Materials</th>
<th>First Stage</th>
<th></th>
<th>Second Stage</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>% Total</td>
<td>Number</td>
<td>% Total</td>
<td>Number</td>
<td>% Total</td>
</tr>
<tr>
<td>Split Cane</td>
<td>18</td>
<td>22.8</td>
<td>34</td>
<td>72.3</td>
<td>52</td>
<td>41.3</td>
</tr>
<tr>
<td>Brick</td>
<td>39</td>
<td>49.4</td>
<td>5</td>
<td>10.7</td>
<td>44</td>
<td>34.9</td>
</tr>
<tr>
<td>Bahareque</td>
<td>19</td>
<td>24.0</td>
<td>8</td>
<td>17.0</td>
<td>27</td>
<td>21.4</td>
</tr>
<tr>
<td>Others</td>
<td>3</td>
<td>3.8</td>
<td>--</td>
<td>--</td>
<td>3</td>
<td>2.4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>79</td>
<td>100.0</td>
<td>47</td>
<td>100.0</td>
<td>126</td>
<td>100.0</td>
</tr>
</tbody>
</table>

### Table 73: Predominant Materials in the Roof (El Plumon Census)

<table>
<thead>
<tr>
<th>Materials</th>
<th>First Stage</th>
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<th>Second Stage</th>
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<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>% Total</td>
<td>Number</td>
<td>% Total</td>
<td>Number</td>
<td>% Total</td>
</tr>
<tr>
<td>Carton</td>
<td>15</td>
<td>19.0</td>
<td>25</td>
<td>53.1</td>
<td>40</td>
<td>31.7</td>
</tr>
<tr>
<td>Clay Tile</td>
<td>37</td>
<td>46.8</td>
<td>15</td>
<td>31.9</td>
<td>52</td>
<td>41.3</td>
</tr>
<tr>
<td>Eternit</td>
<td>4</td>
<td>5.1</td>
<td>2</td>
<td>4.3</td>
<td>6</td>
<td>4.8</td>
</tr>
<tr>
<td>Cement Slab</td>
<td>9</td>
<td>11.4</td>
<td>1</td>
<td>2.1</td>
<td>10</td>
<td>7.9</td>
</tr>
<tr>
<td>Zinc</td>
<td>3</td>
<td>3.8</td>
<td>--</td>
<td>--</td>
<td>3</td>
<td>2.4</td>
</tr>
<tr>
<td>Throwaways</td>
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<td>--</td>
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<td>4.3</td>
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<td>1.6</td>
</tr>
<tr>
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<td>13.9</td>
<td>2</td>
<td>4.3</td>
<td>13</td>
<td>10.3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>79</td>
<td>100.0</td>
<td>47</td>
<td>100.0</td>
<td>126</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>Number</td>
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<td></td>
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</tr>
<tr>
<td>--------------------------------</td>
<td>--------</td>
<td>---------</td>
<td></td>
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<td></td>
</tr>
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</tr>
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<td>20.7</td>
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<td><strong>TOTAL</strong></td>
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</tr>
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<td>37.9</td>
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<td></td>
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</tr>
<tr>
<td>Absent</td>
<td>18</td>
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</tr>
<tr>
<td><strong>TOTAL</strong></td>
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<td>100.0</td>
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<td>None</td>
<td>25</td>
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</tr>
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<td><strong>TOTAL</strong></td>
<td>29</td>
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</tr>
</tbody>
</table>

Note. Refers to respondent households.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
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<td>752.80</td>
<td>1,490.00</td>
<td>700.00</td>
<td>1,000.00</td>
<td>70,000</td>
<td>1,016.00</td>
<td>70,000</td>
<td>1,000.00</td>
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<tr>
<td>Constant</td>
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<td>752.80</td>
<td>1,490.00</td>
<td>700.00</td>
<td>1,000.00</td>
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<td>1,016.00</td>
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</tr>
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<td>700.00</td>
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<td>1,016.00</td>
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<td>1,000.00</td>
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<td>Monthly</td>
<td>1,000.00</td>
<td>752.80</td>
<td>1,490.00</td>
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<td>1,000.00</td>
<td>70,000</td>
<td>1,016.00</td>
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<td>1966-67</td>
<td>1,900.00</td>
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<td>1,609.70</td>
<td>92.80</td>
<td>1,520.00</td>
<td>816.99</td>
<td>1,459.80</td>
<td>72.03</td>
<td>1,400.00</td>
<td>653.24</td>
</tr>
<tr>
<td>1967-68</td>
<td>1,940.00</td>
<td>11,622</td>
<td>1,606.50</td>
<td>92.50</td>
<td>1,520.00</td>
<td>816.99</td>
<td>1,459.80</td>
<td>72.03</td>
<td>1,400.00</td>
<td>653.24</td>
</tr>
<tr>
<td>1968-69</td>
<td>2,100.00</td>
<td>11,122</td>
<td>1,586.00</td>
<td>92.00</td>
<td>1,520.00</td>
<td>816.99</td>
<td>1,459.80</td>
<td>72.03</td>
<td>1,400.00</td>
<td>653.24</td>
</tr>
<tr>
<td>1969-70</td>
<td>2,000.00</td>
<td>11,122</td>
<td>1,586.00</td>
<td>92.00</td>
<td>1,520.00</td>
<td>816.99</td>
<td>1,459.80</td>
<td>72.03</td>
<td>1,400.00</td>
<td>653.24</td>
</tr>
<tr>
<td>1970-71</td>
<td>2,000.00</td>
<td>11,122</td>
<td>1,586.00</td>
<td>92.00</td>
<td>1,520.00</td>
<td>816.99</td>
<td>1,459.80</td>
<td>72.03</td>
<td>1,400.00</td>
<td>653.24</td>
</tr>
<tr>
<td>1971-72</td>
<td>2,000.00</td>
<td>11,122</td>
<td>1,586.00</td>
<td>92.00</td>
<td>1,520.00</td>
<td>816.99</td>
<td>1,459.80</td>
<td>72.03</td>
<td>1,400.00</td>
<td>653.24</td>
</tr>
<tr>
<td>1972-73</td>
<td>2,000.00</td>
<td>11,122</td>
<td>1,586.00</td>
<td>92.00</td>
<td>1,520.00</td>
<td>816.99</td>
<td>1,459.80</td>
<td>72.03</td>
<td>1,400.00</td>
<td>653.24</td>
</tr>
<tr>
<td>1973-74</td>
<td>2,000.00</td>
<td>11,122</td>
<td>1,586.00</td>
<td>92.00</td>
<td>1,520.00</td>
<td>816.99</td>
<td>1,459.80</td>
<td>72.03</td>
<td>1,400.00</td>
<td>653.24</td>
</tr>
<tr>
<td>1974-75</td>
<td>2,000.00</td>
<td>11,122</td>
<td>1,586.00</td>
<td>92.00</td>
<td>1,520.00</td>
<td>816.99</td>
<td>1,459.80</td>
<td>72.03</td>
<td>1,400.00</td>
<td>653.24</td>
</tr>
<tr>
<td>1975-76</td>
<td>2,000.00</td>
<td>11,122</td>
<td>1,586.00</td>
<td>92.00</td>
<td>1,520.00</td>
<td>816.99</td>
<td>1,459.80</td>
<td>72.03</td>
<td>1,400.00</td>
<td>653.24</td>
</tr>
<tr>
<td>1976-77</td>
<td>2,000.00</td>
<td>11,122</td>
<td>1,586.00</td>
<td>92.00</td>
<td>1,520.00</td>
<td>816.99</td>
<td>1,459.80</td>
<td>72.03</td>
<td>1,400.00</td>
<td>653.24</td>
</tr>
</tbody>
</table>

**Table 75: Housing Conditions and Costs in Barrio Cuba**
TABLE 76: CLASSIFICATION OF EXTERNAL CONSTRUCTION MATERIALS IN EL PLUMON

<table>
<thead>
<tr>
<th>Form of Production</th>
<th>First Stage</th>
<th>Second Stage</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>% Total</td>
<td>Number</td>
</tr>
<tr>
<td>Industrial</td>
<td>68</td>
<td>86.1</td>
<td>36</td>
</tr>
<tr>
<td>Manufactured</td>
<td>64</td>
<td>81.0</td>
<td>20</td>
</tr>
<tr>
<td>Artisanal</td>
<td>62</td>
<td>78.5</td>
<td>47</td>
</tr>
</tbody>
</table>

Note (1) Percentages relate to proportion of total lots: 126 in settlement, 79 in the first stage, 47 in the second.

(2) Industrial materials include cement, carton, eternit, zinc. Manufactured materials include brick, cement block, clay tile. Artisanal materials include split cane, bamboo, throwaways.

Source: Housing Census 1976

TABLE 77: INCIDENCE OF SELF-HELP AND WAGE LABOUR (EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th>Type of Labour</th>
<th>First Stage</th>
<th>Second Stage</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>% Total</td>
<td>Number</td>
</tr>
<tr>
<td>Family only</td>
<td>8</td>
<td>42.2</td>
<td>6</td>
</tr>
<tr>
<td>Family &amp; Friends (unpaid)</td>
<td>-</td>
<td>--</td>
<td>3</td>
</tr>
<tr>
<td>Family &amp; Paid Labor</td>
<td>6</td>
<td>31.6</td>
<td>1</td>
</tr>
<tr>
<td>Paid Labour only</td>
<td>3</td>
<td>15.8</td>
<td>-</td>
</tr>
<tr>
<td>Previous Owner</td>
<td>2</td>
<td>10.5</td>
<td>-</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>19</strong></td>
<td><strong>100.0</strong></td>
<td><strong>10</strong></td>
</tr>
</tbody>
</table>

Note: Refers to respondent households.
TABLE 78: SOURCES OF EXTERNAL FINANCING FOR CONSTRUCTION (EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th>Type</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer Assistance</td>
<td>2</td>
<td>7.1</td>
</tr>
<tr>
<td>Assistance from Friends</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td>Assistance from others</td>
<td>2</td>
<td>7.1</td>
</tr>
<tr>
<td>None</td>
<td>23</td>
<td>82.2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>28</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Excludes one household renting.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Housing</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Densities (houses/ha.)</strong></td>
<td>65.7</td>
<td>100 lots per ha. (max.)</td>
<td>50 (min.)</td>
</tr>
<tr>
<td><strong>Lot Areas</strong></td>
<td>66m²</td>
<td>60 m² (min.)</td>
<td>120m² (min.)</td>
</tr>
<tr>
<td><strong>Lot Frontage</strong></td>
<td>6m.</td>
<td>5m. (min.)</td>
<td>6m. (min.)</td>
</tr>
<tr>
<td><strong>Height</strong></td>
<td>5.3m</td>
<td>Not Specified</td>
<td>6.5m (max.)</td>
</tr>
<tr>
<td><strong>Front Gardens</strong></td>
<td>--</td>
<td>Not Specified</td>
<td>6m primary, 3m secondary roads</td>
</tr>
<tr>
<td><strong>Patio</strong></td>
<td>18.0m²</td>
<td>9m²</td>
<td>16m² (min.)</td>
</tr>
<tr>
<td><strong>Parking</strong></td>
<td>1 for settlement</td>
<td>1 for each 10 houses</td>
<td>1 for each house</td>
</tr>
<tr>
<td>** Communal Area as % Total Area**</td>
<td>9.7%</td>
<td>10.0%</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Recreational Area as % Total Area</strong></td>
<td></td>
<td>10.0%</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Roads</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>V.4.</strong></td>
<td>8.5m(6+2.5)</td>
<td>15.0m(9+6)</td>
<td></td>
</tr>
<tr>
<td><strong>V.5.</strong></td>
<td>15.0m(6+9)</td>
<td>10.5m(6.5+4)</td>
<td>10.5m(6.5+4)</td>
</tr>
<tr>
<td><strong>V.6.</strong></td>
<td>7.0m(3+4)</td>
<td>8.5m(6.0+2.5)</td>
<td></td>
</tr>
<tr>
<td><strong>V.7.</strong></td>
<td>5.0m(3+2)</td>
<td>8.0m(3+5)</td>
<td></td>
</tr>
</tbody>
</table>

*Carreras 7 bis, 7,8 are V.4. specifications
Calle 2 is V.5 specifications.
Calles 2a and 2 bis are V.6 specifications.
V.7. specifications cover all pedestrian roads.
**TABLE 80: LAND COSTS IN BARRIO HERNANDO VELEZ MARULANDA 1974**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Area</td>
<td>33,112 m²</td>
</tr>
<tr>
<td>Lot Area</td>
<td>66 m²</td>
</tr>
<tr>
<td>Total Houses (projected)</td>
<td>217</td>
</tr>
<tr>
<td>Total Land Cost</td>
<td>$1,330,000</td>
</tr>
<tr>
<td>Land Costs per house</td>
<td>$5,990</td>
</tr>
<tr>
<td>Land Costs per m²</td>
<td>$39.30 m²</td>
</tr>
<tr>
<td>Total Loan</td>
<td>$1,220,000</td>
</tr>
<tr>
<td>Interests on Loan</td>
<td>$944,146</td>
</tr>
<tr>
<td>Interests per house</td>
<td>$4,350</td>
</tr>
<tr>
<td>Interests per m²</td>
<td>$28.50 m²</td>
</tr>
<tr>
<td>Total Loan</td>
<td>$1,220,000</td>
</tr>
<tr>
<td>Total Interests</td>
<td>$994,146</td>
</tr>
<tr>
<td>Downpayment</td>
<td>$80,000</td>
</tr>
<tr>
<td>TOTAL LAND + INTEREST</td>
<td>$2,244,146</td>
</tr>
<tr>
<td>Total Land + Interest per house</td>
<td>$10,340</td>
</tr>
<tr>
<td>Total Land + Interest per m²</td>
<td>$67.80 m²</td>
</tr>
</tbody>
</table>

Note: 1974 US $1.00 = Col. $28.56

Source: Fondo Obrero (1976)
$

12.00

Free
47.0

180.00

200.0
1517.0

Ui o o o o o
47.00
1000.00

i

% INCREASE

2413
1118
1263.96
1221.82
600.00
88.00
560.00

200.0
1739.0

658.65
340.02
579.95
1657.00

1999.17
926.26
1047.19
1012.27
497.10
72.91
463.%

165.70
1440.76

165.70
165.70
389.40
463.96
1532.73
95.28

1051.36

20.0

28.6
28.6
28.6
40.1

11.7
11.7
16.0
16.0
47.1
100.0
133.3

14.6

14.6
133.3
78.6
24.1

14.6

- 5 .0
93.1

-0 .6

-17.2
- 5.0

1975-76
CONSTANT
$1975

795.60
410.40
700.00
2000.00

178.95

14.6
133.3

1269.0

216.00

77.88
828.50

iji
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19,083.78

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94.00
1000.00

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VALUE OF
UNIT
JULY 1975

10.00

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82.00
429.80

8.3

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MATERIALS

Block

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41.00
429.80

30.7

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TOTAL VALUE VALUE OF TOTAL $
% INCREASE
TOTAL $
UNIT $
VALUE
VALUE
1975-76
CONSTANT
CURRENT $
$1975

1

$41.0

47.0

27 sacks

127.0
86.0
105.33
105.33
100.00
22.00
280.00

j
30 u n its
3n®
10 sacks
2 u n its
74 planks
10 lbs

Free
41.0

18.00
18.00
87.50
2000.00

1107.0

9m3
37 sacks

113.70
77.00
90.80
90.80
68.00
11.00
120.00

618.80
319.20
544.32
1428.00

2 sacks
1 u n it

Free
Free
47.0
280.0
25.0
11.5

WALLS
Sand
Cement

19 sheets
13 sheets
2 @ 6m
2 @ 5.8m
6
4
2

14.00
14.00
68.04
1428.00

FLOORS
Banboo
Sand
Cement
Wooden Beans
Wooden Planks
1" Nails

ROOF
Etemit #8
Etemit #4
Asbestos Cement Gutters
Gutters
Cowls for Roof
Cowls for Gutters
Wooden Beans

44.2 k ilo s
22.8 k ilo s
8 u nits
1 u n it

OTHER
P.V.C. Itydralic Pipe
1/2'
Cement Sewage Pipe
Wood for S ta irs

18m

HQ
HO
HH
N-3
NJ
O
S £ g a $ 2 s
8 8 8 So 8 8 8

1

IRON
Bars
3/8"
Bars
1/4"
Window Franes
Door

1

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14,601.80

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TABLE 82: BUILDING MATERIALS COSTS IN BARRIO HERNANDO VELEZ MARULANDA BY CATEGORY July 1975 - July 1976

<table>
<thead>
<tr>
<th>Category</th>
<th>July 1975 ($)</th>
<th>% Total Materials Costs</th>
<th>July 1976 ($)</th>
<th>% Total Materials Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asbestos - Cement</td>
<td>5,756.18</td>
<td>39.4</td>
<td>6,704.78</td>
<td>35.1</td>
</tr>
<tr>
<td>Cement</td>
<td>3,116.00</td>
<td>21.3</td>
<td>3,572.00</td>
<td>18.7</td>
</tr>
<tr>
<td>Iron</td>
<td>3,003.82</td>
<td>20.6</td>
<td>4,021.00</td>
<td>21.1</td>
</tr>
<tr>
<td>Wood</td>
<td>1,945.18</td>
<td>13.3</td>
<td>3,970.00</td>
<td>20.8</td>
</tr>
<tr>
<td>Other</td>
<td>780.62</td>
<td>5.3</td>
<td>816.00</td>
<td>4.3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>14,601.80</strong></td>
<td><strong>100.0</strong></td>
<td><strong>19,083.78</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
### Table 83: Estimated Housing Costs in Barrio Hernando Velez Marulanda

(1976 July)

<table>
<thead>
<tr>
<th>Description</th>
<th>Costs ($)</th>
<th>% Total Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
<td>5,900</td>
<td>11.1</td>
</tr>
<tr>
<td>Interests</td>
<td>4,350</td>
<td>8.2</td>
</tr>
<tr>
<td>Building Materials</td>
<td>19,084</td>
<td>35.9</td>
</tr>
<tr>
<td>Wage Labour</td>
<td>8,100</td>
<td>15.2</td>
</tr>
<tr>
<td>Self-Help Labour</td>
<td>15,750</td>
<td>29.6</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>53,184</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
### TABLE 84: SOURCES OF FINANCING BARRIO HERNANDO VELEZ MARULANDA
(To July 1976)

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount (Col.$)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STATE</strong></td>
<td></td>
</tr>
<tr>
<td>National Auxilios</td>
<td>420,000</td>
</tr>
<tr>
<td>Departmental Auxilios</td>
<td>20,000</td>
</tr>
<tr>
<td>Fondo Obrero (loan)</td>
<td>1,220,000</td>
</tr>
<tr>
<td>Caja Agraria (loan)</td>
<td>500,000</td>
</tr>
<tr>
<td><strong>COMMUNITY</strong></td>
<td></td>
</tr>
<tr>
<td>Initial Downpayments (estimate)</td>
<td>692,753</td>
</tr>
<tr>
<td>Weekly Payments (per month)</td>
<td>28,000</td>
</tr>
<tr>
<td>Rents from Ranchos (per month)</td>
<td>4,000</td>
</tr>
</tbody>
</table>
TABLE 85: AUXILIOS AWARDED TO BARRIO HERNANDO VELEZ MARULANDA
APRIL 1974 - MAY 1976

<table>
<thead>
<tr>
<th>DATE</th>
<th>AMOUNT</th>
<th>US $</th>
<th>TYPE</th>
<th>ORIGIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>9th April 1974</td>
<td>10,000</td>
<td>350</td>
<td>National</td>
<td>DK.</td>
</tr>
<tr>
<td>30th May 1975</td>
<td>65,000</td>
<td>1973</td>
<td>National</td>
<td>Gabriela Zuleta</td>
</tr>
<tr>
<td>11th Nov. 1975</td>
<td>150,000</td>
<td>4614</td>
<td>National</td>
<td>Oscar Velez Marulanda</td>
</tr>
<tr>
<td>11th Nov. 1975</td>
<td>150,000</td>
<td>4554</td>
<td>National</td>
<td>Gabriela Zuleta</td>
</tr>
<tr>
<td>April 1976</td>
<td>20,000</td>
<td>551</td>
<td>Departmental</td>
<td>DK.</td>
</tr>
<tr>
<td>April 1976</td>
<td>30,000</td>
<td>826</td>
<td>National</td>
<td>Oscar Velez Marulanda</td>
</tr>
<tr>
<td>May 30th 1976</td>
<td>80,000</td>
<td>2203</td>
<td>National</td>
<td>Ministry of Labour</td>
</tr>
<tr>
<td>TOTAL</td>
<td>505,000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Awarded, but not received.

