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Conditions in the developing countries argue for planning that relies on policies based on an understanding of the ongoing social processes and on flexible responses rather than on detailed forecasts and master plans. This is because their weak data introduces a great deal of error into forecasting, because their bureaucracies are heavy and unresponsive, with a thin and overextended cadre of able technicians and administrators, and because their situations are unstable in the short run and undergoing profound structural changes in the longer run.

Planners in developing countries often bewail the lack of some data and the low quality of what data is available. It is often thought that if only the data were available, the elaborate mathematical planning models developed in the economically advanced countries might be applied. Foreign experts in these techniques are often consulted, and young national planners aspire to master what they regard as scientific sophistication. This is a fundamental error because the poverty of the data is an intrinsic condition of underdevelopment, not a happenstance. Rich and frequent data is the byproduct of the organization of an advanced economy. When weak data is put through the mathematical machinery of a complex model it deteriorates through the compounding of error, and the output becomes worse than the input. It is as if one tried to build skyscrapers out of wood and reeds: the structure would collapse.

This is not to say, of course, that the available information should not be used. Quite the contrary, its very scarcity makes it especially valuable. But it cannot be used in terms of fully articulated quantitative models. The important thing is the understanding of the

processes of the urban system, and within this context the planner must put together and use his incomplete information as a detective puts together his fragmentary clues, using to the utmost his judgment and ingenuity to join formal data with any other information to produce indicators of the condition and performance of the system. When information is poor, one cannot have confidence in the prediction of specific events, including the actions of the government itself or its consequences. Rather, one must rely on general strategies based on the best possible understanding of the ongoing processes, while retaining the flexibility to respond to the unfolding of events and to new information.

The approach of strategic intervention is also dictated by the usual conditions of the planning and administrative bureaucracies in these countries. These bureaucracies are typically fat at the bottom and thin on top. At the bottom they are commonly overstaffed, undertrained, and inefficient to the point of immobility. Routine matters lose their way in that labyrinth, orders from above are not carried out or distorted from their purpose, and new or unusual needs meet with no responsiveness. Indeed in many cases the system is so rigidified that corruption, whatever its other faults, is the only lubricant that keeps the machine working.

The situation at the top is quite different. There a small number of able and energetic technicians and managers typically find themselves overextended and lacking in staff support. There are extremely limited resources for planning, for ensuring the correct implementation of decisions, and for following up to see how previous decisions have worked out in reality. Thus, there is a limited capacity for action since effectiveness will depend more on the personal attention of the leadership

than on the routine carrying out of programs by the bureaucracy. Since action itself becomes a scarce resource, it is most important that the actions taken be important rather than trivial ones, and it is by reference to an understanding of the processes of the system that an issue or an action may be recognized as important.

Detailed long-range urban plans which are an inventory of specific future investments and programs are further inappropriate in nations undergoing profound and often sudden changes. In many countries the national leadership is often changed by coup or revolution, and diverse crises are frequent, such as sudden deterioration of the terms of trade, fiscal crises, or even war. Since the national government is de facto the metropolitan government in most of these countries, in part because of the disproportionate importance of the capital in national economies, these sudden changes belie the picture implicit in long-range comprehensive plans of a smooth and steady development. And underneath these short range crises, there are the deeper tides of social transformation, affecting customs and life styles, redistributing power and privilege among social groups. Since few can lay claim to a clear vision of the future structure of the society, not too much stock can be put on detailed plans for the physical city that will be the container of that society. Where the society is in the process of change, urban plans must themselves be processes, not static pictures.

Let me illustrate some of these points in the housing sector. A large proportion of the population in the metropolitan areas of developing countries is poorly housed, and in some cases lacks housing altogether. Virtually all of these cities have squatter settlements. A common approach to this has been to estimate a "housing deficit" which is the number of

dwellings that meet that standard. Shanty houses and other dwellings which do not meet this standard are valued at zero. In many cases, indeed, they are valued at less than nothing: bulldozers level shanties, as if their existence were an evil rather than an insufficient good, as if it were better to have nothing at all than such wretched housing. Such policies show the same understanding that Marie Antoinette had when she said of a crowd rioting over the scarcity of bread, "Let them eat cake."

