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**THE URBAN CRISIS:  
CONCEPTUAL ELEMENTS OF AN ENVIRONMENTAL APPROACH \*/**

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## Introduction \*/

Latin America faces not one but three urban crises: a structural economic crisis whose main impact is felt by the urban economy; an urban crisis as such, involving the phenomenon of concentrated urbanization and the environmental problems which are made more severe by metropolitanization; and, finally, a crisis in the current thinking about the cities, which has clearly proven to be insufficient and inappropriate in the light of these challenges.

One of the major material expressions of today's worldwide economic recession is the exacerbation of what is referred to as the present "urban crisis". This crisis is affecting the metropolises of both the developed countries and, particularly, those of the Third World. The large cities' economies and populations are growing day by day. A large part of development financing is being devoted to the expansion of these metropolises, and the financial aspects of the world recession are therefore directly jeopardizing the future of the large cities. From a long-term standpoint, development may be regarded as the process of transforming the natural environment into an artificial, "constructed" one, and this is nowhere more evident than in large cities.<sup>1/</sup> The future of urban areas will, in large measure, determine the future of the world.<sup>2/</sup>

The contents of this paper are based on the belief that the "international recession", as it is called, is actually a structural crisis in which the recession, financial problems and the more obvious imbalances are merely symptoms which could easily be mistaken for the manifestations of a temporary recession but which are, in reality, disguising a deep-seated long-term crisis of enormous scope whose future course is uncertain. It may well mark, therefore, the end of an expansionary phase of Capitalism.<sup>3/</sup> At a more specific level, today's so-called "urban crisis" may also be signaling the end of an era.

This situation poses a new challenge, and in order to meet this challenge, one of the things that will have to be done is to improve the conceptual tools which have thus far been used to study urban phenomena.

The central hypothesis of this document is that the analysis of urban conditions has traditionally been undertaken on the basis of one-sided and discipline-bound studies of problems in the cities and has thus been marked by a failure to understand these conditions as a totality and, hence, a failure to study the problems of the cities and to construct theories concerning them. The scope of the problems posed by the economic and urban crises has converted this shortcoming into a true crisis in our thinking about the cities. This conceptual crisis is discussed in the following paper, and some possible options are suggested.

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A brief analysis of the nature and magnitude of the present economic crisis is presented in chapter I. Chapter II reviews some of the main elements of the urban crisis, with emphasis on its environmental aspects. In chapter III, a diagnostic analysis is made of the conceptual crisis based on an overview of the various disciplines which have studied the urban phenomenon. Chapter IV sets forth what could be the main elements in an alternative approach to the cities. These elements have provisionally been referred to as the "urban/environmental approach". Care has been taken in using the term "environmental" in view of the indiscriminate use now being made of that word. This is why the term is not dealt with until the final portion of the chapter, following a conceptual discussion of what would presumably be the three main features of such an approach: a) an adequate understanding of urban conditions as a totality; b) a detailed study of the complex relationships existing between spatial forms and social processes; and c) an emphasis on the study of processes rather than problems.

Finally, chapter V presents a discussion of some of the important issues involved in the urban crisis in terms of the concepts introduced in preceding chapters.

## I. THE ECONOMIC CRISIS

Paragraph 5 of the Quito Declaration, which was issued by the Latin American Economic Conference held at Quito from 9 to 13 January 1984, states that: "Latin America and the Caribbean are facing what is the most serious and deep-seated economic and social crisis of this century, characterized by unique and unprecedented features". Despite the extreme severity of the crisis, which moved the countries to convene the above-mentioned regional meeting at the highest political level of recent times, and despite the enormous implications of its economic, social and political costs in almost all the Latin American countries, a real awareness of the seriousness of the present situation still appears to be lacking on the part of public officials, entrepreneurs, scholars and political leaders. It would seem that some sort of mental inertia persists as a legacy of the rapid economic growth seen in the 1950s and 1960s and the financial boom of the 1970s which causes people to cling to the idea that "today we are doing fine and tomorrow will be even better" whereas, actually, the situation has been bad since 1981 and tomorrow it will probably be worse.

In order to assist the reader to understand and internalize the seriousness of the present crisis, it may be helpful to review the dramatic figures given in a recent report by the Executive Secretary 4/ of ECLAC which is, with slight modifications, reproduced below.

a) Latin America's total gross domestic product dropped 3.3% in 1983, after having already decreased by 1% in 1982. These figures are broken down by country in table 1.

b) As a result of this drop and of population growth, the per capita product fell by 5.6% in the region as a whole and declined in 17 of the 19 countries for which comparable information is available.

c) Due to this decrease and those recorded in the two preceding years, the per capita product of Latin America was almost 10% lower in 1983 than it was in 1980, and had thus fallen back to the 1977 regional level. Table 2 demonstrates this situation on a country-by-country basis.

d) National per capita income dropped even more sharply (-5.9%), since 1983 was the third year running in which the terms of trade for the region declined, while it marked the sixth consecutive annual drop in the terms of trade for the non-oil-exporting Latin American countries. The terms of trade for the latter countries thus showed a total decline of 38% since 1977 and, for the second year in a row, were even below the level reached during the worst part of the Great Depression.

e) The slowdown in economic activity was accompanied by a further rise in urban unemployment in almost every country for which relatively reliable data are available (see table 3).

f) In spite of this, inflation sped up enormously, as had also been the case during the preceding three years, reaching record heights. The simple average rate

Table 1

LATIN AMERICA: GLOBAL GROSS DOMESTIC PRODUCT  
(Annual growth rates)

Country	1970- 1974	1975- 1978	1979- 1980	1981	1982	1983 a/	1981- 1983 a/ b/
Argentina	4.0	0.5	4.0	-5.9	-5.4	2.0	-9.0
Bolivia	5.6	5.1	1.2	-1.1	-9.1	-6.0	-15.7
Brazil	11.1	6.4	7.3	-1.9	1.1	-5.0	-5.8
Colombia	6.6	4.9	4.7	2.1	1.2	0.5	3.8
Costa Rica	7.1	5.7	2.8	-4.6	-9.0	-0.5	-13.4
Cuba c/	8.7 d/	6.9	3.1	14.8	2.7	4.0	22.6
Chile	0.9	1.7	8.0	5.7	-14.3	-0.5	-9.9
Ecuador	11.5	7.0	5.1	4.5	1.4	-3.5	2.5
El Salvador	4.9	5.5	-5.4	-9.3	-5.2	-1.5	-15.4
Guatemala	6.4	5.5	4.2	0.9	-3.5	-2.5	-4.9
Haiti	4.7	3.3	5.4	0.3	0.3	-0.5	
Honduras	3.9	5.8	4.8	0.4	-0.6	-0.5	-0.5
Mexico	6.8	5.3	8.8	7.9	-0.5	-4.0	3.1
Nicaragua	5.4	1.5	-9.5	8.7	-1.4	2.0	9.3
Panama	5.8	3.5	8.7	4.2	5.5	0.5	10.5
Paraguay	6.4	9.2	11.0	8.5	-2.0	-1.5	4.4
Peru	4.8	1.5	4.0	3.9	0.4	-12.0	-8.3
Dominican Republic	10.1	4.7	5.3	4.1	1.6	4.0	10.0
Uruguay	1.3	4.1	6.0	-0.1	-8.7	-5.5	-13.9
Venezuela	5.4	6.0	-0.4	0.4	0.6	-2.0	-1.1
<u>Total e/</u>	7.1	4.8	6.2	1.5	-1.0	-3.3	-2.8

Source: ECLAC, on the basis of official statistics.

a/ Provisional estimates subject to revision.

b/ Cumulative variation for the period.

c/ Refers to the concept of global social product.

d/ Relates to the period 1971-1974.

e/ Average excluding Cuba.

/Table 2



Table 2

LATIN AMERICA: PER CAPITA GROSS DOMESTIC PRODUCT a/

Country	Dollars at 1970 prices					Annual growth rates				1981-1983
	1970	1980	1981	1982	1983 <u>b/</u>	1980	1981	1982	1983 <u>b/</u>	<u>b/</u> <u>c/</u>
Argentina	1 241	1 345	1 245	1 159	1 166	-0.5	-7.4	-6.9	0.6	-13.3
Bolivia	317	382	368	326	297	-2.1	-3.7	-11.5	-8.7	-22.2
Brazil	530	958	919	908	844	5.4	-4.1	-1.2	-7.1	-11.9
Colombia	587	824	823	816	802	1.9	-0.1	-1.0	-1.6	-2.7
Costa Rica	740	974	904	801	778	-2.1	-7.2	-11.4	-2.9	-20.1
Chile	967	1 047	1 088	916	897	6.0	3.9	-15.8	-2.2	-14.3
Ecuador	420	732	742	729	683	1.7	1.3	-1.7	-6.3	-6.7
El Salvador	422	432	380	350	335	-11.6	-11.9	-8.0	-4.3	-22.4
Guatemala	439	561	549	515	489	0.7	-2.1	-6.3	-5.1	-12.9
Haiti	123	148	145	142	137	3.3	-2.2	-2.1	-3.1	-7.2
Honduras	313	357	346	332	320	-0.7	-3.0	-4.0	-3.7	-10.3
Mexico	978	1 366	1 436	1 391	1 301	5.5	5.1	-3.1	-6.4	-4.8
Nicaragua	413	341	359	342	338	6.7	5.3	-4.6	-1.4	-0.9
Panama	904	1 154	1 176	1 214	1 194	8.6	2.0	3.2	-1.7	3.5
Paraguay	383	633	665	632	603	7.9	5.1	-4.9	-4.6	-4.7
Peru	659	690	698	683	585	1.2	1.2	-2.2	-14.3	-15.2
Dominican Republic	378	601	611	606	616	3.6	1.7	-0.8	1.6	2.5
Uruguay	1 097	1 423	1 412	1 281	1 200	5.1	-0.8	-9.3	-6.3	-15.6
Venezuela	1 205	1 268	1 230	1 197	1 135	-5.1	-3.0	-2.7	-5.2	-10.5
<u>Total</u>	721	1 007	997	965	911	3.4	-0.9	-3.3	-5.6	-9.5

Source: ECLAC, on the basis of official statistics.

a/ At market prices.

b/ Provisional estimates subject to revision.

c/ Cumulative variations for the period.