SOURCE: DIGIDEC (1976)
TABLE 86: AMOUNT PAID BY IN INITIAL DOWNPAYMENTS (HERNANDO VELEZ MARULANDA SURVEY) (To JUNE 1976)

<table>
<thead>
<tr>
<th>Initial Downpayment ($)</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000 - 1999</td>
<td>3</td>
<td>8.8</td>
</tr>
<tr>
<td>2000 - 2999</td>
<td>3</td>
<td>8.8</td>
</tr>
<tr>
<td>3000 - 3999</td>
<td>9</td>
<td>26.5</td>
</tr>
<tr>
<td>4000 - 4999</td>
<td>9</td>
<td>26.5</td>
</tr>
<tr>
<td>5000 - 5999</td>
<td>5</td>
<td>14.7</td>
</tr>
<tr>
<td>6000 and more</td>
<td>3</td>
<td>8.8</td>
</tr>
<tr>
<td>Don't Know</td>
<td>2</td>
<td>5.9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>34</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: 3 respondents (8.8%) paid between $4000 and $4499, and 6 (17.7%) between $4500 and $4999. Refers to respondent households.
APPENDIX ONE

THE CONTRIBUTION OF CHARLES ABRAMS AND JOHN TURNER TO SELF-HELP HOUSING THEORY

THE CONCEPT OF HOUSING

The concepts of housing developed by Abrams and Turner were rooted in their field observations of housing activities in slums and squatter settlements. The housing principles identified were used to criticize existing housing policies and to formulate new policy recommendations.

Both were opposed to the 'slum clearance plus conventional housing formula' of the modernization decades. Abrams (1964; 1966) argued that these policies were ineffective as the slums and squatter settlements continued to mushroom, public housing output was negligible and demolition merely decreased the housing stock and destroyed considerable investment in shelter.\(^1\) Turner (1968, 354) went further and argued that the eradication/conventional housing formula was based on 'the ignorance and misunderstanding of housing and planning concepts based on the experience of the modernized countries'.\(^2\)

Turner argued that the value of any physical object cannot be sought in terms of its physical attributes, but only in the relationship between it and the user, and as such a relationship is variable, then so too will its value vary - the value of a house must be determined by how far it frustrates or satisfies the need of its users (Turner and Fichter, 1972:159). The value of a
house is what it does for people rather than what it is, and as the market value can only deal with the latter dimension, it can only give a partial view of housing value. Turner went on to develop this idea in his analysis of the self-help housing activities of squatter settlers: as the market value of a house cannot be an adequate measure of use value it follows that self-help (popular) construction will produce better houses than the market because the users are the best judge.

Turner used these concepts concerning housing needs and use values, and empirical data on the intra-urban residential mobility of migrants within cities to construct a model of the residential structure of the city that was to dominate Latin American urban studies in the Sixties and Seventies. Housing and settlement types according to Turner can be defined in terms of how they function and how they satisfy specific social needs. These needs are spatially crystallized into a variety of housing and settlement types according to a set of priorities that changes with the domestic and economic cycle of the migrant as he/she adjusts on a permanent basis to urban life. In this way according to Turner the inner city slum, the interstitial shantytown and the peripheral squatter settlements 'all perform the principal functions demanded by their inhabitants' and 'in spite of their many and often severe drawbacks they often act as forward-moving vehicles of social and economic mobility' (Turner, 1969:510).  

Turner and Abrams both reached the same conclusion
- if the slums and squatter settlements of Latin American cities were functional and an expression of their rational utility to the inhabitants, and if the peripheral settlements were self-improving, then what was the sense in trying to eradicate them? The typical squatter dwelling identified by these writers had the consumer as the principal manager and builder, using progressive development and self-help building techniques, subsistence incomes, rudimentary building materials and family-based labour, to construct a constantly improving dwelling on illegal and initially unserviced land. Self-help building permitted the consolidation of families and communities offering a series of psychological and material supports to the poor; it created employment and opportunities for augmenting family budgets through the subletting of land and space; it offered proximity to kinsfolk; housing activities could be related to the changing requirements for space as the family cycle proceeded; space could be allocated for horticulture and livestock-rearing to supplement family income and diets, and no restrictions existed on the use of the house as a place of employment.

Abrams as an economist was quick to identify these activities in terms of 'squatter economics'. Housing was a form of wealth created by the squatter - wealth that included the capitalized value of the income that could be derived from its letting.\(^4\) Turner as an architect explained these activities in accordance with
his utility-maximizing concept of housing. Turner argued that squatter housing satisfied the fundamental needs of its residents at the lowest possible costs, because it was produced and consumed in the popular sector outside of the workings of the formal urban land and housing markets. He located his support of squatter self-help activities in the context of a general theory of housing, which also incorporated a critique of conventional housing policies.

Bureaucratic, heteronomous systems are based on hierarchical structures and centralized large scale technology; they produce objects of high quality and at great cost, but these objects are of low use value. As they supply institutionally-defined products to institutionally defined consumers they cannot accommodate the necessary complexity and variability of housing needs. Generally speaking the housing provided by such systems is badly matched with the needs of its users. The long term productivity of heteronomous systems diminishes as they consume capital resources, and construction and maintenance costs spiral through their disproportionate dependency on borrowed capital. The end product is 'aesthetically hideous, socially alienating and technically incompetent architecture' (Turner, 1976:49).

Autonomous systems on the other hand are locally self-governing and though they produce things of extremely varied standards, these products are generally low cost and yield high use-values. The housing
produced by these systems is admirably adjusted to the needs of the users. It is not socially alienating and in the long term productivity increases as capital is generated through the investment of household income. An adequate housing solution for low income groups, Turner argued, could only come about by ordering land, tools, materials, skilled labour, management and an exchange system within an autonomous system (Turner, 1976:17).

There is no doubt that Turner considered 'conventional' housing to be the product of heteronomous systems, and there is little doubt that he considered the activities of squatters to be nearer to autonomy than to heteronomy. He did argue however, that such autonomy should be completed, so that the 'do-it-yourself component' was complemented by dweller control, with government guaranteed access to resources at the local level. Housing can only be understood and evaluated in terms of the levels of heteronomy and autonomy existing within and between these two systems. Thus the conventional house is high cost, economically unviable, heavily subsidized, socially undesirable and often mismatched with low income housing needs; whilst conventional housing policies aggravate the housing problem through attitudes to slum clearance and minimum standards. Popular construction however, gives immediate possession. The sequence of building operations is better adjusted to people's needs, there is more space, it strengthens family ties, and allows
for the formation of multi-class neighbourhoods that
will provide 'the mix necessary for social change and
development' (Turner, 1967:178). The fundamental
difference however, lies in the cost of the two houses
produced: given the land, Turner argues, the squatter
can build the same house as the government agency at
half the cost. Self employment can cut down on labour
costs, but the greatest savings derive from the
avoidance of finance and credit costs. The squatter
encounters few overheads, he gets a higher productivity
out of the labour he hires, he avoids indirect costs and
fringe benefits, he buys materials very cheaply, and
there are no profits for others.

Both Turner and Abrams were anxious to point out
that as a demonstrated low income housing solution,
squatter housing involved the application of a number of
universal housing principles which could be integrated
into state housing policies.

The first of these was the principle of
homeownership and security of tenure. One of the basic
reasons identified to explain the willingness of low
income households to maintain and improve their housing
and settlement facilities was the perception of security
of tenure. Tenure security and the prospect of
ownership rights were seen to be important incentive for
savings and investment, and the creation of welfare
benefits. Turner argued that it was the desire for
private property in land and dwellings that accounted
for the move from inquilinato to peripheral squatter
settlement and the process of consolidation occurring in the latter. Abrams (1966:21) saw the issue as being wrapped up in the 'law of squatting economics' — investment was what was justifiable in terms of risk. Active markets in squatter real estate existed and that value was determined in part by the prospects of acquiring legal tenure.

The second housing principle identified by both writers was the principle of progressive development. The process of progressive development manifested itself at both the settlement and individual housing levels. The work of Turner (1963; 1965) and Mangin (1967; 1970) on Peruvian barriadas showed that squatter settlements that started as makeshift shelters on unserviced land revealed a tendency to gradual physical improvement and ultimately arrived at complete legal and physical integration into the city (Turner, 1963:375). These findings were subsequently confirmed elsewhere in Latin America. The process of progressive improvement and expansion of one-room, temporary, makeshift ranchos into substantial structures of brick and cement over time was studied with particular interest. Abrams (1964:175) conceived progressive developments as a serial process — the gradual and staged access to a socially-acceptable level of service and shelter provision. He argued that 'instalment building' occurred under conditions where housebuilding was wholly or partially dependent on a cash economy but where mortgage financing was unavailable — as people couldn't save in cash, they had
to save in bricks.

Turner on the other hand recognized the process of progressive development in the context of his utility-maximizing concept of housing. Progressive development was an expression of the principle of autonomy and dweller control - the exercise of the right of the squatter's 'freedom to build'. The dweller was free to build at a pace and to a standard consistent with his needs and financial resources; the process of progressive development allowed for flexibility in standards, design, construction time and materials, and could be finely-tuned to fluctuations in the family budget; to the changing requirements for space as the family cycle proceeded, or to the need to generate a rental income or place of employment in the structure.

A key reason for the housing problem according to Abrams was the absence of a system of home-financing. He argued that urbanization had been universally associated with rising housing costs, shortages of credit capital, and a gap between income and shelter costs, and therefore the only way of acquiring a house was by going into debt: 'If there is no financing mechanism families have no alternative but to rent, invade, or sleep on the streets'. He went on to argue that absence of a mortgage system led to stagnation in the construction sector, increased unemployment, social unrest and 'in some instances even political upheaval' (Abrams, 1964:143).

Turner argued that the origins of the housing
problem lay in the fact that there were large scale heteronomous hierarchies that waste resources (particularly energy), mismatch needs and are too costly. Housing economy in Turner's view is a function of the degree of heteronomy in its production and the legal framework that regulates this production. The cost of production is a direct expression of top-heavy bureaucratic and technical structures abetted by a value-laden and costly set of legal housing norms and procedures. The cost of production of a house, the level of effective demand, and the size of the housing problem are thus determined by technology and its managerial and legal organization per se. Bureaucratically and technologically top heavy systems inevitably substitute for activities 'that are traditionally controlled locally and as a consequence they enrich the better-off, the sponsors at the expense of the needy, and they destroy local communities. They also work in favour of commercial or state socialist interests' (Turner, 1976:66). He argued that large organizations should have little interest in the construction or management of dwellings - the solution to Third World housing problems lies in the replacement of large scale fossil-fueled technology and its accompanying bureaucracy with small scale, low energy and labour intensive technology that is self-governed (Turner, 1976).

This type of critique is of course that sustained by the Intermediate Technology and the Ecological
schools of opposition to 'urban-industrialism' (Meadows et al. 1972; Schumacher, 1974, Illich, 1970; 1972; 1973; 1978). Schumacher argued that there was a range of technologies available - traditional, intermediate and heavy industrial - and that each of these technologies is appropriate to specific activities depending on the context and the end-product. Turner argued that housing was an area for appropriate (autonomous) rather than large scale industrial technology (as used in conventional projects).

**The Concept of Self-Help in Self-Help Housing Theory**

Before discussing Abrams and Turner's concept of self-help a few preliminary remarks are necessary.

First self-help is not a new idea but an old one. Although most self-help writers have recognized the antiquity of self-help traditions, they have been reluctant to locate self-help activities within a broader economic and historical framework, and have been particularly reluctant to discuss the phenomenon in the context of the theories of the social division of labour and the development of the wage/commodity economy.

Second, self-help has been used to characterize both individual and collective efforts. It has been identified as a process involved in the improvement of existing housing, infrastructure and service facilities, and in the creation of new housing stock.

Third, the term 'self-help' has distinct moralistic and ideological connotations. Nineteenth century usage of the word was most commonly associated with Victorian
ideas of self-improvement. Whilst the moralistic element has been more subdued in the twentieth century the presumption behind much self-help philosophy is that people should do more for themselves, and should be encouraged to carry out themselves a lot of what they currently expect other people to do for them.

Fourth, self-help is a term that has been used as a description of a building process that occurs spontaneously in many areas of the world, and it has been used normatively to prescribe a set of policies for housing agencies and policy-making bodies. When talking about 'self-help' a clear distinction has to be made between the existing 'self-help' activities of urban and rural dwellers, and the institutional organization and sponsorship of self-help housing. The relationship between the two and the significance of the role of the state have become contentious issues in the self-help housing debate.

Finally, 'self-help' is not necessarily 'self-build'. Most writers would take the existence of a direct labour contribution as being a necessary element in the definition of self-help but others have used broader criteria. In the spirit of the OED's definition of 'self-help' as 'providing for oneself without waiting for external aid' they have identified self-help contributions in the realm of finance, design, and management as well as labour power. Whatever the case it is clear that a degree of self-help is involved in most types of housing activity - many people
structurally alter their own houses even when they are provided with a ready-made unit. On the other hand it is very uncommon to find a low income barrio in which a considerable number of houses have not had some sort of paid skilled or unskilled labour involved in their construction.

The dominant concept that underpinned the projects implemented by the Alliance for Progress in the Sixties, and indeed by the World Bank in the early Seventies was the 'self-help equals family labour model' (Skinner and Rodell, 1983:15). Although these projects also insisted on a substantial financial commitment, the key to the process of self-help housing was the direct labour contribution of the resident household. At the macroeconomic level it was argued that people were using what would otherwise have been their unproductive spare time in order to expand output. This output was capitalized through an increase in the housing stock, and represented an increase in national income. A widely quoted figure for the Alliance for Progress projects was that a 20-30% reduction in construction costs viz-a-viz the costs of a similar conventional unit could be achieved by replacement of wage labour. The pool of unpaid family labour that existed in the cities represented an additional resource that could be mobilized by state housing agencies to increase the total housing output to the extent permitted by the savings achieved on wage labour. It was argued that self-help housing reduced final costs because the
resident was substituting unpaid family labour for paid labour. The incorporation of the self-help technique in the construction process it was claimed would reduce total costs and the initial cash downpayment; it would increase the resident's equity by the value of his labour power ('sweat equity'); and it would permit the acquisition of skills that could be used elsewhere (Koth, Silva and Dietz, 1966:75). Accordingly housing projects should be planned to maximize the use of unpaid self-help labour.

**Abrams** was critical of the self-help equals family labour model. He argued that it was probably more feasible in rural areas where traditional forms of self-help housing based on kinship and tribal rights and duties and collective traditions were in practice. He was convinced that this way of life 'decreases' in rural areas through the increased use of money in the agricultural economy and 'disappears irretrievably' in the urban areas: 'The long trek to and from the job, and dependence on the market for land and materials, and on community organization for vital services makes self-help in the form of unpaid labour unworkable' (Abrams, 1964:165). In general Abrams saw self-help as having only a limited role to play in housing policy and expressed a preference for core housing schemes which he saw as more efficient and producing a better quality product. However, he did advocate the reorganization of self-help housing policies on the basis of the 'family decision-making model', and in the process hit upon the
sites and services formula that was to be so influential in the late Seventies and the Eighties: 'it is preferable (instead of aided self-help housing) for the government to lay out and provide plots and utilities and let each owner decide whether to use his own skills and hire others for all, most or part of the work' (Abrams, 1964: 74).

Turner's concept of self-help was highly influential in the formulation of housing policy in the Seventies and Eighties. Research in the slums and squatter settlements of Peruvian cities convinced Turner that a universal principle of self-help lay behind the construction practices of the residents, and that this principle could be incorporated to the benefit of low income groups within state housing policies.

Although the use of direct family labour in the actual construction process could constitute an important part of the self-help process it was not co-terminous with it, and under certain circumstances could be absent from self-help solutions. Turner's concept of self-help can only be understood in terms of his general decision-making theory of autonomous and heteronomous housing characterized by the presence and absence of 'dweller-control' respectively. His utility-maximizing concept of housing suggested self-help construction could produce better houses than the market because the users were the best judge of their own housing needs. Moreover housing was also seen as an 'activity' rather than a 'product' and as such was
capable of expressing and satisfying existential needs and preferences that were vital if not for 'moral purification' then at least for personal growth and achievement. Squatter housing involved self-determined choices and as such was an expression of the fundamental human right of 'freedom to build', and a product of the realm of freedom rather than necessity. Thus Turner argued that 'the man who would be free must build his own life. The existential value of the barriada is the product of three freedoms: the freedom of community self-selection, the freedom to budget one's own resources and the freedom to shape one's own environment.' (Ward, 1976:79-80) Turner therefore identified self-help activities occurring in squatter settlements as being a manifestation of the principle of 'dweller control', and identified the absence of this principle as being responsible for the inferiority of modern public housing.  

Turner also identified a number of distinct benefits in support of self-help and mutual aid housing. He argued that self-help could reduce construction costs through unpaid labour ('sweat equity') and unpaid management ('enterprise equity'). The unpaid labour involved in self-help inputs could be converted into housing capital; self-help could reduce monthly cash payments over the mortgage period, and mutual aid could transfer a large part of public low income housing costs to the private sector (OSTI Report, 1969; Harms, 1982:29). The OSTI report, which he supervised, went on
to argue that the efficiency of self-help building was dependent on the relationship between the participant's wage level, equity per hour created and the prevailing contractor wages. It also reached the important conclusion that self-help only made economic sense if self-helper's wages were lower than construction workers' wages (Harms, 1982:30).

The Concept of the State in Self-Help Housing Theory

A number of similarities exist between Abrams and Turner's concept of the role of the state in housing provision. Both shared the liberal concept of the state as representing the general interest - it does, should or has the ability to act in the general interest. Both argued the need for economic intervention by the state in order to stimulate the 'private sector', (Abrams) or the 'popular sector' (Turner). Both attached a great deal of significance to the role of the state and policy intervention.

Like many of his contemporaries Abrams subscribed to the mixed economy theory of the state which recognized the potential of the state to represent the general interest through a harmonious relationship with the private sector. State policies were needed to bring about the climate of economic and political stability required to induce capital to undertake long-term commitments. They were also required through a political necessity - to counteract the threat of communism.

Within this context Abrams argued against those
'conservative' theories of the role of the state in housing provision that were dominant during the modernization decades, and which gave a low priority to state investments in housing. He argued strongly against the 'no factories before housing' and 'housing as a consumption good' theories. Housing should be recognized as a necessity of life and as a social overhead and as such was indispensable to balanced growth both in economic and social terms.

Abrams believed that state housing programmes could and should be reoriented away from middle income groups, who could be catered for quite adequately by the private sector, towards the low income groups. This could be achieved by maximizing the use of local resources and reducing costs: 'A country must choose between building for the few and demonstrating little, building for the many and exhausting its resources, or providing for the many with a minimum outlay. (Abrams, 1964:180). Limited output and the exclusion of the poor in conventional housing policies had come about as a result of: conventional housing financial systems that excluded the poor and not-so-poor from debt financing; low effective rates of property taxation; excessive subsidization of housing and services for higher income groups; a lax attitude toward (and political interference in) the collection of public rents which constrained budgets; and excessive administrative centralization and the absence of responsible institutions which had adequate authority, skilled manpower and resources to implement
programmes and which kept indirect costs high.