Squatter housing is, on the whole, positive evidence of the creative energy of people. It is the production of capital through labor-intensive methods in the poorer half of a dual economy. It is bought and sold, leased and rented, and in some cases it has developed credit mechanisms, large scale developers and technicians. It has often generated techniques that permit incremental investment over time, starting from a minimal shelter of boards or sheetmetal and evolving into quite good dwellings, often of masonry and multi-storey. These techniques take the curse of lumpiness from the housing investment and permit flexible adaptation to the realities of the economic life of the residents. In brief, rather than zero or negative value, this housing constitutes real capital, and a substantial contribution to the national wealth. Because they are, at least at the beginning, poorly integrated into the modern, monetized sector of the dual economy, their value is sometimes not perceived by government officials who live exclusively in that sector.

In recent years the term "marginal housing" has become widely accepted, but the extraordinary aptness of the term is seldom recognized. Consider the metropolitan market for housing as a whole in a developing country. The existing stock of housing cannot cope with a population growing rapidly through natural increase and tides of immigration. Given

the cost of conventional construction, the nation lacks resources to increase that stock at the same rate as the population is increasing. Since new housing is expensive, it goes primarily to the wealthier families and a rising middle class, except for a small amount of expensively subsidized housing for the poor. New life styles among other factors frequently lead to some suburbanization of the upper middle classes, and this frees some small amount of housing near the metropolitan centers that is cut up into many small dwellings, added to in the courtyards and roof tops, and thus made to provide some housing for those of lower income. But this filtering process of housing from the wealthy to the poor proceeds at too slow a rate to deliver enough housing for the combined natural and migratory increase of the poor, and the excess of this population spills over into marginal housing.

In a sense, with the exception of servants, all of the urban poor live in marginal housing. Those crowded into housing that has filtered down to them, are occupying the marginal units of the conventional stock. And those that live in self-constructed settlements settle on land which from the point of view of location, topography, or tenure is marginal in the sense that it is at or just beyond the margin of the conventional land market. Marginal housing goes up on hillsides that are too steep for conventional development, or on floodplains; it spreads beyond the built-up margin of the city; and it takes over land whose owners cannot or will not enforce their claims (private owners in some cases, public in others).

Although it had been thought that migrants into the city settled directly into these marginal housing, recent studies show that, at least in the cases studied, the pattern is for the migrant to go to the poor sections in the center of the city and to move out to the marginal settlements only after achieving a measure of success and family stability. It

appears that these settlements are, in effect, the suburbanization of the successful working class, in search of a better life but still economically unable to afford housing in the conventional housing market. In a sense, these are slums of hope, not of despair. Marginal settlements of new arrivals appear only if the flood of immigrants overwhelms the stock of central city housing that has filtered down to serve as a port of entry. These settlements of newcomers will be quite different from the suburbanizing ones since their inhabitants are less acculturated to urban ways and much weaker economically. Programs and policies for these two types must be different. In one, the need is to help the performance of an upwardly mobile population, while in the other the problem is to help the successful entry of a population into a modern urban setting which is to them strange.

Within this general process, let us consider three questions: that of the mobility of the successful working class, that of the occupancy of the floodplains, and that of the location of subsidized housing for the poor.

If marginal settlements are the housing of an upwardly mobile working class, we must expect that they, or their children, will continue to rise economically and aspire to better housing. One possible way of doing this is for the family to move to a new location with better housing. Another is that they improve their housing in their present settlement. If the pattern is to move, their present housing will then filter to newer arrivals. The districts of the existing settlements will retain their present socio-economic levels while their populations shift. But if the pattern is to stay and improve their present housing, the area will rise in socio-economic level while retaining its population, and the newer

arrivals will begin anew the process of marginal settlement at more distant locations. Which pattern will take place will vary from nation to nation, to be sure, but it is clear that public investment and other programs that would be suited to one case would not be suited to the other. And public programs may encourage one or the other pattern by facilitating it.

In many cities a common sight is that of some shacks (perhaps no more than sticks and mud or tinfoil) on the floodplain of the river which normally runs through the city. These shacks are destroyed periodically not only by the floods but also by public officials who judge that location unsuited for housing. In some cases it would appear that this policy reflects the housing point of view of the middle class and misses the rationality of such a location for the very poor. The middle class typically lives in capital-intensive housing: built solidly and expensively to stand for many years, perhaps forever, and needing only slight periodic care in the form of painting and perhaps occasional re-roofing. But the poor very often have labor-intensive technologies of housing, with low initial capital and high maintenance. Their shacks are easy to put up, but they require constant maintenance and frequent replacement. If there is no danger to life (and perhaps even if there is), the very poor may find the attractions of a floodplain location quite convincing. It is an unoccupied site, convenient to the sources of employment. And whereas it would be disaster for a middle class family to have their house destroyed in a flood, since it represents capital equivalent to two or more years of income, it may be quite an acceptable risk to very poor people, whose housing represents no more than some weeks of effort and very little money.