/Table 3

Table 3

LATIN AMERICA; URBAN UNEMPLOYMENT  
(Average annual rates)

Country	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Argentina <u>a/</u>	5.4	3.4	2.6	4.5	2.8	2.8	2.0	2.3	4.5	4.7	4.9
Bolivia <u>b/</u>	-	-	-	-	-	4.5	6.2	7.5	9.7	-	12.6
Brazil <u>c/</u>	-	-	-	-	-	6.8	6.4	6.2	7.9	6.3	6.8
Colombia <u>d/</u>	-	12.7	11.0	10.6	9.0	9.0	8.9	9.7	8.2	9.3	11.0
Costa Rica <u>e/</u>	-	-	-	5.4	5.1	5.8	5.3	6.0	9.1	9.9	9.8
Chile <u>f/</u>	4.8	8.3	15.0	16.3	13.9	13.3	13.4	11.7	9.0	20.0	19.7
Mexico <u>g/</u>	7.5	7.4	7.2	6.8	8.3	6.9	5.7	4.5	4.2	6.7	12.5
Panama <u>h/</u>	-	7.5	8.6	9.0	-	9.6	11.9	9.8	11.8	10.4	-
Paraguay <u>i/</u>	-	-	-	6.7	5.4	4.1	5.9	3.9	2.2	-	9.4
Peru <u>j/</u>	5.0	4.1	7.5	6.9	8.7	8.0	6.5	7.1	6.8	7.0	8.8
Uruguay <u>k/</u>	8.9	8.1	-	12.7	11.8	10.1	8.3	7.4	6.7	11.9	15.7
Venezuela <u>l/</u>	-	7.6	8.3	6.8	5.5	5.1	5.8	6.6	6.8	7.8	-

Source: ECLAC and PREALC, on the basis of official statistics.

a/ Federal Capital and Greater Buenos Aires. Average from April to October; 1983, April.

b/ La Paz, 1978 and 1979, second semester; 1980, May to October; 1983, April.

c/ Metropolitan areas of Rio de Janeiro, Sao Paulo, Belo Horizonte, Porto Alegre, Salvador and Recife. Twelve-month average; 1980, June-to-December average; 1983, January-to-September average.

d/ Bogotá, Barranquilla, Medellín and Cali. Average for March, June, September and December; 1983, average for March, June and September.

e/ National urban. Average for March, July and November; 1983, PREALC estimate, March to July.

f/ Greater Santiago. Average for four quarters; 1983, January-to-September average. As of August 1983, information refers to the metropolitan area of Santiago.

g/ Metropolitan areas of Mexico City, Guadalajara and Monterrey. Average for four quarters; 1982 and 1983, estimated annual average for the country as a whole, on the basis of figures supplied by the Secretariat of Labour.

h/ National non-agricultural, except for 1978 and 1979, which refer to the urban sector. The figure for 1980 refers to unemployment in the urban area recorded in the population census and the figures for 1981 and 1982, to the metropolitan area.

i/ Asunción, Fernando de la Mora, Lambarey, urban areas of Luque and San Lorenzo. 1983 official estimate.

j/ Metropolitan Lima. 1978, July-to-August average; 1979, August-to-September; 1980, April; 1981, June; 1982 and 1983, official estimates.

k/ Montevideo. Average for two semesters; 1983, average for January to August.

l/ National urban. Average for two semesters.

/of increase

of increase in consumer prices climbed from 47% in 1982 to 68% in 1983, while the rate weighted by population jumped even more sharply from 86% in 1982 to 130% in 1983.

The extraordinary adjustment effort made by the region was reflected in a series of radical changes in the external sector. Thus, in 1983:

a) Latin America achieved an unprecedented merchandise trade surplus. Merchandise trade, which up until 1981 had regularly shown a negative balance, showed a surplus of over US\$ 9.7 billion in 1982, while in 1983 it generated a surplus of almost US\$ 31.2 billion.

b) This surplus was wholly due, however, to a further spectacular drop in the value of imports of goods, which fell by nearly 29% after having decreased 20% in 1982. This unheard-of reduction in imports was both an effect and a cause of the slump in domestic economic activity and reflected the exceptionally strict adjustment policies that were applied in many countries.

c) The value of exports of goods decreased slightly, even though the volume of exports rose by 7% in the region as a whole and by 9% in the non-oil-exporting countries.

d) Net remittances of profits and interest, which had shot up from US\$ 8.6 billion to US\$ 36.8 billion between 1977 and 1982 for what was more than a fourfold increase, amounted to US\$ 34 billion in 1983. Nevertheless, since the value of exports fell during the same period, payments of interest and profits were equivalent to almost 39% of total external sales of merchandise.

e) As a result of the changes in merchandise trade and in remittances of profits and interest, as well as of the considerable decrease in net payments for services, the deficit on current account plummeted from US\$ 36.4 billion in 1982 to under US\$ 8.5 billion in 1983, thus reaching its lowest level since 1974.

f) This extraordinary decrease in the deficit on current account was accompanied, and to some extent caused, by a no less drastic decline in the net inflow of capital. This inflow, which in 1982 had already fallen to just half of its 1981 record high of US\$ 38 billion, again dropped sharply in 1983, when it amounted to less than US\$ 4.5 billion.

g) Because of this marked decrease in the net movement of loans and investments, and despite the very substantial reduction in the deficit on current account, the balance of payments closed with a deficit of almost US\$ 4 billion; although this was much lower than the US\$ 19.8 billion deficit recorded in 1982, it nonetheless represented a further and dangerous drain on Latin America's international reserves.

h) As in 1982, the abrupt decline in the net inflow of capital meant that much less capital entered the region than was paid out in the form of interest and /profits. Consequently,

profits. Consequently, Latin America, which up until 1981 had received a net transfer of real resources from abroad, made a net transfer of resources to the rest of the world of almost US\$ 50 billion in the 1982-1983 biennium.

i) Another consequence of the decrease in the net inflow of capital was that the external debt amounted over US\$ 300 billion in 1983 even though its growth rate had slackened for the second year in a row.

In view of its severity and extensiveness, the present economic crisis has been compared, with good reason, to the Great Depression of 1929-1932. There is, nonetheless, one fundamental difference. The Great Depression took place in relatively primitive and rural societies, whereas this crisis is affecting relatively modern and urban societies whose populations, as well as their economic, social and political activity, are largely concentrated in metropolitan areas. As a result, the manifestations of the crisis are mainly urban in nature.

The policies on development and external borrowing followed in preceding decades have created conditions of extreme dependence and vulnerability in the countries of the region. Under these conditions, the international economic crisis made it necessary for the countries of the region to adopt drastic adjustment policies of a recessionary nature with a view to balancing their external accounts and keeping their economies open, and these policies have further exacerbated the crisis.

In specific terms, the above policies have taken the form of harsh monetary and financial restrictions and public spending cuts which, in turn, have resulted in a decline in private-sector income and expenditure. The decrease in expenditure has had a particular impact on investment, which is more flexible and variable, and an even greater one on construction. This has resulted in a huge increase in unemployment, underemployment and marginality and a drop in the population's real income and wages, especially those of low-income sectors. This has given rise to the suspension of payments for public services (water, sewerage, garbage collection, electricity, fuel, telephone service, etc.), and to delays in rent and mortgage payments. The amount of state, municipal and other tax payments which are in arrears is also extremely high.

All these factors result in a larger fiscal deficit which, in turn, makes it necessary to reduce State contributions to the municipalities and to cut back on social spending (income transfers). A true vicious circle of recession is therefore set up whose primarily urban manifestations are mainly concentrated in metropolitan areas, which are the areas that require the greatest amount of financial resources in order to function.

One of the reasons for the lack of awareness about this extremely serious situation is that it is rather naively assumed that conditions will soon improve and return to the "normality" of past decades. The real outlook, however, offers absolutely nothing to support such expectations. The conditions for the long-term growth of the central and international economies have deteriorated to such an extent that it would be unreasonable to expect to regain the rates of expansion seen during the postwar years at any time during what remains of this century.

/The situation

The situation in the international economy in so far as trade, investment and financing are concerned, is not a promising one either. This is compounded by the enormity of the external debt, whose servicing seriously jeopardizes the possibilities for even minimum growth in the economies of the region. The most optimistic projections go no further than forecasting the reestablishment of pre-crisis levels of economic activity by the end of the decade.

The crisis and the problems affecting urban areas must be considered within this context. Its seriousness can be even more fully appreciated if it is remembered that this crisis is the result of several decades of exceptional economic growth, of a plentiful supply of external and domestic financial resources (both public and private) and of large investments and expenditures in urban and especially metropolitan areas. We might well ask ourselves what to expect in the future, as these problems and the crisis grow worse, given the fact that, rather than increasing, private and public resources, both domestic and external, will most probably remain somewhere near their present low levels and may even fall still further.

## II. THE URBAN CRISIS

Heavy urban concentrations (usually in one city per country) are a singular feature of the urbanization process in Latin America which sets it apart from what is occurring in the rest of the world. The concentration of the population has been increasing rapidly, and demographic projections indicate a continuation of this trend. Thus, whereas the world population doubled between 1920 and 1980, the urban population quintupled (from 360 million to 1 807 million). Latin America had 20 million urban inhabitants in 1920 and will have 466.2 million in the year 2000. Of that number, 50% will be living in cities of one million or more inhabitants, whereas only 23% of the urban population did so in 1950.

In 1950, 11 of the 15 largest urban centres in the world were in developed countries; by 1975, only eight were, and it is estimated that this figure will have dropped to only three by the year 2000. This provides an illustration of the increasing magnitude of the metropolitanization process in the Third World. It is projected that by the year 2000 there will be 14 cities which will be larger than any city that was in existence in 1950, and the two largest of these will be in the region (Mexico City, with 31 million inhabitants and Sao Paulo, with 25.8 million).

What is referred to as the Third World's present-day "urban crisis" is associated with this runaway growth of the large cities and the resulting level of urban concentration. The increase in the scale of traditional urban problems is generating the factors (either real or apparent) which go to make up the phenomenon referred to as the "urban crisis":

a) The problems appear to be irreversible. The optimism which has been founded upon the dynamics of the modern enclaves of the urban economy and urban society is fast being stripped away by the rapidly increasing proportion of urban problems.