Abrams was also the first to return to a theme first mentioned by Sax - the effect of high minimum standards embodied in land subdivision, building and public services codes and regulations on maintaining the high costs of public housing. In general he was in favour of these regulations because they were often essential for fire protection, structural safety and public hygiene; because they upgraded the quality of the housing and settlement; and because of the enormous public investments that were necessary to reorder and rationalize an established pattern of housing and public service networks (Abrams, 1964:112). However, he also pointed out that 'every restriction increases the cost of the dwelling. If too stringent, restrictions may curtail or stop building altogether. They also tend to perpetuate the older buildings which if rebuilt would violate the new codes. They cannot prevent slums, overcrowding, or squatting in the face of massive migration.'

Abrams argued that the excessively high and unfavourable standards embodied in these regulations were most commonly imported by colonial powers and reinforced by architectural philosophers attempting to avoid the errors of developed countries by not building slums. The inevitable result, therefore, of inadequate state legislation was high cost building that was not affordable by the poor. He concluded that 'the more drastic the regulation, the higher the rent, the fewer
who could pay it' (Abrams, 1964:43).

The general concept of the state remains ambivalent in Turner's work, as is the case with other writers of the Intermediate Technology and Ecological Schools of thought. In some works (1968; 1976) he identifies the state as a 'public sector' which coexists with a 'popular sector' and a 'private sector'. Each of these sectors is dominated by different actors with different interests: use values for users in the popular sector, profits for entrepreneurs in the private sector, and the maintenance of public order and regulation in the public sector.

More commonly, however, Turner's concept of the state is located within the technocratic and decision-making terms of his theory of heteronomous and autonomous systems where bureaucracy, hierarchy and large scale technology are counterposed to locally self-governing, decentralized, flexible and small scale technologies. In this scenario the state is seen to be an expression of, and support for heteronomous systems.

In Turner's work however the state is also identified as having a crucial role to play in breaking the domination of heteronomy - the establishment of autonomy and 'self-government' depends on personal and local access to resources which only central government can guarantee' (Turner, 1976:6). Turner argues therefore that whereas under modernization strategies the state does not act in the general interest, through liberal and technologically rational reforms it can be
made to do so.

Turner attached a great deal of significance to state interventions in the housing and urban process. The origins of the housing problem were to be found in the domination of heteronomous system, and its solution in the encouragement of autonomy or dweller control, but the state was a key player in both. It was the mismatching of levels of authority with housing activities and inappropriate legislation that was largely responsible for the deleterious effects of heteronomous systems whilst the accessibility of autonomous builders to basic resources was largely a 'function of law and its administration' and therefore of central authority (Turner, 1976:17). Attention was focussed on three discrete aspects of state intervention: standards; planning procedures and principles, and the levels of authority appropriate to different kinds of housing activity.

Much of the discussion of the state in Turner's work is concerned with analyzing, criticizing and reformulating its regulatory and control functions over housing and urban development. These functions are largely carried out in the framework of a body of national and local legislation that is underpinned by a set of prescribed 'minimum standards'. Turner's critique of the theory and practice of minimum standards was highly influential in the Seventies and Eighties and we shall turn to it in some detail.

It is clear that the process of housing and urban
development cannot go unregulated because too many conflicts of interest and diseconomies are involved in the day-to-day process of capitalist urbanization. The principal goal of regulatory measures, it is argued, is to ensure the maximization of social benefits and the minimization of social costs associated with private decision-making activities in housing and urban development. In this goal it is clear that a body of standards has to be formulated and that these standards will have a normative or value-laden function. (i.e. they will be directed at achieving something that is necessary or desirable). Standards covering housing and urban development have generally been codified in the form of subdivision, building and zoning regulations.²

Turner identified these standards as 'minimum' or 'specification' standards - before a house could be legally approved or a project could proceed there had to be compliance with absolute standards of service provision and with precise specifications of materials, dimensions, and construction methods. If a house or settlement failed to conform to these standards then it could be regarded as substandard and illegal.

Turner's critique of the use of modern 'minimum' standards was wide-ranging. First, he criticized the 'minimum' side of these standards. Whilst specification standards were easy to administer they were also inflexible and mandatory. As a consequence they excluded from consideration, and even made illegal, the processes of progressive development and incremental
investment associated with self-help building; and they led to the production of a limited range of options for buyers, imposing a homogeneous and standardized mode of use on a heterogeneous population.

He identified the values that underpinned conventional minimum standards as being largely responsible for reduced housing utilities, prohibitive costs and serious diseconomies. Housing value had to be assessed in terms of need. But whereas middle income groups attached a high priority to shelter and service standards, low income groups gave a higher priority to location (access to employment), tenure security and the flexible and multiple use of space. Conventional housing standards reflected the priorities of the middle and upper classes and conflicted with those of the poor. Consequently they were unaffordable by the vast majority of the population; limited output by constraining public budgets, and led to middle class encroachment. Attempts to offset the extra costs of minimum standards through subsidies led to further constraints on output and meant privileged treatment for less disadvantaged groups. What was the point, Turner asked, of demolishing 'substandard' housing and rehousing the residents in modern minimum standard housing they could not afford? He also went on to demonstrate the 'hidden costs of conventional housing standards to low income groups'.

Turner therefore saw the function of minimum standards as protecting the housing quality and
servicing levels of the middle classes, and acting against the interests of low income groups. Indeed the absence of conventional standards was often used to justify eradication of low income settlements, and the denial of public services and settlement improvements. Minimum standards discouraged traditional technologies and increased reliance on high cost and often imported building materials and construction systems.

The philosophy and value system that underpinned 'minimum standards' was identified as being part of a broader planning philosophy. He argued that the imposition of these planning principles in the context of inappropriate matching of levels of authority was a major element of the housing problem.

Turner argued that existing state policies were guided by the principle of 'executive planning' which involved planning through programmed specifications and procedures - i.e. it set out specifications of what was to be done, absolute levels of servicing to be achieved and it lay down procedural lines to be followed (how it was to be done). It was therefore based on the principles of 'prescriptive law' ('thou shalt nots'). Planning, Turner argued, should be 'legislative' planning based on 'proscriptive' law ('thou shalt'). In many respects the debate between proscriptive/prescriptive planning in Turner runs parallel to the debate on 'performance' and 'specification' standards. Specification standards are clearly examples of executive or prescriptive planning, and performance
standards of legislative or prescriptive planning.

Turner argued that by setting down procedures to follow and absolute standards, prescriptive planning frustrated rather than complemented the progressive development procedures of staged achievement of minimum goals characteristic of squatter building. It was also clearly incompatible with the necessary reformulation of the concepts of standards as guidelines towards the progressive achievement of goals. Prescriptive planning was hierarchical, authoritarian, non-participatory and inflexible - little choice was given to public housing beneficiaries in terms of optional attributes of design, lot size, tenure, and servicing. In sum Turner saw prescriptive planning as reinforcing the dominance of heteronomous systems.

A third and critical element in the question of state intervention according to Turner was the question of authority in housing. This question was discussed in relation to his general theory of autonomy and heteronomy in housing.

In heteronomous systems (as exemplified by conventional housing policies) virtually all decision-making powers are abrogated by the public and private sectors. Backed up by minimum standards legislation, the central and municipal level of the public sector exercises control over the design, construction and management of dwellings and settlements, and the assembly of land, infrastructure and services; and the private sector controls land and finance.
This allocation of decision-making powers contradicts the principles of user control, 'dweller control' and 'self-government' which characterize autonomous systems, as imperfectly exemplified by the self-help building practices of squatters. Here the local level and popular sector (users) exercise control over the design, construction and management of dwellings and settlement and the assembly of land labour, materials and finance; the municipal public sector provides infrastructure and services, and the central government develops the infrastructure, servicing and financial mechanisms necessary to support these activities.

Turner pointed out that it was the mismatching of levels of authority with various housing and settlement activities that was responsible for the deleterious effects of heteronomous systems.
NOTES FOR APPENDIX ONE

1. Although LDCs were now allocating from 12-30% of their gross fixed investment to residential construction, it was not benefiting the people whose needs were most pressing. Not only were housing conditions deteriorating, but in some instances they were twice as bad as a decade before (Abrams, 1964:105).

2. Opposition to the squatter eradication/conventional rehousing formula was not merely rooted in a rejection of the public housing alternative, though this was firm enough as we shall see. Rather it was based on the entire reassessment of the economic, social and political activities occurring within the urban slums and squatter settlements. However although this reassessment challenged contemporary modernization policies it still continued to share many of the assumptions of modernization theory. Cities were recognized as mechanisms that guaranteed economic and social mobility for the vast majority of newcomers who realized the stability and integration that the modernization process implied.

3. He argued that all migrants in the city looked upon housing for the satisfaction of certain existential needs - for identity, security, and opportunity. These needs had to be matched against the material needs of amenity (shelter, services), location and tenure. As the migrant's needs, family and economic circumstances changed so did his housing priorities. Turner presented a model of the pattern of urban settlement that would follow the satisfaction of the changing needs of the migrant for location, tenure and amenity. Settlements could be classified according to the way in which they fulfilled these various priorities. One of the principal conclusions he drew from this was that the inner city slums and shantytowns will deteriorate under their function as receptor areas with a high incidence of renting, whereas the peripheral consolidating squatter settlements will improve and eventually convert themselves into orthodox working class suburbs. It was also clear that the peripheral squatter settlements rather than being the rural enclaves identified in previous literature were not so much the 'first' but rather the 'last' port of call for migrants in the city (Turner, 1968; 1969).

   This model is clearly based on certain assumptions: that the overwhelming majority of migrants are eventually upwardly socially mobile; that residential mobility is an outcome of this mobility, and that within the shantytown further economic and social mobility expresses itself in the residential stability of the population.

4. He argued that: 'while ownership of such urban homesteads may not eliminate poverty, it can hold it down, dispense with rent payments, provide a vehicle for
the better distribution of wealth as well as create an original wealth form through the settler's own labours or through the hire of another. Creation of this type of commodity is particularly important in areas where there are labour surpluses and where subsistence wages permit no other way for the poor to accumulate savings' (Abrams, 1966:5).

5 In 1892 Charles Booth arguing that the three great causes of poverty were old age, sickness and drink, opposed provision of state housing to the poor because it 'would not stay old age, and while it might allay some distempers, it could not be expected to appease a poor man's thirst.' The indigent said Booth should be taught to build their own dwellings' (Abrams, 1966:43).

6 'When dwellers control the major decisions and are free to make their own contributions in the design, construction or management of their housing, both this process and the environment produced stimulate individual and social well-being. When people have no control over nor responsibility for key decisions in the housing process on the other hand, dwelling environments may instead become a barrier to personal fulfillment and a burden on the economy' (Fichter, Turner and Grenell, 1972:241).

7 Abrams saw the reluctance of Third World governments to address the burgeoning problems of urban low income groups as a form of political suicide:

'There is no more fertile ground for revolutionary propaganda than the beleaguered cities of the underdeveloped nations. Misery, bitterness and resentment in the teeming slums and squatter colonies, low wages and long hours in the new factories, competition for jobs, and child labour all recall the scene that made the Communist Manifesto an alluring document in 19th century Europe' (Abrams, 1964:287).

He was also explicit about the political significance of his policy recommendations:

'A program that promises land distribution for the masses and individual ownership in the cities could strike a revolutionary note politically more vital than communism' (Abrams, 1964:290).

8 Subdivision regulations are concerned with establishing standards governing the size and dimensions of lots; lot and housing densities; the dimensions and 'hierarchization' of roads and footpaths, and specified areas for public and private social facilities (e.g.
schools, clinics, hospitals, community centers, market places, parks, clubs, shops, restaurants, playfields etc.) These standards are essential, it is argued, to secure desirable levels of private and public access to social, cultural, commercial and recreational activities; to obtain optimal levels of accessibility; to minimize fire and health risks; and to avoid layouts that are incompatible with the provision of infrastructure at minimum cost.

Building regulations embody standards governing: the type, dimensions and quality of materials used in construction; construction methods; the height and permissible levels of building area on lot areas; specifications relating to ventilation, natural lighting, adequate foundations, and fire risk; access to private and public open spaces; and construction specifications governing the level and type and use of materials for public service provision (e.g. water supply, storm water and waste water drainage, sanitation and roads and footpaths). These regulations were designed to reduce fire health and structural hazards; to achieve acceptable levels of density and reduce overcrowding, and to secure privacy, access to open space and adequate levels of service provision.

Regulations on zoning attempt to establish particular standards relating to densities, land use and service provision that are appropriate to the area's assigned use. Land use zoning has as its declared goal the separation of industry and residence in order to secure the minimum external costs of noise, pollution and traffic.

He also pointed out that many of these standards particularly those governing the quality of materials and products and zoning regulations were derived from the uncritical application of 'western' standards (particularly those of USA, UK, Germany and France) to a very different Latin American and Third World reality.
APPENDIX TWO

RESEARCH METHODOLOGY

THEORY AND METHODS

The relationship between theory, method and empirical reality is a difficult area of knowledge, and at the centre of debate between the rationalist and empiricist traditions of intellectual enquiry. Two areas of possible agreement are the impermissibility of confusing methods and techniques with theory, and the inability to detach theory from method. Major disagreements exist over the ability of the social sciences (including human geography) to achieve the degree of separation of observation from inference in the manner of the natural sciences, and in practice there has been a tendency towards 'stratospheric' theorizing far removed from empirical realities on the part of the rationalist tradition, and on obsessive preoccupation with specificity on the part of the empiricist.

This thesis remains in the 'rationalist' tradition and the general movement it employs has been that from the general and theoretical (Part I) to the empirical and particular (Part II), followed by a return from the particular to the general (Part III). Its presuppositional basis is that it is impossible in human geography to separate observation and inference in the manner believed by the empiricists; that interpretation underpins measurement; and that this interpretation must be made explicit. Progress in theory is derived from
conflicts over the interpretation of reality. It is correct that alternative theories do and should exist, and choice through critique has to be made between them.

However whilst remaining in this tradition, the thesis has also attempted to close the gap between the preoccupations of the two traditions through the development of intermediate level concepts out of articulation theory. Bringing together theory and empirical reality is always fraught with problems, including ultimately a clash of methods. I do not believe that I have been completely successful in this goal, and nor do I believe that a 'perfect' method in the social sciences has or is likely to be found. However, I do believe that it is the constant attempt to explore this relationship that constitutes the essence of intellectual enquiry and its practical effects.

Given the ambitions of the thesis and the recognized difficulty of the task it is not surprising that methodological problems were encountered en route. An important practical problem was that much of the available secondary data were collected, organized and presented in a form that reflected the explicit or implicit theoretical perspectives of those engaged in the task. Despite this problem our method has been to present empirical data separately from the theoretical concepts, and to bring them together in the concluding synthesis. However in Chapters Seven and Eight in order to maintain the integrity of the settlement level case studies, empirical material is immediately followed by a
theoretical interpretation of the data.

Empirical methods and techniques ultimately clash with rationalist theoretical categories in the social sciences because these methods are underpinned by a conflicting set of presuppositions on the nature of the realities being investigated. Explicit or implicit presuppositions of this type in geography generally concern the relationship between society and space, and the 'structure' of space. Our concept of this relationship cannot be entered into here in detail, but is framed within the requirement for totality, and the rationalist concept of the relationship between the general and the particular.

The requirement for social totality has determined the wide coverage of the empirical material and the need to study the multidimensional nature of the phenomena under study. The demand for spatial totality is recognized in the course of the work by the movement through a spatial scale from global and continental, national and urban, to the local barrio level. Although in our social frame of reference causation is identified in terms of concepts at a national and global level, our principal spatial frame of reference has been at the urban level. Barrio level structures and processes in this view can only be fully understood in terms of their location in these broader contexts, and here again the rationalist and empirical traditions clash in their presuppositions about how the 'generality' of the urban stands in relation to the particularities of the
'local'. The weakness of exclusively local or urban level explanations is confirmed by the close relationship identified between state self-help building and the broader international sponsorship of these projects identified in Parts One and Two of the thesis.

Attempting to study social processes within spatial frames has as many difficulties as a-spatial social theorizing, and most geographical literature reveals evidence of either spatial determinism and/or social voluntarism. Despite these difficulties a fundamental contribution of theory to method in the thesis has been the requirement of studying a totality of economic, political and ideological structures and processes at discrete spatial scales.

**RESEARCH METHODS AT THE URBAN LEVEL**

Our principal spatial frame of reference in the thesis has been the urban level and specifically the city of Pereira. The question immediately arises of how applicable the findings for Pereira were for other intermediate, and larger and smaller cities in Colombia. It is clear that the cities in Colombia's urban system differ considerably in a number of ways: in physical and ecological conditions; rates of urban growth; rates of rural to urban migration; the demographic and socio-economic profiles of the population; the structure of land and housing markets; state urban and housing policies; the nature of the local construction materials industry etc. Again the problems involved in generalizing from small and intermediate size cities to
large cities must include the greater 'rurality' of many urban barrios; different rates of urban growth; the absence or relatively recent introduction of municipal codes; lower levels of law enforcement; lower levels of provision of public services and communal facilities etc. The answer to how significant these differences are, ultimately depends on one's theoretical position and specifically on the interpretation of the relationship between the particular and the general. We follow the rationalist interpretation of this relationship, and identify these differences as being of secondary importance for the phenomena under study.

The question also arises of the definition of the city of Pereira. The cabeceras of Pereira and Dosquebradas constitute a single urban area, divided into two administrative units. Lack of data on Dosquebradas for reasons which have been pointed out in Chapter 3 has generally limited statistical description of Pereira's cabecera and municipal area. Data from Dosquebradas has been included wherever available.

Documentary sources were essential for carrying out the urban level analysis. The requirement of totality demanded extensive coverage of subject matter relating to the economic, political and ideological dimensions of state self-help building in the city. A wide range of quantitative and non-quantitative data was collected from published statistical reports; institutional reports and policy documents; development plans; independent studies and research materials; historical
studies, etc. The limitations of these data have generally been discussed in the notes at the end of the chapters.

Through my relationship with the Municipal Planning Department, I had access to a large amount of unpublished internal data from the numerous urban agencies in the city, to maps, settlement plans, housing designs, technical studies and internal documents and correspondence. This material was indispensable for the urban level analysis.

Interviews were also an important source of information for urban-level research. The heads of virtually every major urban agency in the city were interviewed along with a large number of lower level officials, architects, planners, barrio leaders and local politicians, many on a recurring basis. Interviews tended to be focussed around a number of key issues and were accompanied by notetaking, though points brought up in the many less formal and conversational exchanges were noted down afterwards.

Newspapers were also an important source of information. In the mid-Seventies Pereira was served by three daily newspapers - El Diario, El Periodico and La Imparcial. Pereira's public library had the foresight of keeping copies of El Diario dating back to the early Sixties and these archives proved to be invaluable in unravelling the city's complex political processes.
RESEARCH METHODS AT THE BARRIO LEVEL

The objective of barrio level research was to produce two case studies of artisanal and state self-help building through a combination of quantitative and non-quantitative formal and non-formal methods. The basic idea was to try to create two monographs on artisanal and state self-help building. The case studies tried to build up a picture at a lower spatial/social scale of the articulation processes identified at the urban level, our principal spatial frame of reference.

An obvious requirement in the selection of the barrios was that self-help housing activities were underway and observable over a relatively short period of time. Construction activities in El Plumon dated from 1974, and in Hernando Velez Marulanda from 1975. El Plumon was rather typical of Pereira's squatter settlements insofar as it was formed by a process of invasion and colonization; in its pattern of linear and incremental growth, in its peripheral location. Differences undoubtedly existed however between it and the older more centrally located riverside squatter settlements which had higher densities, higher levels of servicing, a different pattern of housing consolidation and deterioration, different legal conditions and higher levels of renting. Hernando Velez Marulanda was a municipal self-help housing plan. Ideally an ICT self-help housing project would have been preferred given the overall preponderance of the type in the city.
However when fieldwork was being planned I was led to believe that the ICT was not building any of these projects in Pereira, and for that reason a study of an ICT self-help housing project in La Virginia some 30 kms from Pereira was undertaken. Later in order to retain the emphasis on explanation at the city level, it was decided to exclude this study from the thesis. After fieldwork was well advanced it was discovered that a ICT self-help housing project was underway in Barrio Otun. It has to be admitted that in some respects Barrio Hernando Velez Marulanda was a new departure in state self-help housing methods in the mid-Seventies, particular in its organization of the construction process. However, municipal self-help plans were proliferating rapidly in the city at the time and even more dramatically after research was completed, and it was considered that a case study of the settlement could be instructive in this context.