A similar class bias may account for frequent errors in the location of subsidized housing. In the typical middle-class family in developing countries only the father participates in the labor force, and the wife and children stay home. Job and home are secure, and the journey to work is routine, manageable consideration. For poor families, however, there is both a greater rate of participation and often a lack of steady employment. Husband, wife, and often children work -- when they can. The pattern is frequently one of semi-casual employment, such as shining shoes for the boys, cleaning middle-class houses for the woman. When a program, however well intentioned, removes this family from their marginal housing which is conveniently accessible for finding and going to these jobs, and places them in "model" housing which is much less accessible, the additional costs are not only the obvious ones of additional travel for the principal wage earner. Far more important to the well-being of the family may be the income lost because other members of the family are effectively deprived of their more fragile jobs. Such programs fail to recognize the interdependence of housing location and economic participation in the early stages of the integration of this population in a developing economy.

This brief discussion of the housing market process and examples was meant to illustrate the importance of understanding the way the system works for the formulation of effective policies. The forces in the system should be used much as a wrestler takes advantage of his opponent's lunges to amplify his own strength. My stress on the positive and functional aspects of marginal settlements should not obscure, of course, such serious problems as threats to public health, the danger of fire or of such ecological catastrophes as mud-slides, or the serious dysfunction of permanent misuse of land pre-empted by such settlement.

A set of policies based on the functioning of the overall housing and urban land market for dealing with marginal settlements should include the following:

1) A program of urban land reform (or, if the term is politically tainted, one of land management) that will make land available to the relevant populations under terms and at locations that recognize their needs and capacities, possibly using the instrumentality of a land bank. This means a positive program of directing these populations to locations which are consistent with an efficient pattern of growth of the city rather than a strategy of denial which will typically result in bad land use patterns. Beyond such considerations of efficiency, such a program is needed to prevent the psychological and political alienation of this population, which is often forced to live literally outside the law.

I must add here that I have found no evidence that making marginal settlements difficult or tearing them down has any effect in slowing the rate of migration into the city. If this migration is to be slowed down, it will more likely be done through emphasis in the national plan in the rapid development of those sectors, such as agriculture, that can retain population in the interior, or through emphasis in alternative urban centers. Of course these programs are not easy and their success cannot be guaranteed, but they have a far better chance and they make more sense than programs that destroy or prevent the formation of national wealth in the form of residential capital, lower the over-all efficiency of the urban plant, reduce the participation of labor, and alienate a sector of the society.

Further it is important to avoid confusing the money costs of such a program with its economic costs. This is a difficult technical matter

which I cannot develop here except to point out that the cost of acquiring land from their present owners constitutes a transfer payment of money without any necessary economic cost. The direct economic cost would be the productivity of alternative uses of land which are foregone. Against these must be set such economic benefits as lower capital costs for infrastructure resulting from more efficient land use patterns, the economic returns to the land which is not invaded, the productivity of labor through higher participation, and so forth.

2) A program of facilitation of residential capital formation by making available to those that can use them good materials at reasonable retail prices, cadres of skilled workers for such critical maneuvers as the installation of plumbing or the raising of a roof, prototypes of housing types and of local organization for construction and appropriate forms of credit. This program, together with the land reform program, should include security of tenure from the beginning since this encourages contribution by the residents.

3) In all cases, but most especially for recent arrivals, programs of social services to help in finding jobs, training, housing, health, etc. The organization of these services and their scope will vary greatly from one case to another since they must often work through folk organizations such as tribal associations.

4) The administrative apparatus must have a mandate as clear as sense and politics permit, so that the officials involved may be judged by their success. This might help to place as many officials as possible in the field, dealing with specific problems, rather than scribbling or sipping tea in their offices. It would be unrealistic, however, to expect a lean, clean, efficient bureaucracy since inefficiency and corruption are

structural aspects of underdevelopment. This means that there must be a strong administrative leadership, capable of direct use of authority in dealing with concrete situations. This leadership must be supported from above by the political leaders, and it must form strong and sustained links with the people being served. This means not only consent, but most importantly participation by the people so that this leadership is truly informed of the situation and needs and indeed of the efforts and directions of solution that originate with the people. This is an essential avenue for developing the understanding of processes needed for effective planning and action in developing countries.