/Thus, quantitative

Thus, quantitative factors are giving rise to a qualitative change, at least in expectations, if not in reality. For example, today there are few people who would still argue that urban marginality is a temporary phenomenon which is consubstantial with the modality of modernization in Latin America, i.e., the transition from a traditional rural society to a modern urban one. This phenomenon is now recognized as being of a structural and ongoing nature and, therefore, solutions cannot be expected to come exclusively from outside the marginal sectors themselves.

b) The problems appear to be unsolvable. From the standpoint of the traditional approach taken to urban planning, its assumptions and its technical tools, the problems of the large third-world cities would appear to outstrip society's capacity for action. For example, conventional housing policies based on the concept of a housing deficit entail an assumption that the housing problem does not have any one overall, definitive solution.

c) Long-standing problems take on new facets which exacerbate the situation. These new factors stem from the increasing proportions and severity of these problems. Whether because of an increase in population density as a result of population growth which exerts pressure on certain areas and on their limited supplies of resources or because of the expansion of urban centres as a result of this pressure, there has clearly been a deterioration in certain aspects of the quality of urban inhabitants' lives which are closely linked to environmental problems (e.g., the congestion of downtown areas and the air pollution to be found there, worsening traffic conditions and reduced access within cities, the physical deterioration of overcrowded housing, and insufficient public service facilities, especially for drinking water and sewerage).

d) The environmental viability of large cities and of their continued growth becomes an issue. Cities require an inflow of energy, foodstuffs and raw materials from nearby or remote natural ecosystems in order to function. Urban growth involves increased demands on and intervention in such ecosystems. This, in turn, leads to the modification and possible destruction of the ecosystems upon which a city draws. As a result, the costs involved in obtaining the necessary resources and energy increase; difficulties are encountered in resolving the problems posed by the need to transport an increasing volume of materials, energy and urban wastes, and this also involves additional costs; and, finally, all the foregoing factors produce a steady rise in the cost of living in urban areas which, in turn, results in a deterioration of related elements that go to make up the quality of life.

There has usually been a tendency to see a causal relationship between the urban crisis of the Third World and the large size of its cities, the high levels of urban concentration this represents, and the rapidly increasing magnitude of these phenomena. Obviously, the urban crisis is connected with these conditions. However, the mere concomitance of certain factors (in this case, urban size and the urban crisis) is not sufficient proof of causality. Indeed, a number of distinguished authors (including Coraggio and Currie) have come to the defense of large Latin American cities, which they see as "storehouses" of a range of social capabilities and potentials which could help carry these countries over the threshold of underdevelopment.<sup>5/6/</sup> When viewed from this angle, the problems which have collectively come to be referred to as the "urban crisis" would not appear to be caused by the size of such cities, but rather by qualitative factors associated

/with the

with the distribution of resources, power structures, income distribution, access to urban land, the geographic location and make-up of cities and, in general, prevailing styles of development along with their historical and territorial manifestations. In Currie's opinion, too many of men's problems have been attributed to urbanization, which is in itself only a manifestation or consequence of much more deeply-seated forces that shape our world and that so far, have created problems faster than we can resolve them.<sup>7/</sup> Moreover, in dealing with the present urban and economic crises, the metropolises (seen as reservoirs of man's capabilities and potentials) may constitute the most important forces of all in reorienting the costly and regressive pattern of growth being seen in Latin America today.<sup>8/</sup>

Regardless of which views ultimately prevail in the above controversy (which, either way, has major policy implications as regards, for example, efforts to bring about the deconcentration of urban areas), large cities are an irreversible phenomenon. This does not mean that from now on the only possible form of population grouping will be the large city, but simply that today's big cities will continue to be just that. The reasons for this are mainly demographic and economic in nature. In so far as the demographic reasons are concerned, it should be noted that as the importance of migration as a factor in urban growth declines, natural population growth in the cities is playing a more and more important role and, given the large size of such cities at present, it accounts for considerable increases in the population in absolute terms. For example, an annual natural population growth rate of 2% in Mexico City means that approximately 300 000 new inhabitants swell its ranks each year. On the economic side of the situation, the large numbers of problems which mainly affect large cities, in combination with the territorial concentration of power, cause a growing percentage of public spending to be allocated to these cities. The effect of this is heightened by the fact that private investment is also concentrated in the cities due to the economies that can be achieved in large population centres. Large cities are thus endowed with a type of self-perpetuating mechanism. In practical terms, this mechanism takes the form of migration, which adds its effect to the already considerable rate of natural population growth.

### III. THE CRISIS IN CURRENT THINKING ABOUT THE CITIES

The cities and especially the metropolises of today are manifestly complicated phenomena. In a very thought-provoking analysis,<sup>9/</sup> Harvey posits that the difficulty lies not only in the inherent complexity of cities, but also in an incorrect conceptualization of the situation. Perhaps the main conceptual problems in this regard may be attributed to academic and professional specialization in specific aspects of the cities. Sociologists, economists, geographers, architects, urban planners, etc. appear to cloister themselves in their special conceptual worlds and to devote their efforts exclusively to the study of certain aspects of the problem which relate to their realm of knowledge. In this connection, Harvey refers to a well-founded statement made by Leven,<sup>10/</sup> who has said that much of the research work now being done is more concerned with the problems in the cities than with the problems of the cities. Harvey concludes that each discipline, based on its particular outlook, uses the city as a laboratory in which it tries to prove certain hypotheses and theories, but no discipline has hypotheses and theories about cities as such.

/This distinction

This distinction between the study of problems "in" and "of" the cities brings us to the heart of the problem as regards our understanding of large cities, an understanding which is essential if we are to be successful in our attempts to resolve the problems that have been identified above as being components of the urban crisis.

The discipline of urban sociology, which originated in the Chicago school of sociology early in the century and which, inter alia, has drawn from the field of natural ecology, is devoted to the study of social pathologies and institutions in the cities. Recurring topics include delinquency, mental and moral disturbances, alcoholism and drug addiction, the emergence of "marginal man", sects, and characteristics of the family unit. For this discipline, cities have come to constitute a sort of "spatial receptacle" which contains the social phenomena being studied. Generally speaking, the study of such social phenomena does not take their spatial dimension into consideration, except when that dimension is included in a descriptive treatment of what has come to be the "factorial ecology" tradition of urban geography. However, it would not be giving the discipline its due if we were to say that this sociological approach regards the spatial totality of cities as no more than a "receptacle" which contains the social phenomena it studies. One sociological tradition, whose most prominent exponent is perhaps Emile Durkheim, sees a relationship between the two levels. In Castells' opinion,<sup>11</sup> urban sociology regards the city as an independent variable. The increase in the size and density of large urban centres (a spatial phenomenon) produces significant changes in social structure. According to Durkheim, it causes societies based on relationships of "mechanical solidarity" (or solidarity based on similarity) to make the transition to a basis of "organic solidarity". Indeed, sociologists in the tradition of the Chicago school devote their efforts to studying processes of social disorganization and not --as Castells states-- "everything that goes on in the cities".

Geography --another discipline which has been concerned with the cities-- can be divided into two main stages. In the approach taken by the first stage (that of traditional geography), reality is seen as being made up of spatially-delimited parts, such as regions and urban districts, and all that is required is to describe these units in the greatest possible detail. The underlying concept is one of absolute space; the events studied by traditional geography are recognized as unique in so far as they occupy a unique position in space.<sup>12</sup> This traditional approach, when applied to cities, focuses attention on the "microscopic" differences between various parts or spaces within the city, thus attributing a great deal of importance to the form of urban areas.<sup>13</sup> According to this approach, a city as a whole is no more than the sum of its painstakingly-described parts.

In a second stage (perhaps goaded on by what has been called the "quantitative revolution", which made it possible to gather and process great masses of data), geographers began to question the concept of absolute space and to devote attention to the relationships among different types of phenomena (a concept of relative space). At this point, economic and social factors begin to be taken into express consideration. However, although it is true that the social order is taken into account, it is seen as a totality which influences its component parts, with the latter being regarded solely as localized and interrelated geographic phenomena.

/Thus, in



Thus, in reference to urban geography, Herbert and Johnston <sup>14/</sup> describe the urban landscape as "a mirror which reflects the society that sustains it". Hence, the geography of "relative space" postulates the existence of spatial relationships, processes, structures and laws but does not associate them with theories about society, thus running the risk of stopping at mere phenomenological description and of reaching conclusions which misrepresent or distort reality.<sup>15/</sup> At this second stage, therefore, urban geography is the study of spatial phenomena, relationships and structures, while the social system is regarded as being no more than the whole or totality which originates them.

Within the field of economics, some important steps have been taken towards the explicit incorporation of spatial aspects, and this has given rise to a series of concepts that may be grouped together under the term "spatial economics"; some of these concepts focus on the cities, while others concern regional spaces. These include: the theory of location, based on neoclassic economics, which primarily focuses on the intra-urban distribution of businesses and industries; the economics-based transport models of Lowry, Penjersey and Echeñique, et al.; the "new urban economics" which consists of microeconomic models of overall urban balance; and, in regard to regional spaces, the economic base theory (or the theory of regional growth) and the theory of development enclaves. In general, the contributions made by spatial economics take the form of concepts which draw upon traditional elements of economics (especially marginalist economics) and which then incorporate another variable into the analysis, i.e., space, whether it is regarded in terms of transport distances and costs or as a focal point that serves as a basis for the organization of economic processes. Unlike the two disciplines discussed earlier, this obviously represents a step forward in understanding the relationships between the spatial and economic dimensions of reality. It should be remembered that urban sociology studies social phenomena which occur in the cities, while urban geography (at its second stage) examines the spatial "reflections" of urban society.