Documentation was a particularly important source of information on the barrios. I was able to trace a close account of the origins and development of Barrio El Plumon and the economic, political and ideological processes involved from internal documents of the Planning Department and Acción Comunal. The Municipal Correspondence was a mine of information containing reports from Planning Department inspectors; police and army reports on settlement activities; letters to and from the Department and barrio organizations and
residents; and exchanges between the Department and the wide range of local and national institutions involved in the settlements. ICT internal documents and studies on the Cuba settlements and data from the local Cadastral office were important for building up a picture of land and housing markets in the area. For Hernando Velez Marulanda I was able to acquire a large number of internal documents, maps, plans and designs from the Planning Department. The local branch of DIGIDEC made the barrio's Acción Comunal file available, and the local Catastro Office provided the tradición de lote which allowed a close analysis of the evolution of the local land market. The Fondo Obrero provided numerous documents concerning the loans for land purchase, and SENA provided information on its mobile programme in the barrio. The Municipal Correspondence yielded a lot of information on political, legal, architectural and planning issues and the nature of institutional involvement and conflicts in the barrio. World Bank and Ofisel studies on the area's proposed Integrated Urban Development Project were also instructive. Barrio residents also provided useful documentation. Acción Comunal statutes were obtained from both settlements and in Hernando Velez Marulanda the builders' committee accounts were invaluable for the estimation of building materials costs.

Local newspapers and newspaper files were important sources of information on the history of the settlements, and on political struggles around settlement
A wide range of facts and opinions about the barrios was obtained through interviews. Interviews (often multiple) were conducted with the Planning Department Director, the Fondo Obrero Manager, the Secretary of Government, the Regional Promoter of Acción Comunal, the Director of the Cadastral Office, the Director of the ICT, and a former Director of the Valorization Department. Local politicians, municipal councillors, barrio leaders, state officials, land developers, architects and planners were also interviewed wherever possible.

The other source of data for the barrio case studies was the survey. Its primary aim was to generate data on the central theoretical preoccupations of the thesis. In this goal the survey's objectives were limited - the production of simple statistical measures (percentages and averages) and non-quantitative data to complement data acquired through non-quantitative methods of analysis and evaluation. Given these modest objectives, no attempt was made to cross-tabulate data from the two surveys, nor to generalize individual survey findings to other self-help housing projects or artisanal settlements in the city, and attempts were made to minimize generalizations from sample to settlement populations.

A questionnaire was developed for each barrio, pre-tested through pilot surveys and administered personally by the author and a Colombian assistant in
the period May to August 1976. The questionnaire consisted of 47 (El Plumon) and 56 questions (Hernando Velez Marulanda) and took on average 45 minutes to complete. A combination of open-ended and precoded questions yielded a wide range of factual data and opinions. Questionnaires for both surveys were structured into nine sections, but the form of questions in some sections differed to take account of the different systems of self-help building used in the two barrios. The sampling unit in both cases was the household (defined in terms of meal-sharing) and it was decided only to interview heads of household. The questionnaires aimed at covering a wide range of factual data and opinions including: basic demographic and socio economic data (age, sex, marital status, education, literacy, occupational types and stability, place of birth, income and consumption expenditures); data on rural to urban migration and the intra-city residential mobility of respondents; data on conditions of tenancy, presence of inquilinos and arrimados; price paid for lot and house; physical housing conditions, the use and disposition of internal spaces; the presence and location of facilities; the use of building materials in roofs, walls and floors, the allocation of space to artisanal and retail activities, and the presence of domestic animals and horticultural activities. In Hernando Velez Marulanda these questions related to respondent's existing housing conditions (off-site). Questions were also asked in El Plumon patterns of
housing construction and expansion, the participation of
self-help and paid labour in construction, types of
changes made to the house or anticipated, and levels of
satisfaction with results. In Hernando Velez Marulanda
questions in this section were addressed to the amount
of hours and finance put into the project, the level of
employment training received or anticipated, estimates
of the final costs and completion date, attitudes
towards the design and settlement plans, and the
cooperative system of self-help building. In both
surveys questions were directed at gathering the
opinions of self-help builders towards their neighbours,
official bodies and settlement organizations in the
barrio, and about levels of participation in barrio
organizations.

A number of practical difficulties encountered
during fieldwork led to the decision not to employ a
random sampling method in the survey. Constraints of
time and resources were brought on by fieldwork in La
Virginia; local elections in April 1976 (when survey
work was impossible); and financial limitations
associated with unfavourable exchange rate movements.
It proved impossible to acquire an adequate sampling
frame for Hernando Velez Marulanda (where there was
off-site residence); and it was felt that a measure of
spatial dispersion should be introduced into the sample
frame for El Plumon to accommodate the effects of linear
and incremental growth.

A pilot study El Plumon revealed that the settlement
was formed in two stages at different periods and a housing census indicated the marked impact of the length of the period of residence on progressive development and self-help activities. The barrio was divided into three areas for sampling purposes with roughly the same number of lots in each area (39 in the first part of the first stage, 40 in the second part of the first stage, and 47 in the second stage). Interviews were evenly spaced in each area but as it was recognized that this was not a random sample, substitution was allowed. Twenty nine questionnaires were completed, a sample size of 23% for each area and the whole barrio. Interviewing occurred during day-time and at the weekends.

The specific conditions of the self-help building process in Hernando Velez Marulanda - cooperative labour and off-site residence created difficulties for random sampling. A full and accurate list of all project members proved impossible to obtain; project members and documentary evidence indicated widely fluctuating numbers, and new members seemed to be constantly recruited by Perchis Giraldo, the barrio leader. However, compulsory attendance at the Sunday work sessions meant that once a week, most members were on-site, and this permitted selection of a sample, although again this was not on a random basis. 34 questionnaires were completed which on an estimate of a total of 175 project members gave a sample size of 19.4% (slightly below the 20% sample sought).

In assessing the methods of sampling used in the
survey, a number of errors have to be recognized. First, as the samples were not selected on a random basis it is not possible to state precisely the size of the sample error. Since the size of the error could not be calculated attempts to make broader inferences from survey results have generally been minimized. Although this restricted the utility of the data, it did permit elementary tabulations and a range of general information that could be combined with data from other sources to build up a general impression of self-help activities in the barrios.

Two shortcomings affecting the representativeness of the samples can however be recognized. In El Plumon the households in the second stage were over-represented because there were more unoccupied lots in the first stage, and little is known about the conditions affecting attendance in the Hernando Velez Marulanda work sessions. Second, it can also be recognized that the sample sizes were on the small side, particularly in the case of Hernando Velez Marulanda. Resource and time constraints proved to be the major determinant here, and Sunday-only interviewing was a particular problem in survey work in the project.

In general in summarizing the problems of sample error and sample size, it has to be said in hindsight that the use of a random sample and a larger sample size would have undoubtedly improved the confidence with which data from the surveys could be used. On the other hand the impact of this reduced level of confidence was
in part contained by the limited role given to survey data in the construction of the *barrio* case studies; by the fact that no attempt was made to generalize settlement studies for other settlements or projects in the city; and by the fact that no attempt was made to aggregate data from the samples.

On the positive side it must be said that personal participation in the interviewing process probably reduced interviewer and response errors. Moreover the joint interviewing technique did create possibilities for maximizing the information that could be extracted from respondents through a combination of formal and informal methods, and this information was indispensable for building-up a detailed and informed picture of the economic, political and ideological dimensions of self-help building in the two barrios. The lessons of experience were learnt in the field work, and the writer came away as an enthusiastic supporter of survey work.
APPENDIX THREE

A HISTORY OF THE RAILWAYS IN PEREIRA

The era of railway building came relatively early to Colombia. The Panama railway was built in 1855, and legislation dealing with railways was introduced as early as 1835 - some five years before the completion of the Manchester - Liverpool railway (Pardo 1976; Beyer 1948; Rippy 1942). However, it wasn't until the early twentieth century that Old Caldas was fully linked up to the national network. By this time the southward push of Antioqueño colonization, and the development of coffee as the major export crop made it vital that the region was connected by rail with the coastal ports of Buenaventura and Baranquilla, and the major industrial centres of Cali and Medellin (Map 1). In 1914 the Cali-Buenaventura rail link was opened up and steam transport on the Upper Cauca was greatly improved. In 1911 a contract was signed between the Department of Caldas and the Nation to build a rail link between 'a port that was navigable for steamships' and Manizales and Cartago were chosen as the two termini. Work started on the FFCC de Caldas in this year with the result that by 1921 Pereira was linked up with the Cauca River and two years later by rail with the Cali-Buenaventura system. In 1927 the railway reached Manizales. Subsequently Cartago was linked up with the FFCC de Antioquia and Medellin, and the Atlantic ports became accessible by rail to Pereira. In 1929 Pereira was also connected with Armenia by rail, although the
principal reason for this connection - the future rail connection with the Magdalena valley and Bogota through the Armenia - Ibagué route was never realized.

As can be seen from the map (Map 3) the Cartago - Manizales route rose up from the Cauca Valley and proceeded in a west/east direction along the flat meseta between the two valley bottoms of the Otun and Consota. It took an east/west route around what was then the southern periphery of the city, and a major railway station was constructed a few blocks south of the city centre facing what is now the Parque Olaya Herrera. It then swung north-east again, around the periphery of the city before descending into the Otun valley where a railway bridge was constructed some 200 metres upstream from the Puente Mosquera. It then climbed the Dosquebradas slope in a north-westerly direction before reaching the top of the meseta, where it then proceeded in a north-easterly direction to Manizales.

The Pereira - Armenia railway approached the city from a south-westerly direction rising from the Consota valley bottom in a series of three long loops before arriving at the plateau top and the Cartago-Manizales railway at the Nacederos station. It was the stretch of the line leading up to this last loop ('The Ultima Copa') that was to be invaded by the settlers of El Plumon.

As long as the railways proved to be a viable proposition, and the city was not growing rapidly then Pereira was satisfied with its rail connections.
However, both of these conditions changed dramatically in the post-war period.

By 1945 Old Caldas was producing over a third of the country's coffee exports, but decapitalization, the bad state of the rolling stock, low productivity and high tariffs were all taking their toll on the efficiency and profitability of the railways. By the Fifties and Sixties the railways were adversely affected by competition from road transport, stimulated by cheap petrol prices and heavy government expenditure on the roads. Between 1956 and 1963 losses on the national railway system rose from $48.8 mills. to $76.0 mills. The response of the FFCC (under national control after 1956) was to reduce services, raise tariffs further and to close down the most inefficient sections of the networks. As a result by 1968 total cargo handled by Pereira on the Cartago - Manizales line was only 31,942 tons, and on the Armenia - Pereira line 41,847 tons. By 1970 Pereira station was selling less than $3000 a month, and services were reduced to two passenger trains from Armenia and two freight trains from Cartago arriving on an irregular basis during the course of a week.

At the same time as the railway service and stock was deteriorating, Pereira's urban growth began to take off under the combined effect of a high birth rate, lowering death rates, and a rural-urban migration rate of around 6% a year. The city rapidly expanded in all directions, and as a result the railways came under
serious local pressure. First there were calls throughout the Fifties for the raising of the railway lines between Nacederos and the Otun bridge. Proponents pointed to the high level of accidents (around 64 a year) on over 50 level crossings. Moreover, many figures in the municipal administration began to talk of the iron noose ("cordon de acero") that was 'strangling' the development of the city's infrastructure. Specifically they wanted to remove the lines between the Pereira station and the Otun bridge in order to construct a by-pass that would take through traffic to and from Manizales out of the city centre. A third and very powerful reason why Pereira wanted to take up the lines in this section came from the traditional resentment and hostility between Pereira and Manizales, which was later to end in the breaking-up of Old Caldas into the three departments of Caldas, Risaralda and Quindío. In Pereira, Manizales as capital of Old Caldas, was identified historically as acting as an obstacle to Pereira's development. It was argued that Manizales opposed Pereira being linked up with Armenia, and when this proved impossible it had forced the connection to be made at Nacederos. Moreover in 1956 just before the railways were put in the hands of a national agency, Manizales had ordered the removal of important auxiliary facilities from Pereira and installed them in Manizales. Whatever the reason on 8th May 1958 the mayor, Oscar Velez Marulanda, ordered a convité to remove the tracks between the station and
the bridge and Manizales was cut off from the rail service by the unilateral decision of Pereira. Manizales was outraged, and massive public demonstrations were held in protest. Tensions reached such a point that the President had to send a ministerial delegation to reconcile the two cities. This was achieved in the Acuerdo San Mateo whereby the railway company promised to build a 10 km. by-pass to the north of Pereira from the Nacederos station at a cost of $24 mills. This by-pass was never built. The Avenida del FFCC between the Puente Mosquera and Pereira station was finally completed in 1972. In the meantime pressure was mounting in Pereira for the removal of the lines between the Pereira and Nacederos stations.

At the same time the railway company was also in great difficulties with the Armenia - Pereira railway. In the early Sixties the ICT began to develop the Hacienda Cuba in the south western periphery of the city in order to accommodate the increased numbers of rural migrants fleeing La Violencia. The western boundary of this large property was marked by the course of the San Joaquin-Nacederos section of the railway. Northern sections of this railway track had been invaded in the late Fifties, but with the opening-up of Barrio Cuba in the Sixties, a process of rapid and accretive growth up to the level crossing with the road to Naranjito took place based on the sale of invaded subdivisions. The railway did little, in part because many of its pensioned staff were involved in the process, but in
1967-68 a larger and more organized invasion of the section between the level crossing and the bridge over the Oso forced them to call in the local police. An agreement was reached (which has never been implemented) where the municipality would compensate the rail company for the properties expropriated and the settlement remained as Barrio Cuba Carrilera. Further invasion of the railway line south of the bridge over the Oso in 1974 resulted in a settlement that by 1976 was some 1.5 kms. long, consisting of 249 houses providing accommodation for some 700 families and a total population of 3000 people (Shifter, 1976).

By the early Seventies the very same pressures that had led to the closure of the Pereira - Otun sections led the FFCC to seek a similar arrangement with the municipal administration over the Pereira - Armenia line. At a time when profits on the line were non-existent, railway land was rapidly being incorporated by urban growth, and pressure mounted for its alternative use. Already large sections of the railway had been invaded, and there was a constant war of attrition going on between the railway company and the squatters. A survey carried out in 1972 by the legal department of the FFCC on the sections between Cuba Carrilera and Nacederos, and Cuba Carrilera and San Joaquin found 49 illegal ranchos on railway land and denounced the speculation in lots that was occurring: 'the invasion of railway land has been converted into a lucrative business by people who subsequently sell lots
to poor people without being able to give them escrituras..." (El Diario Sept. 14th, 1972).

In 1968 Pereira's Development Plan was published and its road plan anticipated the conversion of the Pereira - Nacederos section into the Avenida 30 de Agosto linking the city with the airport and Cartago.

In Feb. 1970 the FFCC formally agreed with the municipality on the withdrawal of the Pereira station, and the Nacederos - Pereira section to realize this plan. Given the inability of the company to effectively protect and police their land and the desire to receive some financial gain from the sale of their properties, in 1970 the Pacific Division of the FFCC began to negotiate with the municipal authorities in order to arrive at a comprehensive and binding solution to the problem of the railways in Pereira.

The FF.CC. agreed to cede all its properties to the municipality in exchange for the municipal financing of a new station to an equivalent value, on a site agreed by both parties. Until such an agreement was reached all services from Cartago would terminate at the Nacederos station. Initial plans to expand the facilities at Nacederos were scotched by the refusal of the Batallón to sell the lands needed and in Dec. 1971 the Council agreed to build a new station at San Joaquin immediately to the south of the Cuba Carrilera settlement. Service on the Armenia line was suspended in 1971, the pace of 'colonization' on the Nacederos - San Joaquin section quickened and the Cuba Carrilera
settlers took up the railway lines. However it was not until March 1973 that both parties formalized these arrangements. On the day the agreement was signed, the first lines were taken up on the Nacederos-Pereira section. Work immediately began on completing the Avenida 30 de Agosto, and the conversion of the station into a municipal library.

The closure of rail services to the city was opposed by the coffee growers, and their fears about the permanency of the closure had a ring of truth about them. In 1976 Pereira continued to be disconnected on both routes despite frequent appeals by the council and the municipal and departmental administrations for a speedy reconnection.
The city's 'Pilot Development Plan' was drawn up by IGAC and accepted by the Municipal Council in Acuerdo 54 of October 25th 1967 (IGAC, 1968). The Pilot Plan was a comprehensive plan for the city's development over a period of 20 years. It consisted of a number of interlinked plans concerned with the physical and socio-economic development of the city. The basis of the plan was two sets of regulations which together made up the municipal codes (Código de Urbanismo). These were the regulations governing subdivision (Reglamento de Lotificación) and the regulations governing the zoning of land uses (Reglamento de Zonificación) - the former being defined as 'the division of a tract of land into two or more lots or parcels with the aim of transferring property, or of engaging in construction activity' and the latter as 'the subdivision of the city in relation to the use of land and buildings in a way that permits the normalization and harmonic development of the city'. Anyone wishing to engage in transactions involving land, housing and urban development within the municipal limits had to submit to the general norms established in the rules governing subdivisions; to the specific norms applicable to the zone in which the development was to take place, and to the specifications established by the EEPP for the provision of water, sewerage, electricity and telephones. The zoning plan for the city
established eight types of zone: an agriculture zone (ZA), a commercial zone (ZC), an industrial zone (ZI), a zone of institutional public use (ZUPI), a green zone (ZV) and three housing zones (ZR-1, ZR-2, ZR-3). Each of these housing zones had specific minimum norms drawn up for it, and were further subdivided into areas for single or multi-family housing.

Anyone wishing to subdivide or urbanize a lot had to draw up the project according to an elaborate set of minimum norms and technical regulations specific to the zone in which the development was going to take place. These norms covered the provision and minimum dimensions of roads and pavements, the minimum areas and dimensions of lots and blocks, levels of public access, and the amount of parking space. Minimum norms were also specified for areas to be allocated for green zones, recreational areas, schools and other public and communal services. Article 26 stated that 'all subdivisions must be provided with the public services of sewerage, water, electricity, telephones and public lighting (according to the requirements set out in Decree 1371 of 1953); to the specifications stipulated by the municipal public services agency (EEPP), and according to the specifications outlined in this Article.' The Article went on to specify the nature of these norms in general, and in relation to specific residential zones. In addition the municipal codes also indicated a large number of norms governing the construction of housing in the various zones including:
minimum areas and frontages for individual lots (from 375m$^2$ and 15 m$^2$ in R-1 zones, to 120m$^2$ and 6m$^2$ in R-3 zones); the density of houses per hectare; the proportion of lot areas that could be built on, the height and number of the floors of the housing, the minimum areas of front gardens and patios etc.

A third fundamental element in the Pilot Development Plan was the Road Plan whose realization was the responsibility of the Valorization Department. It envisioned the construction of two major east-west roads along the Rio Otun (Avenida del Otun) and the Rio Consota (Avenida del Sur) and substantial improvements to the Avenida 30 de Agosto between Olaya Herrera and the Puente Mosquera. It also planned for major improvements on a number of roads in the central area, the pedestrianization of some roads, the construction of a parking centre in the CBD, and the reorganization of bus routes and taxi-flows. The Plan also drew up a somewhat ambitious Urban Renewal Plan which identified four major zones: zones that required total or partial eradication were identified and included squatter settlements along the Otun valley, around the San Camilo cementery, along the western approaches of the railway, and in the area around the Parque Olaya Herrera. Zones of rehabilitation were identified and included the area lying between the K4 and the Otun and the area lying between Calle 10 and Barrio Alfonso Lopez.

The CBD was identified as a 'zone of transformation' where flexible zoning legislation would prevail, whilst
the remainder of the city was designated as a 'conservation zone' where improvements such as the provision of public services and the upgrading of communal and public facilities would be concentrated.