The progress made in this regard by spatial economics is, however, both limited and one-sided. At the intra-urban level, spatial factors are regarded solely as an element of friction or a cost associated with the various distances which alternative locations involve. At the regional level, the implicit assumption is that a symmetrical (and somewhat simplistic) relationship exists between economic processes and spatial forms or geographic sites. The theory of the economic base is thus founded upon the assumption that production and, most of all, that part of the economy's surplus supply that is available for regional exportation will, at an initial stage, help fuel the emergence of an industrial sector in the same location at a later stage; but this theory does not take into account the network of economic power relationships which siphon off part of these surpluses to other locations. For its part, the theory of development enclaves does not achieve a good synthesis of its economic (Perroux) and geographic (Boudeville) inputs, and thus ends up positing a symmetrical relationship between two elements which the theory attempts to differentiate, i.e., cities and development enclaves.

In respect of intra-urban factors, which is what is of interest here, spatial economics entails another conceptual problem as well. Generally speaking, this discipline either undertakes partial-scope studies in a given city of a sectoral

/nature (transport,

nature (transport, industry, etc.), while disregarding the overall unit represented by the city, or conducts studies in which the city is regarded as the sum total of a series of individual decisions, in the tradition of microeconomic analysis. Finally, it should be pointed out that these studies, which are closely linked to economic models, operate on the basis of a formal time-frame rather than a historical one, with the result that an ahistoric analysis is produced which does not reflect the rationale and individuality of actual cities such as the Latin American metropolises.

Architects' increasing interest in cities has, to an overwhelming degree, focused on the physical dimension of the urban phenomenon, the explicit or implicit assumption being that social behaviour and structures can be modified by reorganizing a city's spatial forms. It should be recalled that urban geography, at its second stage, does just the opposite, i.e., regards spatial factors simply as "reflections" of the social order. Ironically, both these approaches have a common starting point: the idea that spatial elements, whether they are seen as forms or as a system of relationships, exist in their own right independently of social processes. This ambition of modifying social behaviour by changing physical structures may have its origin in the tradition of urban planning. In Browne's view,<sup>16/</sup> the land-use regulations on which urban planning work is based consists of the management of the available supplies of materials. Hence, this accretion of short-term planning actions gradually creates the illusion that social processes may be changed or directed through the control of spatial forms. This disregards the fact that, in the long run, the dynamics of social uses (resulting from the division of labour and other economic and social processes) are what determines what supply of materials will be available, both in terms of its increase through urban investment and in terms of its use by social groups and sectors of activity within the cities.

The members of this discipline also, generally speaking, perceive today's cities as being disorganized, irrational and chaotic, and they therefore propose that radical changes be made. No attempt is made to gain a scientific understanding of actual conditions or to isolate the underlying causes of this apparent disorganization. It is therefore a normative approach which stresses what "should be". It cloaks many values and ideologies which have their origins in other sets of conditions, and the members of this discipline then simply attempt to apply them to the region.

The approach taken to the cities by urban architects has traditionally been (and continues to be) concerned with the analysis of segments of urban space (such as neighbourhoods, districts, areas designated for transport flows, recreational areas, etc.), the regulation of their use and their rehabilitation. This approach, which is based on the analysis of cities and the taking of action upon them (with emphasis on the latter, given the normative nature of this discipline), results in the design of master plans for districts or sections of the city and urban investment programmes, especially of a type directed towards renovating and remodelling given neighbourhoods. These forms of urban action have two important features: they entail an implicit perception of the city as an aggregation of spaces having specific uses; and they belie a reactive style which is unable to rise above short-term exigencies.

/In respect

In respect to the first characteristic, this urban-architectural approach bears some similarity to the first stage of urban geography, in which reality is viewed as being made up of different parts that should be painstakingly studied (or acted upon) on an individual basis. This atomistic approach is buttressed by current trends in planning at the local level (municipalization), which are also apparent in the present idées-force of local participation and "small is beautiful".

As regards the latter feature (reactive planning), this approach operates on the assumption that the sum total of partial solutions (consisting of the gradual substitution of order and rationality for chaos) will eventually resolve the overall crisis of the cities. In addition, this form of urban action often exacerbates the social segregation and heterogeneity of urban spaces. This is due to the fact that the pressing needs which arise as constructed spaces are filled up (and to which this style of planning reacts) are related to consumption, which, in turn, is linked to income levels.

The urban-architectural view of the cities involves more than just the atomistic scheme discussed above, however. It also accounts for a number of significant overall approaches which stress the city's identity as a totality. One prominent example is the "garden-city" movement led by Ebenezer Howard in the late nineteenth century, whose roots appear to go back to Leonardo's plans for a model city, with its municipal gardens and pedestrian areas, which has undeniably had an influence on the present discipline of urban design. This comprehensive approach to the cities can also be seen in the experiments with "new towns" in England and other regions and in the formulation of urban master plans. This concept of totality, however, is not founded upon an understanding of real cities or of the urban phenomenon as a dynamic process, but instead bears a closer resemblance to the idea of a work of art which has an (aesthetic) sense of order only as a completed work. This concept does not recognize either the physical or the social dynamics of the urban phenomenon. For the same reason, the ongoing search for a definitive point of equilibrium belies an intellectual attitude which is divorced from urban reality.

Finally, a younger discipline which is also concerned with the city is that of urban planning. Originally derived from urban architecture, this discipline now incorporates elements from the other disciplines discussed above into its treatment of the city. Thus, urban planning studies are a type of hybrid which holds out the possibility of overcoming the shortcomings of the disciplinary approaches discussed earlier and of gradually shaping an interdisciplinary style which opens up new opportunities.

In short, the above-mentioned approaches to the study of the cities reveal two main faults: an incomplete or insufficient understanding of the relationships existing between the two main dimensions of urban reality (i.e., spatial forms and social processes 17/ 18/ or available supplies of materials and social uses 19/); and an inadequate concept of the urban phenomenon as a totality. These two defects are summed up by the previously-mentioned statement that urban studies have traditionally been studies of problems in the city rather than of the city.

As regards the first deficiency, these disciplines usually end up focusing on one of these two dimensions, no matter how extensive their overall consideration

/of the

of the relationships between the two. Examples of such one-sided approaches are urban geography (in both of its stages) and urban architecture which mainly concentrate on the physical dimension, as well as urban sociology and, to a large extent, spatial economics, which focus on the social dimension (in the broad sense of the term). What all these disciplines have in common is that they regard spatial forms as a variable which is separate from the social sphere (rather than as one of the dimensions of social processes), whether these spatial forms are seen as a mere "reflection" of social processes or as a determining factor of human behaviour.

As regards the second shortcoming, these same disciplinary approaches to urban studies fail to achieve an understanding of the city as a totality, even though they posit the need to do so, because they work with (often implicit) concepts of totality which are inappropriate for this purpose. There are two concepts of totality. The first, which might be referred to as "atomistic totality", sees the whole as the sum of its parts and stresses the importance of those parts as being what determines the identity of the whole. Since there is no understanding of the origin of these parts nor of the laws governing their future evolution (it is simply stated that the parts are there, and the researchers then proceed to study them on a descriptive basis), there is no possibility of understanding the dynamics of the whole (in this case, the city) inasmuch as it is seen as no more than the sum of its parts. This is the static descriptive approach to the cities of urban geography (in its first stage) and urban architecture. The second concept of totality might be termed that of an "emerging totality". Unlike the first, this concept sees the whole as having its own identity, with the parts being determined by the whole and having no ability to act upon it. Harvey <sup>20/</sup> states that, according to this concept of an emerging totality, the explanation for the phenomena in question is to be found in the laws that govern the behaviour of the totality, which can function without reference to its parts. This concept of an emerging totality is present in the studies produced by the Chicago school of urban sociology and in those of urban geography at its second stage. If the component parts are seen as being unable to act upon the whole, then the transformational dynamics of cities would not be the result of their internal dynamics but rather of exogenous factors. There would therefore be no point in studying the internal dynamics of cities as a way of understanding the evolution of a city as a whole.

#### IV. TOWARDS A COMPREHENSIVE AND DYNAMIC INTERDISCIPLINARY APPROACH

The essential element, from a practical standpoint, required of an approach that goes beyond the tradition of studying problems in the cities is that it should offer new possibilities for resolving those problems seen as constituting the urban crisis. The present worldwide economic recession, which a majority view as being of a structural nature, constitutes an aggravating factor in the urban crisis of the Third World. This certainly cannot be overcome by relying on an inflow of external resources, as might have been possible in the past. The main thrust of efforts to overcome the situation will necessarily have to be based on the utilization of the existing resources, abilities and potentials of the countries themselves.

/The urban

The urban crisis therefore appears to correspond to the threshold of a qualitatively different stage in world economic development. Moreover, the chances of resolving this urban crisis will very probably be determined by the countries' ability to react and to implement new economic and social orders in response to the economic crisis.

A. Requirements of an approach to the cities

Based on the foregoing analysis, the features which an approach of the cities must have if it is to offer new ways of overcoming the urban crisis would be the following:

a) It must achieve an accurate understanding of the relationships between spatial forms and social processes as the two dimensions of urban reality. To this end, the interdisciplinary focus used in addressing this reality must be deepened and refined.

b) It must arrive at a suitable characterization of the city as a totality whose identity is attributed neither to its parts nor to an "emerging" whole (since this tends to make the analysis a static one). A new concept of totality, that of a "relational totality", will therefore have to be used. In this case, the identity of the whole would be determined by the laws governing the relationships among its parts. Thus, the parts and the whole may change, as they in fact do, without losing their identity. In the view of Piaget, what matters is not any given element --nor a whole which is "established" as such, without there being any possibility of specifying just how this is done, but rather the relationships existing among the various elements, or in other words, the procedures or processes by which they are formed; the whole is then the product of these relationships or formations, whose laws are the laws of the system.<sup>21/</sup>

c) It must stress the analysis of processes over that of situations or problems, viewing the study of the latter as being largely based on social value judgements, political contingencies or "fashions" rather than on a scientific effort to understand the nature of cities. The term "problems" is understood to refer to an entire situation or aspect of reality which is perceived as being unsatisfactory by a social force or group that is capable of taking action. Such dissatisfaction may stem from normative or ideological concepts about how a society should operate, from fear about the future or from values of solidarity and equality among men, or it may stem from a perception of a direct threat to individual or group interests. The terms "process" is understood to mean any ongoing and significant change in the internal organization of the overall phenomenon being studied (in this case, the city).<sup>22/</sup> This approach makes it possible to identify the laws of change governing the totality's continuous restructuralization instead of attempting to discover the "causes", in an isolated sense, based on a presumed atomistic association or the identification of stages or descriptive laws which would govern the evolution of totalities independently of their parts.<sup>23/</sup> The foregoing does not mean that problems or situations should not be dealt with. The question is how to go about doing so. In this respect, the idea of "mechanisms" appears to be a promising means of relating problems or situations to their underlying processes. In studying a given problem, attention should then be focused on the mechanisms involved, these being understood

/as the

as the specific processes which produce the problems. Studying problems by linking them to the relevant processes makes it possible to overcome the static, descriptive and normative bias of the traditional, problem-based approach to the study of the cities.

B. An interdisciplinary approach and the relationships between spatial forms and social processes

The different approaches to urban studies taken by the disciplines discussed in chapter II assume, implicitly or explicitly, the existence of relationships between spatial forms and social processes. Generally speaking, the concepts they employ are ~~inadequate or inappropriate~~; the root cause of this is that spatial elements are seen as something that can be defined and dealt with independently of social factors, i.e., as an external variable, albeit related to social variables. This unsatisfactory concept has two main forms: in one, spatial factors are seen as a dependent variable or a reflection of social factors; in the other, they are seen as an independent variable which can be manipulated in such a way as to influence social factors. The fact that both of these hypotheses (each apparently excluding the other) have their origin in the same conceptual flaw is illustrated by the change in the position assigned to spatial factors, inasmuch as they usually appear in diagnostic analyses as a dependent variable, whereas their position becomes the reverse when they are regarded as a variable that can be manipulated in order to influence social factors. Thus, urban geographers' descriptive analyses, in which spatial factors are seen as mirroring social factors, can be employed in urban architects' hypotheses about the "urban landscape" as a means of acting upon or influencing urban society.

This position is not only open to criticism because of the theoretical errors it commits, but also because of its ideological implications. The isolation of spatial factors as an independent (explanatory) variable of development necessarily involves an assumption of the existence of some type of symmetry between spatial and social forms.<sup>24/</sup> This is equivalent to depicting and dealing with social differences as no more than mere territorial differences.

If the oversimplifications involved in these initial attempts to understand the relationship between spatial forms and social processes are to be done away with, it would appear necessary to resort to ontology and to attempt to determine the characteristics of reality or existence. From this standpoint, reality is made up of at least four strata: a) inert matter, b) organic life, c) the psyche and d) historical, social life. These categories are not meant as a denial of the unity of the real world; on the contrary, they represent the form assumed by this unit (as opposed to a unit based on homogeneity). The relationship among the strata is one of successive inclusion of the lower (first) strata into the upper strata, not the reverse. If it were possible to reverse this order, then heterogeneity would be transformed into homogeneity. According to Hartmann,<sup>25/</sup> then, space and time have absolutely no real existence outside or apart from the real things and processes of which they are the real dimensions. Space (and time) should not be regarded as a receptacle for things, but rather as what things are made of.<sup>26/</sup>

/All "objects"

All "objects" of social reality (the uppermost stratum) --people, groups, a given society-- also have reality in the other strata. Focusing an analysis solely on the uppermost stratum is an abstraction. Abstraction is a useful tool for gaining scientific knowledge, but it is an error if the analysis is not then reversed so as to return to the totality, i.e., to the concrete and real. In this connection, the two main mistakes made by social scientists are: a) to turn the spatial determinants of any social phenomenon into an abstraction; and b) to attempt to parcel out social reality into different sciences which demand real objects of study "of their own". These two biases stem from the fact that the strata of existence (abstractions) are confused with real objects or formations (the concrete). Two of the consequences of these errors are:

a) The placement of limitations on the possibilities of knowledge and scientific explanation. For example, the reader should consider the fact that the internal reality and survival strategies of the poor in Latin American cities are closely related to the spatial dimension of their world: the neighbourhood, conditions influencing access to the downtown area of the city, the ownership of a plot of land, etc. One of the main shortcomings of the extensively-used sociological and economic concepts of marginality and the informal sector, respectively, has been that the spatial dimension is left out of their theoretical definitions of the object of study. The omission of the spatial dimension also makes it more difficult to understand that certain phenomena which have occurred in the past cannot be repeated. The romantic idea of returning to self-sufficient, unstratified, agrarian societies as an escapist solution for the problems of contemporary civilization is one example. Assuming that a definitive feature of Capitalist society is private ownership of the means of production and the resulting exclusion of the bulk of population (whose labour goes into what is produced) from such ownership, some utopians have maintained that private ownership should be preserved but should be extended to the entire population. If this were accomplished, the second characteristic (i.e., the exclusion of the bulk of the population) would disappear. This combination of ownership and democracy, in which the landowner is a worker as well, would represent a return to the rural societies of the past. There are two spatial phenomena which make this proposal unrealistic: present population density would make it difficult to find property or a plot of land for each producer/worker; and the larger scale of production used in our times (which is the basis for the increase in the quality of life that has occurred over time) are not compatible with this extreme social and spatial fragmentation of production.

b) The wasting of energy on attempts to isolate those elements that correspond to each discipline, thereby relegating the truly important objective to a place of secondary importance (i.e., the solution of research problems or the answering of scientific questions which often go beyond the bounds of any given discipline). In the opinion of Popper, a distinguished philosopher of the science, "we do not study subjects, but rather problems, and problems may go beyond the bounds of any object of study or discipline". Therefore, "... classification into disciplines is relatively unimportant... We study problems, not disciplines".<sup>27/</sup> The course suggested by Popper points in the direction of interdisciplinary study and research. This is particularly evident when the object of study is the relationship between spatial forms and social processes.

/Thus far,

Thus far, we have explored the difficulties inherent in regarding the strata of reality as if they were real objects or formations. Stressing the study of the relationships between spatial forms and social processes dispenses with this unwarranted fragmentation of reality. Nonetheless, the need to undertake such studies on an interdisciplinary basis is one thing, and the conceptual difficulties it poses are another.

These difficulties stem from the fact that the category "spatial factors" is not a real category in all the strata of existence. According to Hartmann, once one moves up the scale beyond organic life, there is no separation or extensive-spatial relationship whatsoever; the life of the mind (and social-cultural life as well) has no existence in space; its contents are not spatial formations. In contrast, time is a real category at all levels of reality.28/

This does not mean that the upper strata bear no relation to the spatial aspects of the two lower strata (inert matter and organic life). This is because the upper strata can only exist within formations or objects encompassed by the lower strata, such as man or a society, for instance.

"... man is himself a stratified entity, an organic, psychic and spiritual entity; indeed, not even the lowest stratum is lacking, since man is ultimately a material entity as well". Nonetheless, it is necessary to differentiate between a stratum and a real object or formation. Thus, "a psychic being does not contain organic processes within it, but man does indeed contain them... all the lower categories are constituent parts of him. He is subject to gravity, pressure, the conversion of energy, just as he is subject to hunger, death and the creation of life".

By way of analogy. "a population group has its own living space, its own organic life process, similar to the life of animal species, including self-reproduction and the succession of generations; it also has its special type of psyche, and it is only above all this that its spiritual life takes place".29/

Consequently, the problem is to understand and ascertain the nature of the relationships existing between the upper strata and the spatial aspects of the lower strata.

Throughout these pages, these links are referred to as the "relationships between spatial forms and social processes".

In order to delve more deeply into these complex links, it may be helpful to identify at least three of the forms they take:30/

a) Support and conditioning

It has already been pointed out that the strata are not independent of one another and that the upper strata rest upon the lower ones. In other words, the upper strata exist within formations or objects which are necessarily a part of the lower strata. This is not only a supporting relationship but also one involving

/conditioning, in



conditioning, in the sense that the aspects of the lower strata (specifically, their spatial aspects) place limits and restrictions on the life of society. Arnold Toynbee argued that the size of the medieval city and of its surrounding rural area of influence was determined by the distance which a farmer and his horse could travel in order to sell his products in the city and still be able to return to the farm the same day and by the number of people which this amount of land could support. The area involved might vary, but only to a certain extent, as a result of climatic factors, the type of soil and the nature of basic local products.<sup>31/</sup>

b) Restructuring

It would be unwarranted to use the above analysis of the supporting and conditioning relationship as a basis for concluding that the upper levels of existence are no more than constructs of the lower levels.<sup>32/</sup> According to Hartmann, basic conditioning from below coexists within the stratification alongside the unassailed autarky of the upper strata in relation to the lower strata; whenever a process of restructuring is taking place within the stratification, the lower category is no more than a source of "material" for the upper category. Nonetheless, Hartmann goes on to say that the upper category cannot shape whatever it wishes out of the material supplied by the lower category, but can only restructure it.<sup>33/</sup> If the conditioning relationship described above were to function in absolute terms, then today's cities could not have grown beyond the size of the medieval city as analysed by Toynbee. Restructuring is, in this case, linked to society's ability to improve upon its technology (specifically, that used for transport and the storage of foodstuffs). This is why the powerful conditioning or influence which distance exerted on the size of medieval cities has now lessened, although it has not disappeared. As a result of a historical process of restructuring, the spatial limitations associated with distance are now different and less forceful.