The fourth major element in the Pilot Development Plan was the plan for the extension and improvement of public services. This was elaborated in close collaboration with the EEPP which was responsible for its realization. It consisted of three components: The Master Water Plan, the Master Sewerage Plan, and the Master Electricity Plan.

The Pilot Development Plan also had a comprehensive programme for expanding and introducing a whole range of improvements in the city's physical infrastructure. These included a new Intermunicipal Bus Terminal (to be built south of the Parque Olaya Herrera), a new railway terminal (to be built near the Airport); a new City Market and a number of smaller markets in various settlements in the city; the expansion of existing hospital facilities and the construction of two new ones; a new cementery; the use of vacant municipal plots for more green areas and extensive work on the Parque Vergel; the expansion of existing educational facilities; the expansion of the Villa Olimpica and existing recreational facilities within the city; the construction of a new administrative centre on Olaya Herrera to house the Departmental Government; the construction of a new central post office and a sub-post office in the west of the city; the upgrading of all
public, social, and physical facilities in Barrio Cuba to make it a 'satellite-centre', and the relocation of the Batallón San Mateo, freeing a very large area in the west of the city for urban development.

By the mid-Seventies the Municipal Planning Department was in the process of drawing up the programmes and studies for the realization of these plans, of evaluating the results of those plans already executed, and of coordinating the planned activities with the official and private bodies involved in their realization. It was also concerned with modifying the Plans in accordance with unforeseen developments that had occurred. Because the scale of improvements and investment envisioned by the Plan required a long term perspective, one of the principal functions of the Planning Office in the mid-Seventies was to establish these priorities for urban development. It thus had a critical role in establishing an Emergency Water and Sewerage Plan with the Public Works Corporation, and an Emergency Road Plan with the Valorization Department both within the context of the Master Plans established within the Pilot Development Plan.

By the mid-Seventies some progress had been made on the Plan - substantial improvements in water, sewerage and electricity had been achieved, the improvement in road paving was considerable, work was started on important elements in the Road Plan (e.g. Avenida Sur and the extension to Avenida 30 de Agosto), the Departmental Government Offices and the new Post Office;
and the Municipal Planning Department had some success in upholding the zoning and subdivision codes. However, in vital areas, many aspects of the Plan had still not got beyond the drawing board - the Urban Renewal Plan existed in name alone; the problem of squatter settlements and illegal subdivisions occupying land scheduled for future planned development was not dealt with, and indeed large areas of the city continued to lay outside and in breach of subdivision and zoning codes. Moreover, no progress had been made on many important projects that would relieve growing urban problems such as the congestion of the central areas - the construction of a new market place and the Intermunicipal Transport Terminal - and there was a marked intransigence on the part of the Army to consider moving out of the Batallón San Mateo. Little progress was made in the construction of the much needed health, educational and recreational facilities (green areas) envisioned by the Plan.
APPENDIX FIVE

SOCIO-ECONOMIC CHARACTERISTICS OF BARRIO EL PLUMON

DEMOGRAPHIC CHARACTERISTICS

Total Population

Estimates of the total population of Barrio El Plumon were difficult to gauge with accuracy for a number of reasons. First, there were a number of sites in the barrio on which construction was taking place and which remain unoccupied. In August 1976 when the survey was undertaken there were 126 lots in the barrio, 79 in the first stage and 47 in the second stage. Second, because there was a constant market in lots (principally through subdivision in the settlement), there was a considerable turnover in population. In addition there was a history of incremental growth of the settlement along the railway line, with latecomers taking up what were often the worst sites left by others (e.g. on the infill). By the time of the survey, however, the linear growth of the settlement was complete. The process of subdivision of larger lots, however, was still going on. Third, a number of settlers were also subletting rooms to other families, within their properties. Bearing all these difficulties in mind an estimate of the total population of the settlement can be make from the questionnaire data based on a 23% sample of the total number of households (n=29). These data revealed a total population of 187 people, constituted into 35 households. It revealed an average household size of 5.3 persons (Table 87). It also revealed that on
average there were 1.2 households living in each house. Using these two figures and taking the total number of lots in the settlement, a total population of 807 can be calculated (506 in the first stage and 301 in the second stage). As 14 lots were unoccupied (vacant, under construction, community centre), the total population living in the barrio at the time of the survey can be estimated at 717. This is larger than an estimate of 601 persons made by the President of the Health Committee in April 1976. As we are here generalizing from the sample, this figure can only be taken as a rough estimate.

**Distribution of the Population**

Data from the sample revealed that 49.4% of the population were female and 50.6% male, a small and untypical balance in favour of males (Table 88). Table 89 shows the distribution of the population by age and reveals the typical pattern associated with the high birth rates and high death rates under conditions of underdevelopment - 58.8% of the population were under 20 years old, and only 8.1% were over 50 years old.

**Household Structure**

The nuclear family was by far the predominant form household in the sample (68.9%), although there was a substantial proportion of one parent households (13.8%). Extended families made up another 13.8% (Table 90).
Distribution of Migrant - Natives

Table 91 gives data on the place of birth of all heads of households in the sample. Only 9.4% were born in the cabecera of Pereira, and 7.6% in the veredas of the municipality. Thus 91.6% can be said to be migrants. The Table also indicates a predominant pattern of short-distance migration with 75.4% of the sample being born in the Departments of Old Caldas (39.6%), Valle (15.0%) and Antioquia (20.8%).

A different pattern emerges when the places of birth of the entire sample population are considered (Table 92). Here the total proportion of the population born in the municipal cabecera rises to 45% of the total sample, and the total migrant population falls to 55%. This figure is more or less in line with local and regional averages.

Migration History

28 out of the 29 heads of household interviewed could be classified as migrants (on the basis of the place of birth). Of these 28, 21 named a location different to that of their place of birth as their place of residence immediately before their arrival in Pereira (75%), whilst 7 stated that they moved directly to Pereira from their place of birth (25%). This evidence of indirect migration conforms to the characteristics of the migration process established for the region in general. Several examples of rural-to-rural migration prior to the final Pereira move existed for migrants in the sample, as did urban-to-rural moves prior to final
Some interesting data emerged out of the analysis of the period of residence of migrants in the city. Table 93 shows that although two thirds (67.9%) had been living in Pereira less than 10 years, a significant proportion (21.4%) had been living in the city over 15 years. The average period of residence in Pereira of migrant heads of household interviewed was 9.9 years. When it is recalled that the settlement at the time of the survey was less than 2 years old, these data indicate a long period of residence of migrants in rented accommodation in the city before moving into the invasion.

The Migrant in the City

All migrant heads of household in the sample were asked to name their first location when they moved permanently to Pereira. Because of the great personal significance of the move to the city, an accurate picture of the initial location of the migrants could be established and this pattern of distribution is shown in Table 94. The most outstanding feature is the wide distribution of the population throughout the low income settlements of the city - which include some of the poorest. Almost all of these settlements can be described as invasions, inquilinato zones, or unimproved subdivisions - only Barrios Cuba, Alfonso Lopez and Kennedy had higher income levels and higher levels of residential stability. The popularity of the northern settlements, which are amongst the poorest in the city
should be noticed, with 46.5% of the sample choosing this area to live in on arrival in the city. The low proportion of the sample who moved directly from the countryside to the invasion should also be noted (only 10.8%).

When the migrants were asked why they chose this location rather than another for their residence, the significance of family and personal connections for the migration process was revealed (Table 95). 57.1% of the sample gave assistance from relatives as the principal reason, and a further 14.3% assistance from friends. This assistance generally took the form of temporary lodgings or help in finding lodgings, and accounts for the high proportion of arrimado tenancy relationships (Table 98) in first residential locations. For a substantial proportion of the migrant sample the period of residence in this initial location was very short. More than a quarter (28.6%) moved house within the first year, and nearly a half (46.4%) within three years (Table 96). The most important single reason given for moving from this initial location was eviction or withdrawal of support from relatives or friends (28.5%), although the costs of this housing (17.9%) and the availability of plots in Barrio El Plumon (17.9%) were also important reasons given (Table 19). Over a half of the sample were paying rent for this accommodation (53.6%) and almost a third (32.1%) were arrimados (Table 98). Table 99 shows that the majority (60.7%) were occupying one or two rooms in a
house, and only a quarter a complete house.

An attempt was made to retrace all the residential movements of the migrant in the city, before arriving at his present location. Table 100 shows the number of houses lived in by migrants and shows the relatively high level of residential mobility of the migrant population in the city. The data give the average number of houses lived in before settlement in El Plumon as 4.5, ranging from a minimum of one to a maximum of 18. Around a third of the sample (32%) had lived in more than six houses. The evidence from the data was that these moves consisted of a constant shift of the population around the city, from one similar type of rented accommodation to another, and from one inguïlinato zone to another with virtually no change in housing conditions or tenancy. Thus if Table 101, which shows the type of tenancy of the house lived in immediately before moving to El Plumon, is compared to Table 98 which shows the type of tenancy in the first residence, then it can be seen that the proportion renting accommodation has actually increased slightly, whilst the proportion living as arrimados has dropped from a third to a quarter. Given that the average period of residence of the migrant in the city was estimated at 9.9 years these figures reveal that a majority of the population remained in a static housing condition despite their high levels of residential mobility.

Moreover when the locational distribution of the
last residences of the migrants in the sample (Table 102) is compared with that of their initial location on migrating to the city, the same basic pattern is revealed. Thus El Plunon has taken its population from a large number of low income settlements scattered widely throughout the city. However, the zone of invasions, unimproved subdivisions and inquilinatos that border the River Otun seems to have been a particularly important source of settlers (especially Barrios Risaralda and San Judas). Not surprisingly given its locational proximity and political allegiance, Barrio Cuba also seems to have provided a substantial proportion of the settlers for the invasion (17.9%). Data was also collected on the level of rents being paid in this accommodation. There was a considerable range in rents that obviously in part reflected the different type, quality, size and location of the housing occupied. Thus a maximum rent of $1500 (US 1974 $53) a month and a minimum of $120 (US 1974 $4) were recorded. Although a quarter (27.6%) of the sample were paying less than $300 (US 1974 $10) a month, slightly less than a half were paying in excess of this sum (Table 103). The average rent paid out was $443 (US 1974 $16) a month. This distribution not only indicates the high proportion of that rents make of household income, but also the considerable income inequalities that must exist in order for some of these rents to be sustained.
Though we shall return to the question of rents shortly it should be pointed out that the single most important reason given for moving into the invasion was to avoid paying rent (34.5%)(Table 104). The cheapness of the mejora (24.2%) was the second most popular reason given, and the desire to own property (13.8%) the third. An equal proportion of the sample (6.9%) gave the desire to be independent of relatives, and assistance from relatives as the principal reason for moving into the barrio.

EDUCATIONAL LEVELS IN THE COMMUNITY

The survey revealed that 86.5% of heads of family were literate and 13.5% illiterate (Table 105).

Again when the data on the type of education received by all those over 7 years old in the sample was analyzed (Table 106) the low levels of education in the settlement was clearly shown. Thus whereas in Pereira in 1973 only 13.7% received no education and 60.9% had received some form of primary education, corresponding figures for El Plumon were 43.1% and 44.7%. Only 12.2% had received secondary education. Moreover if we consider the type of education received just by heads of household, the proportion that have received no education at all rises to 67.3%, and the proportions receiving primary and secondary education drop to 26.9% and 5.8% (Table 107). These differences are of course explained by the high proportions of heads of household that are rural migrants and the higher levels
of educational opportunities that are available in urban areas.

EMPLOYMENT CONDITIONS

Table 108 shows the distribution of the economically active and inactive population in the sample. The table reveals that a quarter of the sample population supported the remaining economically inactive three quarters. Table 109 breaks down the forms of economic inactivity. Roughly a third (33.3%) of the sample were inactive because they were studying, a quarter (28.4%) because they were engaged in housework, and a further third (35.0%) were under the age of 7.

Table 110 reveals that 12.5% of the EAP itself was unemployed and thus at the time of the survey only 21.9% of the sample population was working. Lack of stability in employment was also a serious problem. Table 111 shows that 45.7% of the EAP were employed on a short term or irregular basis. These data indicate high levels of underemployment in the sample, as well as to a significant proportion of 'informal sector' or 'marginal' type of employment. Tables 112 and 113 show the occupational types of the economically active population. The occupations were classified using the system of occupational categories employed in the Manizales Development Plan (CID, 1970:240-245). The dominance of a large proportion of working class occupations (low category) is indicated in the distribution (70% EAP) as well as a substantial proportion of the EAP employed in the low paying
'marginal', informal sector, or petty commodity jobs (25.0%). There was a relatively low proportion of the population in the middle category (5%) and the absence of employees in the state sector was notable.

Taken together with the data on the distribution of income and rents, the employment data indicated that there was a considerable amount of social and economic inequality within the sample.

**LEVELS AND DISTRIBUTION OF INCOME**

The data on family income yielded some valuable evidence on the levels and distribution of income within the sample (Table 114). Thus about a quarter (24.2%) of households in the sample had an income of less than $1000 (US $28) a month, and over half (51.7%) had an income of less than $1500 (US $41) a month. On the other hand over a fifth (20.7%) had a monthly household income in excess of $2500 (US $69). An average family income of only $1552 was calculated for the sample. The data also indicate a considerable range of income inequality within the sample - a minimum income of only $250 a month was registered and a maximum in excess of $4500.

Ultimately the reasons for such low levels and wide distribution of income were to be found in the high levels of unemployment and underemployment in the city, and low wage levels. In the immediate sense the number of working people per household and household size were obviously important considerations, both in terms of income and expenditure. Some examples
from the sample will be sufficient to bring out the importance of these considerations.

Thus a family with 11 members, six of them below working age existed on a monthly income of $3000 derived from three jobs – that of the father who was a skilled mason, and his two oldest sons who worked in artesianas. The mother and eldest daughter were responsible for the housework. On the other hand a woman of 35, with 4 daughters the eldest of whom was 10, estimated her monthly income at $250 a month from taking-in washing. Since her husband abandoned her two months earlier, she was largely living off the charity of friends and relatives and was looking for a job as a seamstress. Elsewhere a household of 7 managed to draw in a combined income in excess of $3500 (US $96) a month derived from four sources: the father and two youngest sons worked in a shop which they had constructed as part of the house; a 16 year old daughter worked in domestic service: one of the two eldest sons worked as an agricultural labourer in a nearby coffee finca, whilst the other ran a business from the house as a baker supplying panecillos to the neighbours and clients in Barrio Cuba. Again a 42 year old widower who lived by himself in one of the most substantial properties in the barrio (whose value he estimated at $93,000 or US $2561) managed to derive a monthly income of $4500 (US $124) from his business in buying and selling fruit. On the other hand a street hawker selling fried potatoes in the city centre only managed
to gain $1500 (US $41) a month, with which he had to support a wife and three young children.

If we relate these household income figures to those of the monthly payment of rents (Table 103), we can get a rough idea of the proportion of income that was being spent on rents before the inhabitants moved into the invasion. As can be seen from Table 115 the situation is highly variable with 38.1% of the sample paying between 10-19% of their monthly income, another 42.9% paying between 20-49% of their family income in rent, and around a quarter (23.8%) of the sample were paying between a 30 and 49% of their monthly incomes in rent.

An average household monthly income of $1552 (US $43) and an average monthly rent of $444 (US $12) were calculated giving an average rent/income proportion of 28.6%.

The fact that on average over a quarter of total income was spent on rent, and that the monthly household income was so low is of vital importance in estimating the capacity to pay for the house being built, whilst the differences in income levels within the community were important for understanding the tensions and difficulties within the settlement.
TABLES FOR APPENDIX FIVE
### TABLE 87: HOUSEHOLD SIZE IN THE EL PLUMON SURVEY

<table>
<thead>
<tr>
<th>Size</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 4</td>
<td>13</td>
<td>38.2</td>
</tr>
<tr>
<td>5 to 9</td>
<td>19</td>
<td>55.9</td>
</tr>
<tr>
<td>10 and more</td>
<td>2</td>
<td>5.9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>34</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Average Household Size: 5.3
Note: Refers to all households in residence.

### TABLE 88: SEXUAL DISTRIBUTION OF THE POPULATION IN THE EL PLUMON SURVEY

<table>
<thead>
<tr>
<th>Sex</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>81</td>
<td>50.6</td>
</tr>
<tr>
<td>Female</td>
<td>79</td>
<td>49.4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>160</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Refers to population of all respondent households.

### TABLE 89: AGE DISTRIBUTION OF THE POPULATION IN THE EL PLUMON SURVEY

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-11</td>
<td>60</td>
<td>37.5</td>
</tr>
<tr>
<td>12-19</td>
<td>34</td>
<td>21.3</td>
</tr>
<tr>
<td>20-29</td>
<td>24</td>
<td>15.0</td>
</tr>
<tr>
<td>30-49</td>
<td>29</td>
<td>18.1</td>
</tr>
<tr>
<td>50-64</td>
<td>10</td>
<td>6.2</td>
</tr>
<tr>
<td>65 and more</td>
<td>3</td>
<td>1.9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>160</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Refers to population of all respondent households.
### TABLE 90: HOUSEHOLD STRUCTURE IN THE EL PLUMON SURVEY

<table>
<thead>
<tr>
<th>Household Structure</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Father with children</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Mother with children</td>
<td>4</td>
<td>13.8</td>
</tr>
<tr>
<td>Father and Mother with children</td>
<td>20</td>
<td>68.9</td>
</tr>
<tr>
<td>Extended</td>
<td>4</td>
<td>13.8</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>3.5</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>29</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Refers to respondent households.

### TABLE 91: PLACE OF BIRTH OF HEADS OF HOUSEHOLD IN THE EL PLUMON SURVEY

<table>
<thead>
<tr>
<th>Place of Birth</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pereira (cabecera)</td>
<td>5</td>
<td>9.4</td>
</tr>
<tr>
<td>Pereira (veredas)</td>
<td>4</td>
<td>7.6</td>
</tr>
<tr>
<td>Risaralda</td>
<td>4</td>
<td>7.6</td>
</tr>
<tr>
<td>Caldas</td>
<td>12</td>
<td>22.6</td>
</tr>
<tr>
<td>Quindio</td>
<td>5</td>
<td>9.4</td>
</tr>
<tr>
<td>Valle</td>
<td>8</td>
<td>15.0</td>
</tr>
<tr>
<td>Antioquia</td>
<td>11</td>
<td>20.8</td>
</tr>
<tr>
<td>Tolima</td>
<td>2</td>
<td>3.8</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>3.8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>53</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Refers to all heads of respondent households.
### TABLE 92: PLACE OF BIRTH OF SAMPLE POPULATION IN THE EL PLUMON SURVEY

<table>
<thead>
<tr>
<th>Place of Birth</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pereira (cabecera)</td>
<td>72</td>
<td>45.0</td>
</tr>
<tr>
<td>Pereira (veredas)</td>
<td>5</td>
<td>3.1</td>
</tr>
<tr>
<td>Risaralda</td>
<td>17</td>
<td>10.6</td>
</tr>
<tr>
<td>Caldas</td>
<td>19</td>
<td>11.9</td>
</tr>
<tr>
<td>Quindio</td>
<td>12</td>
<td>7.5</td>
</tr>
<tr>
<td>Valle</td>
<td>17</td>
<td>10.6</td>
</tr>
<tr>
<td>Antioquia</td>
<td>13</td>
<td>8.1</td>
</tr>
<tr>
<td>Tolima</td>
<td>2</td>
<td>1.3</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>1.9</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>160</td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*Note: Refers to total population of respondent households.*

### TABLE 93: LENGTH OF RESIDENCE IN THE CITY OF MIGRANTS IN THE EL PLUMON SURVEY

<table>
<thead>
<tr>
<th>Length of Residence</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5 years</td>
<td>8</td>
<td>28.6</td>
</tr>
<tr>
<td>Between 5 and 10 years</td>
<td>11</td>
<td>39.3</td>
</tr>
<tr>
<td>Between 10 and 15 years</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td>Between 15 and 20 years</td>
<td>2</td>
<td>7.1</td>
</tr>
<tr>
<td>Between 20 and 25 years</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td>More than 25 years</td>
<td>3</td>
<td>10.7</td>
</tr>
</tbody>
</table>

**TOTAL** | 28 | 100.0 |

*Note: Refers to migrant head of household interviewed.*

**Average Period of Residence: 9.9 years**
### TABLE 94: INITIAL LOCATION OF MIGRANTS IN THE CITY IN EL PLUMON SURVEY

<table>
<thead>
<tr>
<th>Location</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Otun Riverside Squatter Settlements and Illegal Subdivisions (1)</td>
<td>8</td>
<td>28.7</td>
</tr>
<tr>
<td>Northern Inquilinato Zone (2)</td>
<td>5</td>
<td>17.8</td>
</tr>
<tr>
<td>Western Inquilinato Zone (3)</td>
<td>4</td>
<td>14.3</td>
</tr>
<tr>
<td>Southern Inquilinato Zone (4)</td>
<td>2</td>
<td>7.1</td>
</tr>
<tr>
<td>Consota River Squatter Settlements (5)</td>
<td>2</td>
<td>7.1</td>
</tr>
<tr>
<td>Western Periphery (6)</td>
<td>2</td>
<td>7.1</td>
</tr>
<tr>
<td>Others (7)</td>
<td>2</td>
<td>7.1</td>
</tr>
<tr>
<td>Outside City</td>
<td>3</td>
<td>10.8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>28</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**NOTE:**

1. Barrios Risaralda, San Judas, El Balso, Granada, Ormaza.
2. Barrios San Jorge, America, Santa Teresita.
3. Barrios Cementerio, Canarte, La Palmera.
4. Barrios Mejia Robledo, Olaya Herrera.
5. Barrios La Dulcera, Los Canceles.

Refers to migrant head of households interviewed.
### TABLE 95: REASONS FOR MOVING TO THE FIRST RESIDENTIAL LOCATION (EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistance from relatives</td>
<td>16</td>
<td>57.1</td>
</tr>
<tr>
<td>Assistance from friends</td>
<td>4</td>
<td>14.3</td>
</tr>
<tr>
<td>Direct to El Plumon</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td>Other Reasons</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td>Don't Know</td>
<td>2</td>
<td>7.2</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>28</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Refers to migrant head of household interviewed.

### TABLE 96: LENGTH OF RESIDENCE OF MIGRANTS IN FIRST LOCATION (EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th>Length of Residence</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 3 months</td>
<td>2</td>
<td>7.1</td>
</tr>
<tr>
<td>3 months to 1 year</td>
<td>6</td>
<td>21.5</td>
</tr>
<tr>
<td>1-2 years</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td>2-3 years</td>
<td>2</td>
<td>7.1</td>
</tr>
<tr>
<td>3-4 years</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td>4-5 years</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td>5-9 years</td>
<td>5</td>
<td>17.9</td>
</tr>
<tr>
<td>10-15 years</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td>15 years + more</td>
<td>2</td>
<td>7.1</td>
</tr>
<tr>
<td>Direct to El Plumon</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>28</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Refers to migrant head of household interviewed.
### TABLE 97: REASONS FOR MOVING FROM FIRST LOCATION (EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eviction/Withdrawal of Support</td>
<td>8</td>
<td>28.5</td>
</tr>
<tr>
<td>Too Expensive</td>
<td>5</td>
<td>17.9</td>
</tr>
<tr>
<td>Plots Available in El Plumon</td>
<td>5</td>
<td>17.9</td>
</tr>
<tr>
<td>Too Little Space</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td>Nearer to Work</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td>Don't Know</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>28</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Refers to migrant head of household interviewed.

### TABLE 98: TYPE OF TENANCY IN FIRST LOCATION (EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th>Tenancy</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rented</td>
<td>15</td>
<td>53.6</td>
</tr>
<tr>
<td>Arrimado</td>
<td>9</td>
<td>32.1</td>
</tr>
<tr>
<td>Owner Occupied</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td>Direct to El Plumon</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>28</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Refers to migrant head of household interviewed.
### TABLE 99: TYPE OF ACCOMODATION IN FIRST LOCATION (EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th>Type</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rooms</td>
<td>17</td>
<td>60.7</td>
</tr>
<tr>
<td>House</td>
<td>7</td>
<td>25.0</td>
</tr>
<tr>
<td>Rancho</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td>Direct to El Plumon</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>28</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Note: Refers to migrant head of household interviewed.*

### TABLE 100: NUMBER OF HOUSES LIVED IN BY MIGRANTS DURING RESIDENCE IN PEREIRA (EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th>Number of Houses</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 2</td>
<td>12</td>
<td>48.0</td>
</tr>
<tr>
<td>3 - 5</td>
<td>5</td>
<td>20.0</td>
</tr>
<tr>
<td>6 - 10</td>
<td>6</td>
<td>24.0</td>
</tr>
<tr>
<td>11 - 15</td>
<td>1</td>
<td>4.0</td>
</tr>
<tr>
<td>16 + more</td>
<td>1</td>
<td>4.0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>25</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Note: Three migrants moved directly to El Plumon
Refers to migrant head of household interviewed.
Average: 4.48*
### TABLE 101: TYPE OF TENANCY OF HOUSE PRIOR TO MOVING TO BARRIO EL PLUMON (EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th>Type</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rented</td>
<td>15</td>
<td>53.6</td>
</tr>
<tr>
<td>Arrimado</td>
<td>7</td>
<td>25.0</td>
</tr>
<tr>
<td>Work</td>
<td>2</td>
<td>7.1</td>
</tr>
<tr>
<td>Owner Occupied</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td>Direct to El Plumon</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>28</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Refers to migrant head of household interviewed.

### TABLE 102: LAST PLACE OF RESIDENCE OF MIGRANTS PRIOR TO MOVING TO BARRIO EL PLUMON (EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th>Place</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Riverside Invasions and Illegal Subdivisions (1)</td>
<td>8</td>
<td>28.6</td>
</tr>
<tr>
<td>Northern Inquilinato Zone (2)</td>
<td>2</td>
<td>7.1</td>
</tr>
<tr>
<td>Western Inquilinato Zone (3)</td>
<td>4</td>
<td>14.3</td>
</tr>
<tr>
<td>Southern Inquilinato Zone (4)</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td>Central Inquilinato Zone (5)</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td>Western Periphery (6)</td>
<td>5</td>
<td>17.9</td>
</tr>
<tr>
<td>Outside of City</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>28</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note:
1. Barrios Risaralda, San Judas, Ormaza.
2. Barrios America, Santa Teresita.
4. Barrios Camilo Mejia Duque, Mejia Robledo.
5. Barrios La Galeria, San Jose
6. Barrio Cuba

Note: Refers to migrant head of household interviewed.
### TABLE 103: DISTRIBUTION OF RENTS IN LAST PLACE OF RESIDENCE PRIOR TO MOVING TO BARRIO EL PLUMON (EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th>Rent Col. ($)</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 199</td>
<td>4</td>
<td>13.8</td>
</tr>
<tr>
<td>200 - 299</td>
<td>4</td>
<td>13.8</td>
</tr>
<tr>
<td>300 - 399</td>
<td>5</td>
<td>17.3</td>
</tr>
<tr>
<td>400 - 499</td>
<td>4</td>
<td>13.8</td>
</tr>
<tr>
<td>500 - 599</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>600 - 699</td>
<td>1</td>
<td>3.4</td>
</tr>
<tr>
<td>700 - 799</td>
<td>1</td>
<td>3.4</td>
</tr>
<tr>
<td>800 - 899</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>900 - 999</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>1000 + more</td>
<td>2</td>
<td>6.9</td>
</tr>
<tr>
<td>Don't know</td>
<td>8</td>
<td>27.6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>29</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Refers to head of household interviewed. Min.: $120, Max.: $1500, Average: $443 a month.

### TABLE 104: PRINCIPAL REASON FOR MOVING TO BARRIO EL PLUMON (EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonpayment of Rent</td>
<td>10</td>
<td>34.5</td>
</tr>
<tr>
<td>Cheapness of Mejora</td>
<td>7</td>
<td>24.2</td>
</tr>
<tr>
<td>Desire to own property</td>
<td>4</td>
<td>13.8</td>
</tr>
<tr>
<td>Helped organize invasion</td>
<td>3</td>
<td>10.3</td>
</tr>
<tr>
<td>Independence from relations</td>
<td>2</td>
<td>6.9</td>
</tr>
<tr>
<td>Assistance from relatives</td>
<td>2</td>
<td>6.9</td>
</tr>
<tr>
<td>Don't know</td>
<td>1</td>
<td>3.4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>29</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Refers to head of household interviewed.
### TABLE 105: LITERACY AND ILLITERACY. (EL PLUMON SURVEY)

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literate</td>
<td>45</td>
<td>86.5</td>
</tr>
<tr>
<td>Illiterate</td>
<td>7</td>
<td>13.5</td>
</tr>
<tr>
<td>TOTAL</td>
<td>52</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Refers to heads of respondent households.

### TABLE 106: LEVELS OF EDUCATION IN EL PLUMON SURVEY

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>53</td>
<td>43.1</td>
</tr>
<tr>
<td>Primary</td>
<td>55</td>
<td>44.7</td>
</tr>
<tr>
<td>Secondary</td>
<td>15</td>
<td>12.2</td>
</tr>
<tr>
<td>University</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>TOTAL</td>
<td>123</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Refers to Population of respondent households over the age of 7 years.

### TABLE 107: EDUCATIONAL LEVEL OF HEADS OF HOUSEHOLD IN EL PLUMON SURVEY

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>35</td>
<td>67.3</td>
</tr>
<tr>
<td>Primary</td>
<td>14</td>
<td>26.9</td>
</tr>
<tr>
<td>Secondary</td>
<td>3</td>
<td>5.8</td>
</tr>
<tr>
<td>University</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>TOTAL</td>
<td>52</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Refer to heads of respondents households.
**TABLE 108: ECONOMICALLY ACTIVE AND INACTIVE POPULATION IN THE EL PLUMON SURVEY**

<table>
<thead>
<tr>
<th></th>
<th>Heads of Household</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>% Total</td>
<td>Number</td>
</tr>
<tr>
<td>Economically Active</td>
<td>22</td>
<td>42.3</td>
<td>18</td>
</tr>
<tr>
<td>Economically Inactive</td>
<td>30</td>
<td>57.7</td>
<td>90</td>
</tr>
<tr>
<td>TOTAL</td>
<td>52</td>
<td>100.0</td>
<td>108</td>
</tr>
</tbody>
</table>

Note: Refers to all respondent households.

**TABLE 109: COMPOSITION OF ECONOMICALLY INACTIVE POPULATION IN THE EL PLUMON SURVEY**

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>40</td>
<td>33.3</td>
</tr>
<tr>
<td>Housework</td>
<td>34</td>
<td>28.4</td>
</tr>
<tr>
<td>Less than 7 yrs old</td>
<td>42</td>
<td>35.0</td>
</tr>
<tr>
<td>Retired/Invalid</td>
<td>4</td>
<td>3.3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>120</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Refers to all economically inactive population in respondent households.

**TABLE 110: ECONOMICALLY ACTIVE POPULATION IN THE EL PLUMON SURVEY**

<table>
<thead>
<tr>
<th></th>
<th>Heads of Household</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>% Total</td>
<td>Number</td>
</tr>
<tr>
<td>Employed</td>
<td>19</td>
<td>86.4</td>
<td>16</td>
</tr>
<tr>
<td>Unemployed</td>
<td>3</td>
<td>13.6</td>
<td>2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>22</td>
<td>100.0</td>
<td>18</td>
</tr>
</tbody>
</table>

Note: Refers to all economically active population in respondent households.
### TABLE 111: OCCUPATIONAL STABILITY OF THE EMPLOYED ECONOMICALLY ACTIVE POPULATION IN THE EL PLUMON SURVEY

<table>
<thead>
<tr>
<th></th>
<th>Heads of Household</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>% Total</td>
<td>Number</td>
</tr>
<tr>
<td>Permanent</td>
<td>10</td>
<td>52.6</td>
<td>9</td>
</tr>
<tr>
<td>Casual</td>
<td>9</td>
<td>47.4</td>
<td>7</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>19</td>
<td>100.0</td>
<td>16</td>
</tr>
</tbody>
</table>

Note: Refers to the employed EAP of respondent households.

### TABLE 112: TYPE OF WORK OF THE EMPLOYED ECONOMICALLY ACTIVE POPULATION IN THE EL PLUMON SURVEY

<table>
<thead>
<tr>
<th></th>
<th>Heads of Household</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>% Total</td>
<td>Number</td>
</tr>
<tr>
<td>Medium Category</td>
<td>2</td>
<td>9.1</td>
<td>-</td>
</tr>
<tr>
<td>Low Category</td>
<td>16</td>
<td>72.7</td>
<td>12</td>
</tr>
<tr>
<td>Marginal Category</td>
<td>4</td>
<td>18.2</td>
<td>6</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>22</td>
<td>100.0</td>
<td>18</td>
</tr>
</tbody>
</table>

Note: Refers to the employed EAP of respondent households.
TABLE II: TYPE OF OCCUPATION OF ECONOMICALLY ACTIVE POPULATION IN THE EL PLUMON SURVEY

<table>
<thead>
<tr>
<th>Type of Occupation</th>
<th>Number</th>
<th>Number % Total</th>
<th>Number</th>
<th>Number % Total</th>
<th>Number</th>
<th>Number % Total</th>
<th>Number</th>
<th>Number % Total</th>
<th>Number</th>
<th>Number % Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture (casual)</td>
<td>3</td>
<td>100.0</td>
<td>5</td>
<td>100.0</td>
<td>7.0</td>
<td>100.0</td>
<td>10</td>
<td>100.0</td>
<td>5.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Manufacture</td>
<td>1</td>
<td>100.0</td>
<td>2</td>
<td>100.0</td>
<td>5.0</td>
<td>100.0</td>
<td>7.0</td>
<td>100.0</td>
<td>5.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Street cleanmen</td>
<td>2</td>
<td>100.0</td>
<td>5</td>
<td>100.0</td>
<td>7.0</td>
<td>100.0</td>
<td>10</td>
<td>100.0</td>
<td>5.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Transportation</td>
<td>3</td>
<td>100.0</td>
<td>5</td>
<td>100.0</td>
<td>7.0</td>
<td>100.0</td>
<td>10</td>
<td>100.0</td>
<td>5.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Domestic service</td>
<td>2</td>
<td>100.0</td>
<td>5</td>
<td>100.0</td>
<td>7.0</td>
<td>100.0</td>
<td>10</td>
<td>100.0</td>
<td>5.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Low category</td>
<td>2</td>
<td>100.0</td>
<td>5</td>
<td>100.0</td>
<td>7.0</td>
<td>100.0</td>
<td>10</td>
<td>100.0</td>
<td>5.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Businessman</td>
<td>2</td>
<td>100.0</td>
<td>5</td>
<td>100.0</td>
<td>7.0</td>
<td>100.0</td>
<td>10</td>
<td>100.0</td>
<td>5.0</td>
<td>100.0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>12</td>
<td>100.0</td>
<td>46</td>
<td>100.0</td>
<td>70.0</td>
<td>100.0</td>
<td>101</td>
<td>100.0</td>
<td>50.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Refers to EAP of respondent households.
### TABLE 114: LEVELS AND DISTRIBUTION OF MONTHLY HOUSEHOLD INCOME IN EL PLUMON SURVEY

<table>
<thead>
<tr>
<th>Monthly Household Income Col. (§)</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 499</td>
<td>1</td>
<td>3.5</td>
</tr>
<tr>
<td>500 - 999</td>
<td>6</td>
<td>20.7</td>
</tr>
<tr>
<td>1000 - 1499</td>
<td>8</td>
<td>27.5</td>
</tr>
<tr>
<td>1500 - 1999</td>
<td>4</td>
<td>13.8</td>
</tr>
<tr>
<td>2000 - 2499</td>
<td>4</td>
<td>13.8</td>
</tr>
<tr>
<td>2500 - 2999</td>
<td>1</td>
<td>3.5</td>
</tr>
<tr>
<td>3000 + more</td>
<td>5</td>
<td>17.2</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>29</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Note: Refers to all respondent households.  
Min.: $250, Max.: $4500, Average: $1552 a month.
<table>
<thead>
<tr>
<th>Rent as % of Income</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 9 %</td>
<td>2</td>
<td>9.5</td>
</tr>
<tr>
<td>10 - 19</td>
<td>6</td>
<td>28.6</td>
</tr>
<tr>
<td>20 - 29</td>
<td>4</td>
<td>19.1</td>
</tr>
<tr>
<td>30 - 39</td>
<td>2</td>
<td>9.5</td>
</tr>
<tr>
<td>40 - 49</td>
<td>3</td>
<td>14.3</td>
</tr>
<tr>
<td>50 - 59</td>
<td>3</td>
<td>14.3</td>
</tr>
<tr>
<td>60 - 69</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>70 - 79</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>80 - 89</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>90 - 99</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>100</td>
<td>1</td>
<td>4.7</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>21</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Refers to all respondent households but excludes 8 don't knows.
Average Monthly Income: Col. $1552
Average Monthly Rent: Col. $444
APPENDIX SIX

SOCIO-ECONOMIC CHARACTERISTICS OF BARRIO HERNANDO VELEZ MARULANDA

DEMOGRAPHIC CHARACTERISTICS

Total Population

Precise estimates of total population were difficult to obtain. First, because the community was not in residence on the site and was dispersed throughout the city (with the exception of 25 families) a precise count could not be made. Second, membership of the community fluctuated greatly as new members joined and others dropped out because of changes in economic or family circumstances: settlement plans were elaborated for the construction of 217 single family houses. The application for JAC status issued in September 1972 listed 144 'fundadores.' An article published on the housing plan in El Diario in December 1975 stated the total membership was 145 families, and an Ofisel research project undertaken in January 1976 indicated a total population of 170 families. In an interview with Perchis Giraldo (May 1976) the figure of 180 families was mentioned. At the time the interviews were undertaken in the settlement (May 1976) it was reasonable to assume that between 170 and 180 families were currently affiliated to the project. For the purposes of the interview data, a total population of 175 families was assumed and a questionnaire survey was undertaken offering a 19.4% sample (n=34).

The survey revealed a large household size (Table
116): 82.3% of the families in the sample had over 5 members, and 29.4% had 10 members or more. The minimum household size in the sample was four, and one household had sixteen members. An average household size of 7.5 was calculated. On this basis and assuming, a total membership of 175 families, the total population for the settlement can be estimated at approximately 1313.

**Distribution of Population**

Table 117 reveals that 52.0% of the sample population were female, and 48.0% male. Tables 118 and 119 show the age distribution of this population and again shows a typical pattern. Whereas 54.3% of the population were under 20 years old, only 5.5% were over 50 years old, reflecting the high birth rates and death rates associated with underdevelopment.

**Household Structure**

The nuclear unit was the predominant form in the sample (exactly 50%) but 38.3% of households experienced some form of disintegration (father or mother with children). 11.7% of the households in the sample were extended by the presence of relatives in some type of relationship to the heads of household (Table 120).

**The Role of Migration**

Table 121 shows the distribution of migrant and native heads of household in the settlement according to place of birth. Less than one in five of the sample (18.8%) were born in the city and the rest were migrants. 70.3% of heads of household were born outside of the city but within the limits of Old Caldas.
However, when we consider the places of birth of the entire sample population (Table 122) a totally different picture emerges. Here the proportion of the population born in the municipal cabecera rises dramatically to 43.4% of the total sample, and the total migrant population falls to 56.6%. The high proportion of short distance migration is maintained - 47.6% of the sample being born outside of the Pereira cabecera but within the limits of Old Caldas.