Obviously, this restructuring is not wholly contingent upon technological progress, but also on the forms of social organization which determine the specific uses made of technical inventions. Given the same level of technological progress, different production patterns and development styles give rise to specific ways of restructuring spatial forms. For example, in Latin America neocolonialism, which functioned on the basis of a production pattern that was oriented towards the exportation of raw materials, in combination with the technology of that era (railways and the mechanization of production), gave rise to a spatial structure of settlement, production and transport of an inland-coastal type. In the central countries (the "owners" of technological know-how), spatial restructuring displayed different features as a result of those countries' specific development styles and production patterns.

c) Spatial awareness

According to Hartmann,<sup>34/</sup> despite the fact that the upper levels of existence (the life of the psyche and historical, social life) do not in themselves occupy space, the faculty of awareness entails a knowledge of the world which is a spatially-oriented type of knowledge. This type of spatiality --again, according to Hartmann-- is an indirect spatiality consisting of a subjective relationship

/between awareness

between awareness and the spatial categories of the lower strata of reality. This particular type of relationship between spatial forms and social processes is linked to culture and is manifested as feelings and attitudes of territorial belonging and identification. Social geography analyses subjective territorial identification by focusing on the individual and postulates that the differences that may be observed among individuals are due to such factors as the size of a settlement, its density, the length of time an individual remains in the same place, his social class and age.<sup>35/</sup> The sociology of modernization, on the other hand, also places importance on the phenomenon of territorial identification, but at the societal level. In analysing the transition from traditional society to modern society, it attributes significance to the process of overcoming "localisms" (defined as forms of identification with the immediately surrounding territory) and their replacement by a feeling of national belonging. Harvey places a great deal of importance on such "spatial awareness" as an intellectual quality which scholars should develop so that they can advance beyond the tradition of studying problems in the cities and proceed to the study of the problems of the cities. The possibility of arriving at a general theory of the cities depends, in Harvey's opinion, on scholars' ability to see some sort of relationship between the social processes in the cities and the spatial forms which the cities take on. This involves bridging the gap between scholars with a "sociological" imagination and those having a spatial awareness, or "geographic" imagination.<sup>36/</sup>

### C. Towards a comprehensive and dynamic approach

In so far as the development of such an approach is concerned, interesting results can be obtained by applying ecological concepts in an attempt to understand social phenomena in general and urban phenomena in particular. The most significant work done in this area may perhaps be the studies conducted by sociologists of the Chicago school early in this century, two prominent members of this school being Mac Kenzie and Burgess. Working in the field of what they called "urban ecology", these scholars applied concepts borrowed from ecology (e.g., segregation, invasion and succession) to urban populations with a view to describing them and explaining the changes they underwent. Decades later, under the term "human ecology", this approach was broadened to include the overall operation of society, rather than just urban spaces.

Specifically, the two advances discussed below are perhaps the most important contributions made by these approaches:

a) Their ability to examine a wide range of interrelated phenomena at one and the same time. This "relational mentality" undoubtedly makes a significant contribution to the development of comprehensive approaches to such complex subjects as urban phenomena which would go beyond the tradition of specific and one-sided studies of problems in the cities.

b) Their interdisciplinary nature. The concept of ecology (which, moreover, is relatively new, having been developed late in the nineteenth century), which focuses on the relationship between species and territories, has given birth to a discipline that is, in itself, interdisciplinary. This feature stands out even

/more clearly

more clearly when the concept is applied to the study of one species in particular: homo sapiens. In urban ecology and human ecology, the social disciplines are necessarily brought together with those disciplines which have traditionally been concerned with the study of the settings in which life takes place (the biosphere).

However, the application of ecological concepts to the analysis of urban and, in general, social phenomena involves both substantive and methodological problems.

The substantive difficulties are extensively discussed by Pumarino.<sup>37/</sup> The concept of an ecological community is at the heart of his criticism. This concept, understood as a convergence of people occupying a more or less defined area, necessarily entails the idea of the existence of a "natural social order". Just as in the case of animal species, whose geographic distribution determines their form of organization, functions and natural hierarchies, human communities would also be subject to the same law. Capitalism would thus come to constitute the "natural" social order. The laws governing the natural order of animal and plant species (such as those of competition, survival of the strongest, segregation, etc.) bear an extraordinary resemblance to those that govern Capitalist societies, which are therefore seen as being "natural". This presents some problems, such as the ideological bias entailed by discarding alternative forms of societal organization and the failure to consider the volative effects of social action, both as regards the manipulation by groups or individuals of the "rules of the game", power structures and systems of domination and as regards the values of justice and liberty which mobilize large social groups that act as the vehicles for social change.

Urban ecology was not the first discipline, however, to point out the difficulties and dangers involved in applying concepts to society which have been borrowed from the natural sciences. Based on Darwin's theory on the evolution of species, Social Darwinism (which was the precursor of the more prominent racist theories of the twentieth century) emerged during the second half of the nineteenth century as part of a widespread crisis in the social sciences.<sup>38/</sup> The most outstanding features of Social Darwinism, in Lukacs' opinion, are the following: Firstly, the structure of society is not seen as being based on classes (defined in economic and social terms) but rather on the struggle for existence among races and other biological categories. Secondly, oppression, inequality, exploitation, etc., are regarded as natural --indeed, as laws of nature-- and, as such, as being inevitable and indestructible. Finally, this movement's concept of human history as a natural process --in the words of one of its prominent defenders-- "most convincingly foretells of the need for man to resign himself to being ruled by natural laws, which are the only laws that govern history".<sup>39/</sup> In contrast, this theory seeks to establish an objective, impartial and scientific doctrine of social reality.<sup>40/</sup>

The methodological difficulties involved in the application of these concepts stem from urban and human ecology's use of a systemic approach. Three main criticisms of the systemic approach may be made:

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a) The definition of any system is arbitrary. This is because there are no clear boundaries between systems in the real world; instead, such systems correspond to highly analytical concepts. A system is therefore defined by activities and phenomena, i.e., by the "parts" on which the researcher chooses to focus in accordance with his objectives. To counter this, it might be argued that the systemic approach does not stress the "parts" but rather the relationships among phenomena, and that it is precisely these relationships which make it possible to delineate the systems that operate in the real world. However, a recognition of the relationships existing among phenomena appears to be necessary but not sufficient for such delimitation. This is particularly evident in dealing with highly complex realities, such as that of the cities. If the relationships among phenomena were a sufficient condition for such delimitation, then systems would tend to converge into one single vast system encompassing all the phenomena as they relate to one another. In the case of urban phenomena, this vast system would not even be confined to the city, but would ultimately encompass the entire universe. Since this is an inoperative assumption lacking in meaning, additional (necessarily arbitrary) criteria must be introduced in order to define such systems. Ultimately, this leads to the conclusion that the identity of a system is determined by the activities and phenomena of which it consists, i.e., by its "parts", and the underlying concept here is thus the above-mentioned one of an atomistic totality. The whole is the sum of its parts. For Mc Laughlin, the "parts" of urban and regional systems are the ongoing activities of man, especially those which tend to be conducted in specific situations and places. This means that the identity of a system lies in the fact that these parts neither change nor are transformed, and the resulting concept of a "system" as such is therefore markedly static.41/ 42/

A situation in which the real relationships among phenomena and activities could constitute a sufficient condition for the delimitation of the systems involved is that of specific functional relationships as defined beforehand by the researcher (e.g., systems of urban transport, cycles of water pollution, etc.). Nonetheless, this necessarily leads to a tendency to confine oneself to partial or one-sided analyses, usually within the security offered by some specific discipline; the true significance of this is that researchers learn to deal with problems in the cities rather than with the problems of the cities. The systemic approach may therefore be very useful in dealing with certain clearly-defined problems and in understanding some dimensions of the urban phenomenon, but it cannot be used for purposes of a broader scope. Harvey emphasizes that "the optimization of the city" is a meaningless phrase.43/

b) The systemic approach entails a descriptive analysis of reality which, however, is not neutral. This approach makes it possible to divide a whole into its parts and to establish the relationships which exist among those parts; however, it does not usually provide an explanation of why given components were chosen rather than others, nor why certain features were attributed to them. Therefore, even in the unlikely event that, for example, the systemic concept of a city were to include all its structural elements, this approach would not necessarily explain the nature of the corresponding phenomenon. This type of description of reality, just like any other, is not neutral. The researcher always chooses those phenomena

/which appear

which appear to be relevant to him and, therefore, there is always some set of concepts, values or even prejudices in operation which orients that description. The seeming scientific objectivity of the systemic approach is thus called into question. Moreover, its descriptive nature is quite remote from the true objective of science which is, in the final analysis, to provide an explanation.44/

c) The systemic approach is extremely static in the sense that it does not deal with the dynamics of structural change, but only with operational dynamics. This relates to the fact that a system is defined by the (largely arbitrary) selection of its parts, which are what ultimately give it its identity. Thus, "the formulation of systems represents an attempt to trace the interactions and reactions that take place within a totality; but when set categories and activities have to be defined, the system loses flexibility in dealing with the free-flowing structure of social relationships as they exist in reality". Therefore, neither the origin of the system nor its future transformations are accounted for; only its present existence is described. In this respect, the systemic approach bears an extraordinary resemblance to the functionalist theories of sociology.45/

#### D. The urban environmental approach

A tentative definition of the environmental problems of urban areas which would probably be generally accepted would be that they correspond to a major and ongoing imbalance between man's activities and needs, on the one hand, and the available (constructed) materials or elements of the biosphere, on the other. Two types of urban environmental problems can be identified; those brought on by development, which are basically the result of human activities that despoil the natural environment (environmental pollution); and those brought on by underdevelopment, which are mainly caused by a shortage of resources in relation to the population's needs (e.g., a shortage of low-cost housing) and which, therefore, result in their depletion. Both these types of environmental problems are to be found in the cities of the Third World.

Nonetheless, an appropriate environmental approach, as defined in the preceding discussion, should not focus on the problems themselves (whose identification as such is often a matter of "fashion" or social opportunism) but instead on the processes that cause them. Placing emphasis on environmental processes rather than problems is one of the three requirements of an approach of the cities to be discussed in this chapter and which will be referred to here as the urban/environmental approach.

The other two requirements of the urban/environmental approach would, therefore, be that it should stress an understanding of the complex relationships between spatial forms and social processes, and that it should make use of the concept of relational totality. As regards the first of these two requirements, the study of environmental processes should seek to arrive at an understanding of the dialectics of conditioning and restructuring which take place between man's activities and needs, on the one hand, and the available supply of materials and elements of the biosphere, on the other hand. Taking an urban/environmental approach would inevitably involve fostering an interdisciplinary understanding of urban reality. As regards the second

/of these

of these two requirements (i.e., the concept of totality), the urban/environmental approach would largely be based on a relational view of the concept of totality. This is because defining the identity of the whole by reference to the laws governing the relationships among its parts implicitly incorporates the possibility of structural change; the other concepts of totality which have been discussed do not do this because the identity of the whole is seen as being determined by set "parts" or a set "whole". Furthermore, the concept of relational totality is more in keeping with an emphasis on the dialectics of conditioning and restructuring in environmental processes. Indeed, Harvey 46/ feels that any attempt to construct an interdisciplinary theory concerning such phenomena as urbanism, economic development and environment must necessarily make use of the operational structuralist method (relational totality) described by Piaget.47/

It is important to note that even though this urban/environmental approach represents an attempt to pave the way for studies and theories of the cities, it is not a new discipline that supplements the traditional disciplinary approaches discussed in chapter II. Just as its name indicates, it is an interdisciplinary approach rather than another discipline.

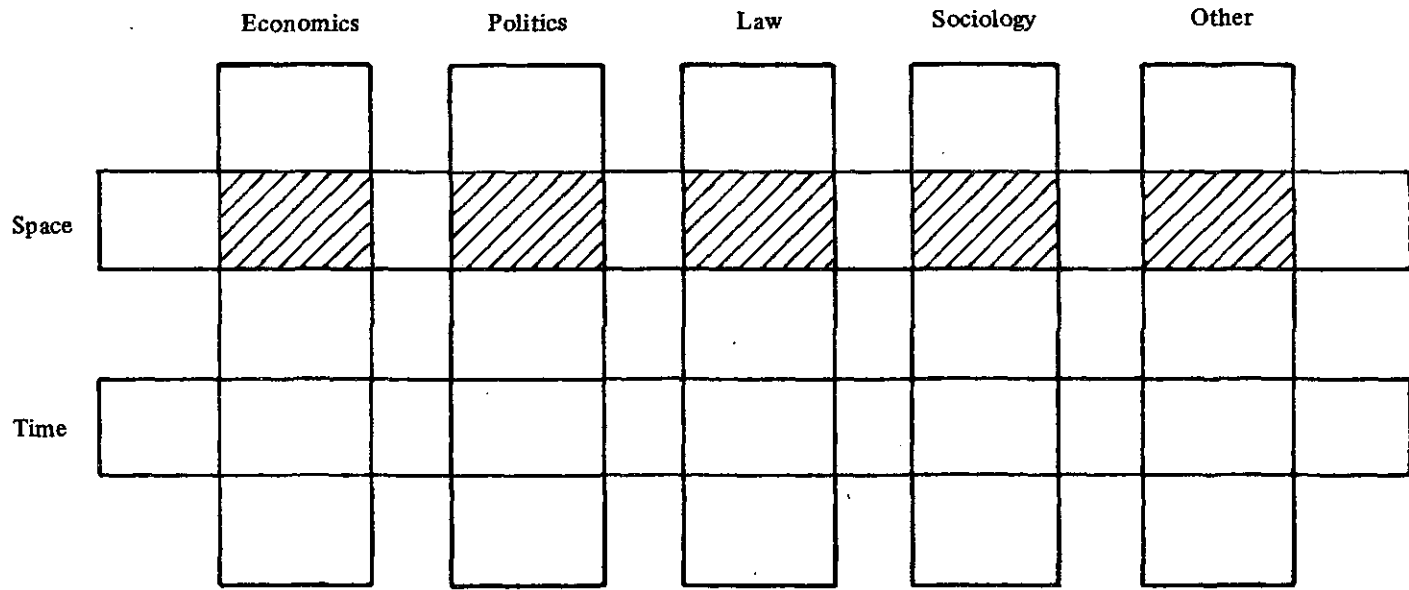
The urban/environmental approach complements the various disciplines' traditional focuses rather than competing with them. The figure shown on the following page depicts reality as made up of vertical and horizontal dimensions. Neither the social disciplines (which are based on the vertical dimensions, e.g., economics, sociology, etc.) nor the spatial (horizontal) dimension of interest to us here (e.g., geography, urban studies) have devoted much attention to the areas where the two dimensions intersect (the shaded areas in the diagram).

In so far as they have not addressed the areas where their fields of study intersect with the spatial dimension, the vertical disciplines have produced studies of the problems in the cities. Even the areas where these dimensions intercept with the temporal dimension have only been partially analysed due to economists' preference for ahistoric models and of sociologists' emphasis on the study of present-day situations. The horizontal disciplines which focus on the spatial dimension have not concerned themselves with the areas of intersection either, inasmuch as they have studied spatial laws and structures as if they were unrelated to social factors.

The urban/environmental approach would focus on what are depicted in the figure as intersecting areas because there are the locations where it is possible to pinpoint environmental processes, as defined above. In view of the fact that, like all real processes and phenomena, these environmental processes outstrip the conventional limits of the disciplines in question, an integral part of the urban/environmental approach would be its interdisciplinary nature. This approach thus encompasses all the intersecting areas and, therefore, would be complemented by in-depth studies based on the traditional approaches taken by these disciplines in respect of specific areas of intersection. Studies of this type include, for example, those dealing with urbanization in relation to economic development, studies on speculation and land revenues, anthropological studies concerning neighbourhood survival networks, studies of urban spaces from a social perspective (as seen from the standpoint of some architects and from that of social geographers), studies which seek to explain changes that have taken place in land use as part of the development of the cities (increasing density and expansion), etc.

/Figure

Figure



Apart from the countless conceptual problems which the proposals made here could involve, the authors are fully aware of the fact that the difference between environmental problems and processes, on the one hand, and urban problems and processes, on the other hand, has not been explored in the preceding discussion. According to a number of scholars, urban studies should focus on the relationships between social processes (the upper strata of existence) and spatial forms (or, in other words, the spatial aspects of the lower strata).<sup>48/</sup> Urban/environmental studies, however, would focus of the relationships between social processes (man's activities and needs) and the lower strata of existence as such (the available supply of materials and elements of the biosphere). Consequently, although the key concepts of conditioning and restructuring appear, at first glance, to be useful tools for both urban and environmental studies, they undeniably suffer from a lack of specificity. Generally speaking, it might well be concluded that the concepts discussed here represent a challenge and a task to be undertaken, rather than a consummated theory.

## V. IMPORTANT ASPECTS OF THE URBAN CRISIS

This chapter provides an overview of some of the more prominent aspects of the Third World's urban crisis as they relate to the main concepts of the proposed urban/environmental approach.

### A. Are the problems which go to make up the urban crisis irreversible?

Why does the urban crisis of the large metropolises seem irreversible? Obviously, the massive scale of such problems is one of the reasons for this. For example, the vast areas inhabited by such a large number of what are regarded as "marginal" families continue to expand faster than the city as a whole; an enormous and increasing number of vehicles and amount of travel are becoming highly concentrated in terms of both time and urban space, with the result that accessibility and safety conditions are deteriorating; and the decline in the quality of life is linked to the increasing seriousness of environmental problems such as air and noise pollution, the contamination of irrigation water and the shortages of housing and of service networks, especially those providing drinking water. For the man in the street, these problems in the large urban centres of the Third World seem to be irreversible.

Might not this pessimistic view of the situation largely be a result of, firstly, the fact that people perceive the problems and suffer their effects without being aware of the processes which cause them and, secondly, the high degree of complexity of present-day metropolises? If this is the case, then the crucial factor is the present image of metropolises as chaotic, disorganized and irrational. In the past, cities were organized along simple and understandable lines; this is no longer the case, and that simplicity may well have been lost forever.

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Is it possible to change our way of thinking about the cities by shifting attention away from the problems and towards the processes which cause them (thus, in effect, questioning the idea that the present situation is a chaotic one lacking any specific order, no matter how difficult it may be to perceive just what that order is)? In what way would our perception of the situation be changed if people were to gain an awareness of the long historical process of evolution and consolidation which urban centres have undergone, whereby man has gradually overcome the environmental and spatial factors which, in each era, have appeared to place definitive limits on the possibility of urban growth? In this respect, an awareness of the dialectics of conditioning and restructuring could make the present crisis, as seen in terms of the cities' size, appear to be no more than just one of a series of such crises. It might then be asked whether there is a type of restructuring that will make it possible to resolve today's urban crisis. There appear to be two possibilities, at least theoretically: restructuring based on further technological progress, and restructuring based on changes in the forms of social organization. In respect of the former possibility, the most pressing problems associated with the urban crisis (such as those of transport, housing shortages and pollution) do not appear to be due to a lack of technological development. Instead, the issue seems to be more properly one of the prevailing organization and social rationality of the metropolises. Is not the present quest for "appropriate technologies" (which, in any event, is generally a question of preserving simpler technologies that have fallen into disuse), in essence, pointing the way towards new forms of social organization?

B. Are the problems associated with the urban crisis a result of the "excessive" size and rapid growth of the metropolises?

Answering the above question in the customary way --with a categorical "yes"-- would entail two conceptual flaws which have already been discussed: the complex relationships between spatial forms and social processes would amount to no more than a type of determinism according to which spatial forms are the cause of a series of social problems in the cities (or urban problems); and a concept of "emerging" totality would be being used according to which the characteristics of the whole (the size of the city) would appear to directly account for the dynamics of its parts (i.e., of the problems found in the cities) on a one-to-one basis.

By way of illustration it is interesting to consider the problem of transport, which is one of the problems that is most often attributed to what is seen as the excessive size of cities. According to Owen,<sup>49/</sup> history demonstrates that transport has been one of the cities' main problems for a long time (and it has therefore been a problem in cities whose size has varied) regardless of the type of transport technology used. A subway was constructed in Boston at the beginning of the century, when the city had scarcely 600 000 inhabitants, in order to solve the traffic problems caused by horses and carriages. Apparently, after they have reached a certain size, cities suffer from internal transport problems whose subsequent exacerbation would not seem to be merely an effect of the increase in their size. Moreover, the explanation of problems as being the result of excessive size usually goes hand in hand with the idea that a shortage of resources for investment is

/another cause

another cause of such problems, and this factor would be particularly serious in the countries of the Third World. In this connection, Owen states that, apparently, the richer a nation becomes and the more advanced its technology is, the less success it usually has in solving its traffic problems.

It therefore seems necessary to explore the factors relating to urban form or structure, the distribution of the costs and benefits of urban development and, in general, systems of social organization. In this connection, a key element would be an examination of how the private appropriation of benefits is divorced from the socialization of costs (especially environmental costs). This leads to the conclusion that it is necessary to identify the laws which govern the relationships between urban activities and groups (relational totality) and to gain a deeper understanding of the relationships between social and economic forces and factors, on the one hand, and environmental phenomena and spatial forms, on the other.