Thus out of the 34 heads of household interviewed, 29 could be classified as migrants (85.3%). Of these 29, 11 named a location different to that of their place of birth as their immediate place of residence before their arrival in Pereira (37.9%). This indicates that a significant proportion of the migratory flow was indirect. The survey revealed several example of the complexity of migration 'stages'. Thus in one case the head of the family interviewed was born in Filandia in Quindio to agricultural workers, and moved with his family to a nearby vereda in Circasia looking for work. After living there for 6 years, he met a local girl and married. They then moved back to Finlandia and started to raise a family. After three years they decided to emigrate with their two children to Dosquebradas where he worked on a finca for a year and half, before finally moving to the inner city slums of Pereira. Another case of existed of a woman who was born in Santuario, married a man from Barranquilla, and lived there for 7 years where she raised two children. The marriage then broke
down, she joined up with another man from Manizales, and then went to live permanently in Pereira. On the other hand, cases also exist of native born Pereirans migrating to other rural areas before returning to Pereira. The history of one interviewee involved a childhood in Pereira, agricultural work in several veredas in the municipality of Pereira, a period as a construction worker in the town of Buga in Valle, a return to agricultural work in Chinchina and Sta. Rosa, before moving to his existing residence in central Pereira.

Some interesting data emerged out of the length of residence that the migrant head of household interviewed has lived in Pereira. Table 123 shows that while only 17.3% of those interviewed had been in Pereira for less than 5 years, 37.9% had been living there over 20 years. The average period of residence of migrant heads of household in Pereira was 16.8 years. This confirms the pattern established for Pereira as a whole, that the most active period of rural to urban migration was in the late Fifties and early Sixties. The length of the average period of residence and the fact that 58.6% of those interviewed had been living in Pereira for over 15 years casts doubt on optimistic assessments of social mobility in urban theory that postulate an average period of residence for migrants in inner city slums of around 6 years. The greater part of the sample population remained housed in rented accommodation, and had yet to acquire adequate housing despite a very
lengthy period of residence in the city.

**The Migrant in the City.**

All migrant heads of household in the sample were asked to name their first location when they moved permanently to Pereira. There was a strong concentration in Pereira's three principal *inquilinato* zones. About 1/5th of the migrants set up residence in the eastern zone that lies immediately adjacent to Barrio Hernando Velez Marulanda (Villavicencio, Berlin, Corocito, Santander, La Paz); another fifth located immediately in the important *inquilinato* zone of Barrios America, Camilo Mejia Duque and Santa Teresita that lies on the northern slopes of the Rio Otun, and a further 40% located in the western *inquilinato* zone around the city's cemetery (San Juan, La Palmera, Buena Esperanza, La Victoria, Juan XXIII). The strong concentration of migrants in this latter zone obviously bears some relationship to the fact that it was in this area that the community was first organized.

When the migrants were asked why they had chosen this location rather than another for their residence, the significance of family and personal connections for the migration process was revealed (Table 124). 58.6% of the sample gave as their reason assistance from relatives and friends, either in the form of temporary lodgings or help in finding accommodation. Thus one woman head of family told how she came to Pereira from Marsella with her parents in 1941. They set up home in Barrio America after a friend of her father from
Marsella who had migrated earlier sold him a part of his plot, on which they built a *bahareque* house. Another recounted how he came to Pereira with his wife in 1964 from the *vereda* La Palmilla in the municipality of Sta. Rosa de Cabal. They immediately set up home in Barrio Buena Esperanza, in the *inquilinato* zone in the northwest of the city. Here one of the wife's sisters let them have a room in their house for a rent of $300 month.

Often the period of residence in this initial location was very short. Over a third (34.5%) of the sample stayed less than a year, and a fifth (20.7%) less than three months (Table 125). The most important reason for moving mentioned by a quarter (27.6%) of the migrants, was either eviction or withdrawal of family or friend's support (Table 126). Not only is three months the legal minimum period for eviction for the nonpayment of rent in Colombia, but it also seems to be a threshold, after which relationships between *arrimados* and resident can become strained, if the migrant has not found his own accommodation.

Table 127 shows the type of tenancy of the first location in the city. Almost two thirds (65.5%) of the sample were paying rent, and if we are to include *arrimados*, most of whom one can assume were paying some form of rent, then 86.2% of the sample were renting accommodation when they first moved to the city. Table 128 shows that the type of accommodation being occupied was largely rooms in houses or self-contained houses.
Migrant Residential Mobility in the City

An attempt was made to retrace all the residential movements of the migrant in the city before arriving at the present location, in full knowledge of the difficulties that such an exercise inevitably encounters. Evidence of bad memory over dates and places, omissions and inconsistencies were rife in these data, though some cases were obviously clearly remembered. Thus one old man remembered the exact addresses, type and length of tenancy and type of accommodation he had lived in over the last 45 years (some 26 different houses), and the exact rents he had been paying in each one.

The high level of residential mobility of the migrant population in the city, is indicated by data from Table 129 on the number of houses lived in by migrant heads of household. These data give the average number of houses lived in as 5.4, ranging from a maximum of 26 to a minimum of 1. Almost two thirds (65.5%) of the sample had lived in more than three houses, and a third (34.5%) had lived in more than six.

The evidence indicates that the process involved a constant shift of the population around the city from one type of rented accommodation to another and from one inquilinato zone to another, with virtually no change in the housing conditions or conditions of tenancy. Thus if Table 130 which shows the type of tenancy of the existing accommodation of the migrant sample is compared with Table 127 which shows the type of tenancy in the
first residence, it can be seen that the proportion renting accommodation actually increased from 65.5% to 75.9%. Given that the average period of residence of the migrant in the city was estimated at 16.5 years, and given the fact that the overwhelming majority continued to live in rented housing the tendency to equate residential mobility with social mobility can be challenged.

CURRENT HOUSING CONDITIONS OF THE COMMUNITY

Table 131 shows that initially project members were concentrated in three of the city's major *inquilinato* zones. 29.4% of the population was resident in the eastern zone that lies immediately adjacent to Barrio Hernando Velez Marulanda (Area 1); another quarter (26.5%) was located in the western *inquilinato* zone around the town cementery (Area 3), and another fifth (17.6%) in the *inquilinato* zone on the Otun slopes in the north east of the city. The rest of the population was scattered throughout the city with a smaller concentration in the settlement in the southern *inquilinato* zone of Barrios Mejia Robledo and Olaya Herrera (about 6%) (Area 4). In contrast Table 132 shows the existing place of residence of the sample population. Area 1, the eastern *inquilinato* zone and settlements bordering Hernando Velez Marulanda now housed about a half (47.0%) of the sample, whilst the western zone (Area 3) was the home for only one fifth (20.6%) of the population. The northern *inquilinato* zone (Area 2) now housed about a tenth (11.8%) of the
sample, whilst the southern inquilinato zone 14.8% of the population. When asked why they moved to their present barrio and not another, just under a half of those interviewed gave an answer related to proximity to the Hernando Velez Marulanda site.

The survey revealed that the vast majority of those interviewed (79.4%) were renting their accommodation and a further 14.7% were arrimados (Table 133). The fact that two interviewees owned the property they were living in, seemed to contradict the JAC's statutes. However this regulation did not preclude an affiliate's family members from owning property (e.g. an aunt or a parent).

A general picture can also be built up of the existing housing conditions of project members from the survey data tabulated in Tables 134 and 135. Thus 76.5% of houses had traditional tiled roofs; over a half of the houses (53.0%) had walls made of bamboo or bahareque; up to a fifth (20.6%) had bare earth floors; and over a half (52.9%) had two or three floors. On the other hand 82.4% had all three services of water, sewerage, and electricity, another 14.7% had two services, and there was only one case of housing without any services.

Finally data was also collected on the level of rents being paid. (Table 137) There was a considerable variation in rent levels, that obviously reflected the different type, quality, size and location of the housing. The average rent paid was $555 (US $15) a
month, and a maximum rent of $1500 (US $41) a month was recorded. This pattern of distribution not only reflected the high proportion of income that inquilinato rents take out of household incomes, but also indicated the considerable income inequalities that existed in the sample.

EDUCATIONAL LEVELS

Questions on the ability of the heads of household in the sample to read and write revealed that 77.8% of in the sample were literate and the 22.2% that were illiterate were largely women (Table 138). 68.6% of the sample population over the age of 7 years old had received or was receiving some form of primary education, and 24.1% some form of secondary education (Table 139).

These figures by themselves seem to indicate a fairly high level of educational achievement in the sample, but the survey also revealed that almost three quarters of heads of household who started primary education failed to finish it, and all those receiving secondary education did not or had yet to complete it.

EMPLOYMENT CONDITIONS

Table 140 shows the distribution of the economically active and inactive population in the sample. It can be seen that just over one third (36.7%) of the population supported the remaining economically inactive two thirds, though as would be expected these proportions were more equal for heads of household (55.6% to 44.4% inactive).
Table 141 shows that over a half (50.6%) of those who were inactive were so because they were students; a quarter (25.3%) because they were involved in housework, and just over a fifth (22.2%) were under the age of 7. The survey also revealed (Table 143) that 17.1% of the economically active population were unemployed, and thus at the time of the survey, only 29.4% of the total sample population was working.

Moreover there were also serious problems with instability of employment amongst those who were employed. Only 56.4% of the employed economically active population were in permanent employment, and the remaining 43.6% were employed on a short-term or irregular basis (Table 143). The data point to the existence of high levels of underemployment in the sample, as well as a significant proportion of 'informal sector' type employment. Tables 144 and 145 show the type of occupation of the employed economically active population. The occupations of the respondents and their families were classified according to the system of occupational categories employed in the Manizales Development Plan (CID, 1970:240-245). No occupations in the 'high' category were found, but a considerable range of occupations was found within the EAP. The three categories 'medium', 'low' and 'marginal' essentially refer to white collar middle class occupations; working class, and 'informal sector' or 'petty commodity' activities. The dominance of a large proportion of working class occupations was indicated in the
distribution (53.3% of the EAP), particularly in industrial (14.0%) and construction activities (16.7%). However, there were also significant proportions of higher paid white collar jobs (17.9%) as well as a very large proportion of the EAP employed in the low paying 'marginal', 'informal sector' or 'petty commodity' jobs (28.2%).

Taken with the data on the distribution of income and rents, the employment survey indicated that there was considerable social and economic inequality within the sample.

LEVELS AND DISTRIBUTION OF INCOME

The data collected from the sample on household income levels must be treated with caution for all of the usual reasons: first, because there was undoubtedly a tendency for higher income groups to declare lesser incomes, and second because household incomes involve an estimation by the head of the household interviewed of the sources of income of other members. In addition the social security and other benefits of public and private employees involve a hidden 'social' wage element. Fourth, the household income estimates made by the heads of household may involve an underestimation of irregular but periodical sources of income, and finally non-cash exchanges and activities are common amongst lower income groups that enable the household to eke out its cash income.

Despite these limitations, the figures on household income nonetheless yield some valuable evidence of the
levels and distribution of income in the sample (Table 146). Thus almost a third (29.5%) of the families in
the sample had an income of less than $1000 (US $28) a month, and two thirds (64.8%) had a household income of
less than $1500 (US $41) a month. On the other hand
11.8% of families had an income in excess of $2500 (US
$69) a month. An average household income of only $1336
(US $37) was calculated. They also indicate a
considerable range of income inequality within the
sample - a minimum income of $450 (US $12) was
registered and a maximum of $4400 (US $121). However a
comparison of type of occupation and declared income
indicates an underestimation of income by those families
who were obviously better off. Income distribution data
from a SENA survey of the project in 1975 found 43.2% of
its sample of 52 families had a monthly income below
$1500 (US $46); exactly one third of the families had
incomes in excess of $2500 (US $61) a month, and about a
fifth (21.6%) in excess of $3000 (US $91).

The data also show the multi-class nature of the
housing problem. Some examples from the sample will be
sufficient to explain the importance of this factor.
Thus one household of 5 persons survived on an income of
$700 a month derived from the labours of the father and
his teenage son in selling cooked foods on the streets
of the Plaza Bolivar. His wife worked in the house and
looked after their two young daughters, one of whom was
obviously seriously ill.

In another case a construction worker, the father of
6 children all below the age of 13 estimated the income of the household was now down to $450 (US $12) a month, because over the last three weeks or so he had been bedridden with a foot infection: contracted whilst collecting sand for the project from the river Cauca at Cartago. At the time of the survey they were relying on his wife's meagre income as a dishwasher in a cantina, the charity of friends and relatives, and small loans from his brother.

At the other end of the income scale, a family of four persons with two (father and son) persons gainfully employed as municipal nightwatchmen with the wife at home and a teenage son in the third year of secondary education, estimated their household income at $3200 (US $97) a month. The largest monthly household income in the sample was $4400 (US $121). Here a widow was head of a household with 9 children, three of whom had permanent jobs as office workers and a factory clerk. One 17 year old son was unemployed and two daughters were still studying. Six of the children had qualifications in secondary education.

If we relate the household income figures to the monthly payment of rents (Table 147), then given the general unreliability of both sets of data we can get only a rough picture of the proportion of income currently being spent on rent by members of the community.

As can be seen the situation is highly variable with almost a quarter (24%) of the sample paying between
10-20% of their monthly incomes, almost a half (48.0%) paying between 20-49% and a quarter (28%) paying 50% or more of their monthly incomes on rent. From the analysis of a reduced sample of 25 (eliminating arrimados and don't knows) an average monthly household income of $1504 (US $41) was computed and an average monthly rent of $555 (US $15). This gave an average rent-income proportion of 36.9%. Thus high average rents and low average incomes seemed to be typical of the sample.
TABLES FOR APPENDIX SIX
### TABLE 116: Household Size in Hernando Velez Marulanda Survey

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between 1 - 4</td>
<td>6</td>
<td>17.7</td>
</tr>
<tr>
<td>Between 5 - 9</td>
<td>18</td>
<td>52.9</td>
</tr>
<tr>
<td>10 and more</td>
<td>10</td>
<td>29.4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>34</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Min. 4, Max. 16, Average: 7.5 persons.

### TABLE 117: Sexual Distribution in Hernando Velez Marulanda Survey

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>133</td>
<td>52.0</td>
</tr>
<tr>
<td>Male</td>
<td>123</td>
<td>48.0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>256</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Refers to the total population of all households in sample.

### TABLE 118: Age Distribution in Hernando Velez Marulanda Survey

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 11</td>
<td>65</td>
<td>25.4</td>
</tr>
<tr>
<td>12 - 19</td>
<td>74</td>
<td>28.9</td>
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<tr>
<td>20 - 29</td>
<td>52</td>
<td>20.3</td>
</tr>
<tr>
<td>30 - 49</td>
<td>51</td>
<td>19.9</td>
</tr>
<tr>
<td>50 - 64</td>
<td>12</td>
<td>4.7</td>
</tr>
<tr>
<td>65 and more</td>
<td>2</td>
<td>0.8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>256</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Refers to the total population of all households in sample.
TABLE 119: Sexual and Age Distribution of the Population in Hernando Velez Marulanda Survey

<table>
<thead>
<tr>
<th>AGE</th>
<th>MALE</th>
<th>FEMALE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>% Total</td>
<td>No.</td>
</tr>
<tr>
<td>0 - 11</td>
<td>29</td>
<td>23.6</td>
<td>36</td>
</tr>
<tr>
<td>12 - 19</td>
<td>37</td>
<td>30.1</td>
<td>37</td>
</tr>
<tr>
<td>20 - 29</td>
<td>26</td>
<td>21.1</td>
<td>26</td>
</tr>
<tr>
<td>30 - 49</td>
<td>22</td>
<td>17.9</td>
<td>29</td>
</tr>
<tr>
<td>50 - 64</td>
<td>8</td>
<td>6.5</td>
<td>4</td>
</tr>
<tr>
<td>65 and more</td>
<td>1</td>
<td>0.8</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>123</td>
<td>100.0</td>
<td>133</td>
</tr>
</tbody>
</table>

Note: Refers to the total population of all households in the sample.

TABLE 120: Household Structure in Barrio Hernando Velez Marulanda

<table>
<thead>
<tr>
<th>Structure</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Father with children</td>
<td>2</td>
<td>5.9</td>
</tr>
<tr>
<td>Mother with children</td>
<td>11</td>
<td>32.4</td>
</tr>
<tr>
<td>Father &amp; mother with children</td>
<td>17</td>
<td>50.0</td>
</tr>
<tr>
<td>Extended</td>
<td>4</td>
<td>11.7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>34</td>
<td>100.0</td>
</tr>
</tbody>
</table>
### TABLE 121: Place of Birth of Heads of Household in Barrio Hernando Velez Marulanda

<table>
<thead>
<tr>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pereira (cabecera)</td>
<td>10</td>
</tr>
<tr>
<td>Pereira (veredas)</td>
<td>6</td>
</tr>
<tr>
<td>Risaralda</td>
<td>18</td>
</tr>
<tr>
<td>Caldas</td>
<td>1</td>
</tr>
<tr>
<td>Quindio</td>
<td>3</td>
</tr>
<tr>
<td>Valle</td>
<td>-</td>
</tr>
<tr>
<td>Antioquia</td>
<td>4</td>
</tr>
<tr>
<td>Tolima</td>
<td>1</td>
</tr>
<tr>
<td>Others</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>44</td>
</tr>
</tbody>
</table>

Note: Refers to all heads of household in the sample.

### TABLE 122: Place of Birth of Sample Population in Hernando Velez Marulanda Survey

<table>
<thead>
<tr>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pereira (cabecera)</td>
<td>111</td>
</tr>
<tr>
<td>Pereira (veredas)</td>
<td>18</td>
</tr>
<tr>
<td>Risaralda</td>
<td>56</td>
</tr>
<tr>
<td>Caldas</td>
<td>40</td>
</tr>
<tr>
<td>Quindio</td>
<td>8</td>
</tr>
<tr>
<td>Valle</td>
<td>16</td>
</tr>
<tr>
<td>Antioquia</td>
<td>4</td>
</tr>
<tr>
<td>Tolima</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>256</td>
</tr>
</tbody>
</table>

Note: Refers to total population of all households in sample.
### TABLE 123: Length of Residence of Migrants in City  
(Hernando Velez Marulanda Survey)

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5 years</td>
<td>5</td>
<td>17.3</td>
</tr>
<tr>
<td>5 - 10 years</td>
<td>4</td>
<td>13.8</td>
</tr>
<tr>
<td>10 - 15 years</td>
<td>3</td>
<td>10.3</td>
</tr>
<tr>
<td>15 - 20 years</td>
<td>6</td>
<td>20.7</td>
</tr>
<tr>
<td>20 - 25 years</td>
<td>3</td>
<td>10.3</td>
</tr>
<tr>
<td>25 and more</td>
<td>8</td>
<td>27.6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>29</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: 29 heads of household interviewed were migrants, 5 were natives.  
Average period of residence: 16.8 years.

### TABLE 124: Principal Reason for Moving to First Residential Location in the City.  
(Hernando Velez Marulanda Survey)

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistance from relative</td>
<td>12</td>
<td>41.4</td>
</tr>
<tr>
<td>Assistance from friends</td>
<td>5</td>
<td>17.2</td>
</tr>
<tr>
<td>Other reasons</td>
<td>7</td>
<td>24.2</td>
</tr>
<tr>
<td>Don't know</td>
<td>5</td>
<td>17.2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>29</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: 29 heads of household interviewed were migrants, 5 were natives.
TABLE 125: Length of Residence of Migrant in First Location in the City (Hernando Velez Marulanda Survey)

<table>
<thead>
<tr>
<th>Length of Residence</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 3 months</td>
<td>6</td>
<td>20.7</td>
</tr>
<tr>
<td>3 - 11 months</td>
<td>4</td>
<td>13.8</td>
</tr>
<tr>
<td>1 year - 2 years</td>
<td>2</td>
<td>6.9</td>
</tr>
<tr>
<td>2 years - 3 years</td>
<td>5</td>
<td>17.2</td>
</tr>
<tr>
<td>3 years - 4 years</td>
<td>3</td>
<td>10.4</td>
</tr>
<tr>
<td>4 years - 5 years</td>
<td>2</td>
<td>6.9</td>
</tr>
<tr>
<td>5 years - 10 years</td>
<td>5</td>
<td>17.2</td>
</tr>
<tr>
<td>10 years - 15 years</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>More than 15 years</td>
<td>2</td>
<td>6.9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>29</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: 29 heads of household interviewed were migrants, 5 were natives.