C. Is the deterioration of the natural and constructed environments in the metropolises inevitable?

This question directly concerns most urban environmental problems (as previously defined), except those in which the imbalance between needs and the environment is the result of a deficit of materials. Furthermore, this question restates what was discussed in section A of this chapter, but this time in specific reference to this type of environmental problem.

How is the belief that such deterioration is an inevitable phenomenon influenced by the undeniable fact that, both as regards the analyses which are conducted and the solutions which are found or proposed, attention appears to be focused on physical factors rather than on the relationships between physical and social factors? In other words, what impact does the lack of a suitable environmental approach or outlook have? Is it possible to identify causes when attention is almost exclusively centered on the problems (effects) rather than on the processes which produce them? When using this static approach, it is almost inevitable that this deterioration will be attributed to the city itself and its size, and there is then no choice but to orient urban policies towards dealing with the effects of such processes by means of rehabilitation and conservation programmes. Social action as regards the apparent causes (the city itself, and its size) are entirely beyond the capabilities of urban planning and, to a large extent, of planning in general. Thus, when action is taken on the effects, it becomes inevitable that --in practice-- the "untouched" causes (whether they are apparent or otherwise) will once again raise problems and, in some cases, will even exacerbate them (as occurs with rehabilitation projects, which almost always create a larger deficit of constructed space than the one they have done away with). Might it not be true that the idea of physical deterioration being inevitable stems, at least partially, from the observation of this phenomenon?

The above accounts for the prevalence of the idea that physical deterioration is inevitable. The fundamental point, however, has yet to be discussed; is it or is it not really inevitable? Obviously, the answer depends upon the type of causes that are identified. If the cause were the city itself and its size, then its

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deterioration would indeed be inevitable. All that would then be left to do would be to demonstrate that there is necessarily a connection between the two phenomena (i.e., size and deterioration). Two different arguments could be put forward in support of this hypothesis. Firstly, the growing size of urban centres gives rise to behavioural changes. One example would be the herd instinct (it being understood as a behavioural characteristic that may be acquired just as certain animal species also take on this feature);<sup>50/</sup> another would be the loss of an awareness of the environment. Is it possible to make a convincing case that all or most of the problems of physical deterioration are the result of urban inhabitants' relative loss of environmental awareness?

The second argument linking size and deterioration would be that an increasing intervention in natural ecosystems will, with time, inevitably cause their deterioration. Here, a quantitative phenomenon becomes a qualitative one (i.e., it translates into ecosystemic deterioration). Nonetheless, is not this explanation for deterioration based, perhaps, on the recognition of only one possible way of intervening in natural ecosystems? In so far as the production and generation of waste (the main cause of the deterioration of the natural environment) is concerned, is it justified to automatically associate large-scale production activities with the generation of wastes? According to Gutman, what happens is that people ignore the fact that the wastes produced by societies having market economies are determined by economic factors. A technique directed towards the privatization of benefits and the socialization of costs takes advantage of the indiscriminate use of the environment in the production process; nature is seen as a potential source of capital in the social process of modern production.

If such deterioration were found to be the result of causes other than the very existence of the metropolises, then the possibility that such deterioration is not inevitable would remain open. If the size of the metropolises were the sole cause of such deterioration, then should we not expect there to be a directly proportional relationship between urban size and the extent of the physical environment's deterioration? Inasmuch as no such proportional relationship is observed when various metropolises are compared, the existence of other causes must be considered. In concrete terms, what influence do social organization and dynamics have on the specific ways in which man intervenes in the physical environment? Gutman underscores the importance of social dynamics (consisting of economic rationality, differential revenues, the turnover of capital, the internalization of benefits and the externalization of costs, etc.) as a factor in the generation of environmental problems.<sup>51/</sup>

- D. Is the relative failure of urban planning a result of the approach taken or only of faulty technical implementation and a deficient technological capability?

The overall objective of urban planning has been to achieve efficient, equitable and orderly urban development. Two different styles characterize efforts to achieve this objective. In the first, the city is addressed as a whole and an attempt is made to replace the existing disorder with a highly formal and esthetics-based

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order (metropolitan land use plans, new towns); in the other, the physical improvement of neighbourhoods and sectors of the city is stressed, with an atomistic concept of totality being an implicit feature (sectional plans, remodeling and rehabilitation).

In so far as the relationships between spatial forms and social processes are concerned, urban planning (which has traditionally been reactive planning) focuses on physical factors and attempts to regulate and expand the available supply of materials so that it will be commensurate with the society's needs. The regulation of urban structures (seen as a dialectic between material supplies and social uses) is a twofold process: in the short and medium terms, land-use regulations and urban investment (i.e., urban planning) influence the available supply of materials and, hence, the social uses which are made of them; while in the long term, the social uses to which they are put (and which are determined by the level of economic and social development and the division of labour) have a strong impact on investment decisions and on the allocation of materials.52/

Would it be worthwhile to employ new technical tools and methodologies of action within the conceptual framework of urban planning as described above in order to meet the challenge posed by the urban crisis? Or will it be necessary to reformulate the concepts to be used in order to ensure that attention is not confined to the physical dimensions of reality, to go beyond those concepts of the city as a totality which have proven to be inadequate and to transcend the present short-term focus which gives rise to a reactive type of planning?

What is clear is that, in the future, urban policies should follow certain guidelines in connection with the present urban and economic crises. As regards economic considerations, it should be borne in mind that the amount of financial resources that will be available (especially in hard currencies) is not going to increase significantly in the next few years, if at all. This means that it will be necessary to set strict priorities, to get the most out of the scant supply of available funding, and to reallocate funds in accordance with the priorities which have been established. Furthermore, given the economic constraints which exist, the environmental aspects of the urban crisis, make it absolutely necessary to emphasize objectives and goals such as the following: to take the greatest possible advantage of the urban infrastructure, which usually has a significant amount of idle capacity; to allocate resources and manpower for the maintenance and conservation of the natural and constructed environments (which would help to raise living standards and productivity by lengthening the useful life of capital and natural resources); to make the best possible use of flows of materials, energy, goods and services, wastes, etc. by providing for multi-use approaches, recycling, etc.; to increase the efficiency with which raw materials and energy are used; and to make an optimum use of imported goods and materials.

Given the structural nature of the urban and economic crises, these essential components of urban policy will very probably tend to remain a constant. In that event, it is quite likely that a substantive change will have to be made in the underlying approach of urban planning. Earlier, it was stated that cities have had to deal with a succession of "crises of size" throughout their history and that these crises have been resolved by means of a social effort which has been referred

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to as "restructuring". This same type of effort will be called for in order to deal with the present urban crisis. The form taken by this effort will, however, have some special features. Firstly, in both physical and technological terms, such restructuring would not be directed towards developing a technology that will allow man to overcome nature or tame it, as has usually been the case in the past. Instead, the challenge is to develop technologies, which, while guaranteeing the same level of well-being as is achieved with conventional technologies, will tend to minimize man's intervention in large cities' supporting ecosystems (i.e., the extraction of materials and energy and the generation of wastes). Secondly, restructuring will also be required in terms of social organization. This would involve lowering the per capita demand placed on urban supplies of materials by modifying the way in which society is organized. This could, for example, include a wide variety of techniques, ranging from the promotion of a more efficient use of transport structures (by placing emphasis on collective or mass transport systems or by reducing demand during rush hours by using flexible schedules) to the promotion of social attitudes and behaviour which will tend to minimize the waste and consumerism so often seen in large cities.

In the future, then, urban planning will have to overcome its reactive biases and those which cause it to over-emphasize physical factors in order to make way for a more integral approach which will make it possible to anticipate future problems and which, in short, will promote efforts to bring about restructuring such as those described above.

E. Is society sufficiently aware of the nature and magnitude of the urban crises and, especially, of its environmental dimension in order to formulate an effective social response?

The type and level of environmental awareness which exists depends, to a large extent, on the social structure. Dominant groups emphasize those problems which affect them directly and treat them as if they were widespread problems that were of top priority for the population as a whole. It is not by mere chance that air pollution and traffic congestion in Latin American metropolises are accorded a disproportionate amount of attention in comparison to the equally or more pressing problems of housing, sanitation, health, nutrition, etc.; greater importance is attributed, then, to those environmental problems which are felt more or less evenly by all and which relate to the quality of life of the population in general than to those problems affecting the extent to which the basic needs of the majority of the population are satisfied.<sup>53/</sup>

The dominant groups in society therefore tend to promote action aimed at removing effects rather than their causes. The solutions they propose are therefore one-sided and based on larger and larger investments having a strong technological bias. The case of urban transport (as pointed out earlier) <sup>54/</sup> is a clear example of this. Can some type of alternative response which would involve changing society's organization and rationale be expected from these social sectors? How severe and numerous would problems have to become in order to elicit a social response of this type?

/At the

At the other extreme of the social structure, marginal urban groups have a radically different type of environmental awareness. The problems that really matter to them are those which are underestimated as environmental problems by the dominant sectors (and by "public opinion", which they influence). They are transgenerational problems and are therefore not associated by these groups with "fashionable" environmentalist terminology and concepts, which focus on "new" problems. These groups therefore develop a type of environmental awareness (which is not externalized as such), that is in large part dependent upon the logic of survival, which has a special sort of impact on their lives. The need to overcome very basic environmental factors which have a direct effect on the nutrition, security, shelter and health of people in a highly precarious situation gives rise to a quite different type of social dynamics. The "restructuring" response of the urban poor is quite efficient (a great deal is accomplished with few resources: survival is ensured and, indeed, some progress is gradually made, as in the case of self-help housing construction) and involves a great deal of recycling of materials and wastes; nonetheless, from an environmental standpoint, inasmuch as this response is constantly directed towards overcoming the problems of the moment, it also tends to have a depredatory effect as regards the procurement and use of resources (i.e., the deterioration of resources subjected to overuse and of ecosystems that constitute a source of energy).

Perhaps the makeshift settlements in the outlying areas of the metropolises of the Third World, where habitats are being constructed on an expanded scale under extremely precarious environmental conditions, contain the seed of the social dynamics which will result in the resolution of substantive aspects of the present urban crisis.

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