TABLE 126: Principal Reason For Moving From First Residential Location in City (Hernando Velez Marulanda Survey)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eviction or Withdrawal of Support</td>
<td>8</td>
<td>27.6</td>
</tr>
<tr>
<td>Too Little Space</td>
<td>7</td>
<td>24.1</td>
</tr>
<tr>
<td>To be Nearer Work</td>
<td>5</td>
<td>17.2</td>
</tr>
<tr>
<td>Too Expensive</td>
<td>3</td>
<td>10.4</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>20.7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>29</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: 29 heads of household interviewed were migrants, 5 were natives.
### TABLE 127: Type of Tenancy in First Residential Location in City (Hernando Velez Marulanda Survey)

<table>
<thead>
<tr>
<th>Type</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rented</td>
<td>19</td>
<td>65.5</td>
</tr>
<tr>
<td>Arrimada</td>
<td>6</td>
<td>20.7</td>
</tr>
<tr>
<td>Work</td>
<td>2</td>
<td>6.9</td>
</tr>
<tr>
<td>Own House</td>
<td>2</td>
<td>6.9</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>29</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: 29 heads of household interviewed were migrants, 5 were natives.

### TABLE 128: Type of Accommodation in First Residential Location in the City (Hernando Velez Marulanda Survey)

<table>
<thead>
<tr>
<th>Type</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>House</td>
<td>13</td>
<td>44.8</td>
</tr>
<tr>
<td>Rooms</td>
<td>12</td>
<td>41.3</td>
</tr>
<tr>
<td>Workplace</td>
<td>2</td>
<td>6.9</td>
</tr>
<tr>
<td>Apartment</td>
<td>1</td>
<td>3.5</td>
</tr>
<tr>
<td>Rancho</td>
<td>1</td>
<td>3.5</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>29</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: 29 heads of household interviewed were migrants, 5 were natives.
## TABLE 129: Number of Different Houses Lived in by Migrants During Residence in Pereira (Barrio Hernando Velez Marulanda)

<table>
<thead>
<tr>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 2</td>
<td>34.5</td>
</tr>
<tr>
<td>3 - 5</td>
<td>31.0</td>
</tr>
<tr>
<td>6 - 10</td>
<td>24.1</td>
</tr>
<tr>
<td>11 - 15</td>
<td>3.5</td>
</tr>
<tr>
<td>16 + more</td>
<td>6.9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: 29 heads of household interviewed were migrants, 5 were natives. Max.: 26; Min:1; Average: 5.4 houses.

## TABLE 130: Type of Tenancy of Existing Accommodation in the City (Barrio Hernando Velez Marulanda)

<table>
<thead>
<tr>
<th>Type</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rented</td>
<td>22</td>
</tr>
<tr>
<td>Arrimada</td>
<td>5</td>
</tr>
<tr>
<td>Workplace</td>
<td>-</td>
</tr>
<tr>
<td>Own House</td>
<td>2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>29</td>
</tr>
</tbody>
</table>

Note: 29 heads of household interviewed were migrants, 5 were natives. Max.: 26; Min:1; Average: 5.4 houses.
<table>
<thead>
<tr>
<th>Area</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barrios: Villavicencio, Berlin, Santander, Corocito, Hernando Velez Marulanda, Ormaza, Alfonso Lopez, La Paz</td>
<td>10</td>
<td>29.4</td>
</tr>
<tr>
<td>Barrios: America, Camilo Mejia Duque, Santa Teresita</td>
<td>6</td>
<td>17.6</td>
</tr>
<tr>
<td>Barrios: Juan XXIII, Cementerio, Esperanza, Victoria, Venecia, San Jorge, 1 de Mayo, La Palmera</td>
<td>9</td>
<td>26.5</td>
</tr>
<tr>
<td>Barrios: Mejia Robledo Olaya Herrera</td>
<td>2</td>
<td>5.9</td>
</tr>
<tr>
<td>Barrios: Libertad, Bolivar, Cuba, Salida Armenia, Salida Cartago</td>
<td>7</td>
<td>20.6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>34</td>
<td>100.0</td>
</tr>
</tbody>
</table>
### TABLE 132: Location of Existing Residence of Respondents  
(Hernando Velez Marulanda Survey)

<table>
<thead>
<tr>
<th>Area</th>
<th>Barrios: Villavicencio, Berlin, Santander, Corocito, Hernando Velez Marulanda, Alfonso Lopez, La Paz</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area I</td>
<td></td>
<td>16</td>
<td>47.0</td>
</tr>
<tr>
<td>Area II</td>
<td>Barrios: America, Camilo Mejia Duque, Sta. Teresita</td>
<td>4</td>
<td>11.8</td>
</tr>
<tr>
<td>Area III</td>
<td>Barrios: Juan XXIII, Cementerio, Esperanza, Victoria, Venecia, San Jorge, I de Mayo, La Palmera</td>
<td>7</td>
<td>20.6</td>
</tr>
<tr>
<td>Area IV</td>
<td>Barrios: Mejia Robledo, Olaya Herrera</td>
<td>5</td>
<td>14.8</td>
</tr>
<tr>
<td>Other</td>
<td>Barrios: Providencia, El Vergel</td>
<td>2</td>
<td>5.8</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>34</td>
<td>100.0</td>
</tr>
</tbody>
</table>

### TABLE 133: Conditions of Tenancy in Existing Accommodation of Respondents.  
(Hernando Velez Marulanda Survey)

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner Occupied</td>
<td>2</td>
<td>5.9</td>
</tr>
<tr>
<td>Rented</td>
<td>27</td>
<td>79.4</td>
</tr>
<tr>
<td>Arrimada</td>
<td>5</td>
<td>14.7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>34</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>Number</td>
<td>% Total</td>
</tr>
<tr>
<td>----------------</td>
<td>--------</td>
<td>---------</td>
</tr>
<tr>
<td><strong>Roof</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tile</td>
<td>26</td>
<td>76.5</td>
</tr>
<tr>
<td>Eternit</td>
<td>8</td>
<td>23.5</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>34</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Walls</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bahareque</td>
<td>11</td>
<td>32.4</td>
</tr>
<tr>
<td>Split Cane</td>
<td>7</td>
<td>20.6</td>
</tr>
<tr>
<td>Brick</td>
<td>15</td>
<td>44.1</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>34</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Floor</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earth</td>
<td>7</td>
<td>20.6</td>
</tr>
<tr>
<td>Wood</td>
<td>16</td>
<td>47.1</td>
</tr>
<tr>
<td>Baldosin</td>
<td>5</td>
<td>14.7</td>
</tr>
<tr>
<td>Cement</td>
<td>6</td>
<td>17.6</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>34</td>
<td>100.0</td>
</tr>
</tbody>
</table>
TABLE 135: Level of Provision of Services in Housing Occupied by Respondents (Hernando Velez Marulanda Survey)

<table>
<thead>
<tr>
<th>Services</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>All 3 Services</td>
<td>28</td>
<td>82.4</td>
</tr>
<tr>
<td>Two Services</td>
<td>5</td>
<td>14.7</td>
</tr>
<tr>
<td>One Service</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>No Services</td>
<td>1</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>34</td>
<td>100.0</td>
</tr>
</tbody>
</table>

TABLE 136: Number of Floors in Housing Occupied by Respondents (Hernando Velez Marulanda Survey)

<table>
<thead>
<tr>
<th>Floors</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Floor</td>
<td>16</td>
<td>47.1</td>
</tr>
<tr>
<td>2 Floors</td>
<td>14</td>
<td>41.2</td>
</tr>
<tr>
<td>3 Floors</td>
<td>4</td>
<td>11.7</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>34</td>
<td>100.0</td>
</tr>
</tbody>
</table>
### TABLE 137: Distribution of Rents For Existing Accommodation Paid by Respondents (Hernando Velez Marulanda Survey)

<table>
<thead>
<tr>
<th>Pesos.</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 0 - 199</td>
<td>4</td>
<td>14.8</td>
</tr>
<tr>
<td>$ 200 - 499</td>
<td>10</td>
<td>37.1</td>
</tr>
<tr>
<td>$ 500 - 999</td>
<td>9</td>
<td>33.3</td>
</tr>
<tr>
<td>$1000 and more</td>
<td>4</td>
<td>14.8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>27</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Note: Average: Col. $555
5 households were arrimados and 2 owner occupied.
US $1.00: Col. $36.31 1976.

### TABLE 138: Literacy and Illiteracy in Hernando Velez Marulanda Survey

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literate</td>
<td>42</td>
<td>77.8</td>
</tr>
<tr>
<td>Illiterate</td>
<td>12</td>
<td>22.2</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>54</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Note: Refers to all heads of household in sample.

### TABLE 139: Levels of Education in Hernando Velez Marulanda Survey

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>16</td>
<td>7.3</td>
</tr>
<tr>
<td>Primary</td>
<td>151</td>
<td>68.6</td>
</tr>
<tr>
<td>Secondary</td>
<td>53</td>
<td>24.1</td>
</tr>
<tr>
<td>University</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>220</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Note: Refers to a sample population over the age of seven.
### TABLE 140: Economically Active and Inactive Population in Hernando Velez Marulanda Survey

<table>
<thead>
<tr>
<th></th>
<th>Heads of Household</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>% Total</td>
<td>No.</td>
</tr>
<tr>
<td>Economically Active</td>
<td>30</td>
<td>55.6</td>
<td>64</td>
</tr>
<tr>
<td>Economically Inactive</td>
<td>24</td>
<td>44.4</td>
<td>138</td>
</tr>
<tr>
<td>TOTAL</td>
<td>54</td>
<td>100.0</td>
<td>202</td>
</tr>
</tbody>
</table>

Note: Refers to total population of sample households.

### TABLE 141: Composition of the Economically Inactive Population in Hernando Velez Marulanda Survey

<table>
<thead>
<tr>
<th>Activity</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>82</td>
<td>50.6</td>
</tr>
<tr>
<td>Housework</td>
<td>41</td>
<td>25.3</td>
</tr>
<tr>
<td>Less than 7 years old</td>
<td>36</td>
<td>22.2</td>
</tr>
<tr>
<td>Elderly/Disabled</td>
<td>3</td>
<td>1.9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>162</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Refers to economically inactive population of sample households.
### TABLE 142: Level of Employment of the Economically Active Population Hernando Velez Marulanda Survey

<table>
<thead>
<tr>
<th></th>
<th>Heads of Household</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>% Total</td>
<td>No.</td>
</tr>
<tr>
<td>Employed</td>
<td>24</td>
<td>80.0</td>
<td>54</td>
</tr>
<tr>
<td>Unemployed</td>
<td>6</td>
<td>20.0</td>
<td>10</td>
</tr>
<tr>
<td>TOTAL</td>
<td>30</td>
<td>100.0</td>
<td>64</td>
</tr>
</tbody>
</table>

Note: Refers to EAP of all households in the sample.

### TABLE 143: Occupational Stability of Employed Economically Active Population in Hernando Velez Marulanda Survey

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Heads of Household</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>% Total</td>
<td>No.</td>
</tr>
<tr>
<td>Permanent</td>
<td>44</td>
<td>56.4</td>
<td>14</td>
</tr>
<tr>
<td>Casual</td>
<td>34</td>
<td>43.6</td>
<td>10</td>
</tr>
<tr>
<td>TOTAL</td>
<td>78</td>
<td>100.0</td>
<td>24</td>
</tr>
</tbody>
</table>

Note: Refers to Employed EAP of all households in the sample.
### Table 4.4: Occupational Structure of Employed Economically Active Population in Barrio Hernando Velez Marulanda

<table>
<thead>
<tr>
<th>Occupation</th>
<th>04.0</th>
<th>05.0</th>
<th>4.0</th>
<th>24.0</th>
<th>100.0</th>
<th>24.0</th>
<th>28.0</th>
<th>78.0</th>
<th>100.0</th>
<th>78.0</th>
<th>100.0</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Category</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nighthawks</td>
<td>3</td>
<td>3</td>
<td>22</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>22</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Street Cleaner</td>
<td>3</td>
<td>4</td>
<td>22</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>22</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Domestic Service</td>
<td>12</td>
<td>15</td>
<td>17</td>
<td>14</td>
<td>15</td>
<td>16</td>
<td>18</td>
<td>20</td>
<td>20</td>
<td>18</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>Low Category</td>
<td>2.6</td>
<td>2.6</td>
<td>2.6</td>
<td>2.6</td>
<td>2.6</td>
<td>2.6</td>
<td>2.6</td>
<td>2.6</td>
<td>2.6</td>
<td>2.6</td>
<td>2.6</td>
<td>2.6</td>
</tr>
<tr>
<td>Private Sector Employees</td>
<td>8</td>
<td>10</td>
<td>10</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>14</td>
<td>17</td>
<td>17</td>
<td>16</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>Public Sector Employees</td>
<td>6</td>
<td>7</td>
<td>7</td>
<td>14</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>No. % Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heads of Household</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Refers to Employed EAP of all households in sample.
### TABLE 145: Type of Occupation of Employed Economically Active Population in Hernando Velez Marulanda Survey

<table>
<thead>
<tr>
<th>Category</th>
<th>Total No.</th>
<th>% Total</th>
<th>Heads of Household</th>
<th>% Total</th>
<th>Others</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>14</td>
<td>17.9</td>
<td>3</td>
<td>12.5</td>
<td>11</td>
<td>20.3</td>
</tr>
<tr>
<td>Low</td>
<td>42</td>
<td>53.9</td>
<td>14</td>
<td>58.4</td>
<td>28</td>
<td>51.9</td>
</tr>
<tr>
<td>Marginal</td>
<td>22</td>
<td>28.2</td>
<td>7</td>
<td>29.1</td>
<td>15</td>
<td>27.8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>78</td>
<td>100.0</td>
<td>24</td>
<td>100.0</td>
<td>54</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Refers to total employed EAP in sample population.

### TABLE 146: Levels and Distribution of Monthly Household Income in Hernando Velez Marulanda Survey

<table>
<thead>
<tr>
<th>Income Level</th>
<th>Number</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0 - 499</td>
<td>1</td>
<td>2.9</td>
</tr>
<tr>
<td>$500 - 999</td>
<td>9</td>
<td>26.6</td>
</tr>
<tr>
<td>$1000 - 1499</td>
<td>12</td>
<td>35.3</td>
</tr>
<tr>
<td>$1500 - 1999</td>
<td>3</td>
<td>8.8</td>
</tr>
<tr>
<td>$2000 - 2499</td>
<td>3</td>
<td>8.8</td>
</tr>
<tr>
<td>$2500 - 2999</td>
<td>1</td>
<td>2.9</td>
</tr>
<tr>
<td>$3000 and more</td>
<td>3</td>
<td>8.8</td>
</tr>
<tr>
<td>Don't Know</td>
<td>2</td>
<td>5.9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>34</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: 1976 US $1.00 = Col. $36.31
Note: Min.: Col. $450, Max: Col. $4400, Average: $1336
<table>
<thead>
<tr>
<th>Income/Rent</th>
<th>No.</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 9%</td>
<td>--</td>
<td>-</td>
</tr>
<tr>
<td>10 - 19</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>20 - 29</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>30 - 39</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>40 - 49</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>50 - 59</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>60 - 69</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>70 - 79</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>80 - 89</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>90 - 99</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>100</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>25</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: 2 owner occupied, 5 arrimado and 2 don't knows not included
Average household income: Col. $1504
Average monthly rent: Col. $555
Average rent/income proportion: 36.9%
1. Multi-storey construction on bamboo piles with bahareque, split cane and throw-aways (metal sheets) in the walls and clay tile roof. Top floor access to the street. Barrio Villavicencio.

2. 'Corridor-type' Inquilinato. Rooms for rent leading on to corridors with shared services. Barrio Villavicencio.
Looking down the Otun valley from the railway bridge, Barrio Ormaza on the left and Barrio El Balso (Dosquebradas) on the right. In the wet seasons the houses are periodically flooded.

Barrio Ormaza from the back. This squatter settlement was over twenty-five years old. Overhanging rooms. Sewage and garbage drop vertically into the river but in the dry seasons they can remain for long periods of time.
5. Barrio Ormaza from the front. Brick facades with typical atico to conceal roof. The sign on the house (right) says 'For Sale', and on house (centre) 'Shoe Repairs'. Most of the children, however, are not wearing shoes.

6. Inquilinato in a squatter settlement. White-washed split cane and clay tile roof. A narrow entrance leads down several floors through a warren of tiny, badly-lit, unsanitary rooms for rent. Narrow plot widths due to further subdivision and sale by compra de mejoras. Barrio San Francisco.
RAILWAY SQUATTER SETTLEMENTS


8. Barrio Cuba Carrilera Lines removed. Note juxtaposition of houses of varying quality and at different stages of progressive development.

10. Long-standing traditions of building in bamboo are often used by artisanal builders to solve difficult architectural problems. Barrio Cuba Carrilera.
11. Progressive replacement of artisanal by manufactured materials. The first floor is of brick, the second floor of whitewashed bahareque. If foundations have been laid, the second floor could be similarly transformed. Barrio Cuba Carrilera.


14. Progressive development. This house could have started out like that in photograph 13. Barrio Cuba Carrilera.

15. Architecture without architects. The heterogeneity of artisanal designs is striking within Pereira's squatter settlements. Note the use of manufactured and industrial materials: bricks, cement, glass, iron window frames.
16. Looking down the first stage of Barrio El Plumon from the entrance.

17. Construction of three and four-storey bamboo structures with top-storey access along the embankment in the second stage. Carton and clay tile roofs.
18. Urban 'town-houses' of industrial and manufactured materials at the head of the barrio. Note the provision of a cement slab for future second floor construction.

19. A two-storey town-house of brick and clay tile. The atico conceals the roof and allows geometrical compositions that 'personalize' the house. Note the adjacent rancho is the settlement branch of the Liberal Party.
20. A typical one-storey town-house with atico. The sign says 'For Sale'. Asking price $55,000 (US$1515).

22. A one-storey structure in the peasant style with artisanal materials stands on a tiny plot adjacent to a substantial two-storey brick structure.

24. A typical rural artisanal design on a 14-yard plot. Note the number and height of the doors to maximize ventilation, and bamboo gutters and oil drum to catch rainwater.

25. A typical brick facade with atico. The original structure was similar to that in Photo 24.
26. Progressive Development -- from 'peasant-style' to urban town house. A brick shell encloses the original structure, awaiting the transference of the roof.

27. A rancho lies adjacent to a brick town-house being completed without on-site residence.
28. Socio-economic inequality in El Plumon. Two interiors inside a rancho and an urban townhouse. Note the sewing-machine in the foreground.

29. 'Building-to-order' without on-site residence. Paid worker in the foreground. The barranca has been cleared to the 12.5 m. limit. Valued $100,000+ by the owner.
30. Clearing back the barranca to the 12.5 m. limit was expensive and time-consuming. This resident preferred to build a brick facade first.

31. Clearing back the barranca in the 7 m. cutting.
32. A well-stocked tienda

33. Making a bahareque house.

34. The house as a place of employment. Shoemaking and repairs.
35. A typical private conventional house.

36. State conventional housing in Cuba 4th stage.

37. State conventional housing. Cuba 6th stage.
38. ICT self-help housing in Cuba the original house has been divided into two separate dwellings, 1st stage.

39. The importance of the facade.
   Barrio Cuba 2nd stage.

40. ICT self-help housing in Barrio Kennedy. Note the predominance of industrial materials.
41. Barrio Hernando Velez Marulanda from the railway bridge. Barrio San Francisco in the foreground.

42. Looking across Hernando Velez Marulanda to the railway bridge and Dosquebradas.
43. Note the design changes. The house in the foreground retains the vertical columns, but adds the atico. In the houses in the background the columns have been removed, top-floor windows have been merged, and the entrance shifted to the right.

44. Note on-site ranchos in the foreground, community workshop in the middle ground.
45. Note the heavy concentration of surface boulders.

46. Not an artisanal material in sight.
47. Substitution of materials -- cement block for wood.

48. Perchis Giraldo addresses the General Assembly.
49. Making cement blocks.