

URBANIZATION AND DESIGN

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ABSTRACT

The paper is structured in two sections. The first briefly identifies the main features and characteristics of the urbanization process which have significant implications for urban design in South Africa. The second raises the question of how well the country is dealing with urbanization. It argues that its track record is extremely poor: current practices and policies are resulting in environments which are sterile, monotonous, inconvenient, expensive and frequently hostile. A primary cause of this is that there is very little design understanding in the making of urban environments.

The paper then identifies a number of key starting points for thinking about the design and management of urban settlements. These include: the need to base thinking on the lowest common denominator – people on foot; the importance of making the public transportation system work; the crucial significance of the public spatial environment; the need to accommodate new urban needs and phenomena; and the need to promote multi-functionality and sharing.

INTRODUCTION

I have been asked to talk to you about urbanization and design. I will do this in two parts. The first will focus on some key tendencies relating to the urbanization process in South Africa which have important implications for the design of human settlements. The second part will ask the question, how well are we accommodating urbanization in the design of our towns and cities?

Part One: Tendencies in the Urbanization Process

What do we mean by urbanization? The term is commonly used in both a demographic and socio-cultural sense. In the former it refers to

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the growth of the number of people living in towns and cities and the commensurate growth of these settlements through rural-urban migration and through natural increase. In the latter sense, the term refers to the social and psychological change involving the acceptance of urban values, norms and ways of life. I will be using it here in the demographic sense.

What are the facts? In bald terms, somewhere between 50-60% of South Africa's population is now urbanized; natural increase is a more significant factor in urban growth than rural-urban migration; in recent years, the rate of rural-urban migration has decreased; the larger cities are the primary target of migrants; and a dominant tendency in migration patterns has been circulatory migration: large numbers of African migrants view themselves as temporary sojourners in towns and cities and intend returning to the countryside.

These are the conventional wisdoms. However, recent work by the Natal-based social anthropologist, Katherine Cross, involving studies in both source and receiver areas in Kwazulu-Natal, the Eastern Cape and the Western Cape suggests a number of interesting and, in implication far-reaching, variations to these patterns:

- (i) Her work suggests that for the first time, permanent as opposed to circulatory migration is becoming dominant.
- (ii) Small towns are increasingly becoming the targets of migration. The reason for both of these changes is the same. The natural resource base, which is the primary source of survival in the rural areas, has in many places reached a point of collapse. Particularly, the multi-billion rand industry in traditional medicines has reached a point of non-sustainability. People are leaving

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the countryside with no intention of returning and very often their target is the nearest town where they can gain access to services, particularly potable water. For the first time, access to services, as opposed to jobs, is a central cause of migration.

- (iii) The extended family structure of the rural areas is breaking down. For the first time there is widespread evidence of grandparents being unwilling, or unable, to take back grandchildren in times of hardship.

The implication of these factors in combination is a rural population with a high propensity to migrate – migration rates may have been slowing in the past but there is no guarantee that this will continue.

- (iv) AIDS has reached pandemic proportions, particularly in the rural areas. For example recent studies have indicated that over 50% of women in rural Natal are HIV positive. The phenomenon of AIDS orphans is becoming an increasing reality in our towns and cities.

The implication of these changing realities is that South African towns and cities are facing new sets of needs, many of which are not even acknowledged. Some of these include: the dignified accommodation of cultural ceremonies such as circumcision as urban events; the accommodation of death as an increasingly common (and culturally very significant) urban reality; societal care of dramatically increasing number of orphans; the hygienic accommodation of livestock in dense urban areas; ways of dealing with (currently informal) processes of slaughtering livestock (at present, livestock are slaughtered and butchered on open land and the high incidence of worms, particularly

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in children, is becoming a serious public health hazard, as is the common practice of dumping animal hides in storm-water drains); the sustainable provision of traditional medicines in order to protect existing indigenous habitats and eco-systems; dealing with increasing informality in the creation of urban fabric; and so on. It is a moment which demands great ingenuity in the fields of urban management and design.

Part Two: Design

How well are we currently dealing with the phenomenon of urbanization in terms of settlement-making? The short answer is not well at all. Despite the enormous amounts being invested in urban areas, emerging urban environments are commonly monofunctional, sterile, monotonous, inconvenient and very expensive places in which to live and they are yielding a poor return in terms of generating opportunities for their inhabitants. The sobering fact is that most of these places will never become really facilitative living environments, regardless of how much investment goes into individual buildings: the preconditions for them to increasingly improve over time have not been built into their making.

What is the reason for this? At the heart of the matter is the essentially programmatic approach which dominates settlement-making in South Africa. Programmatic approaches have at their heart co-ordinating the assembly of pre-identified elements, such as roads, utility services, shops, houses and religious institutions, each of which has its own space requirements. The approach is essentially quantitatively-driven and the basic urban building block is seen as the individual residential unit. Thus, x residential units generate (a) primary schools, (b) senior schools, (c) square meters of commercial space and so on. In this approach it is the task of planning and design to 'balance' these

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competing spatial requirements. However, there is nothing which holds the whole together. Sterility is the inevitable outcome of this form of planning and design.

When this approach is applied to housing – particularly low income housing which is the major growth component of our towns and cities – it is played out like this. Shelter is viewed as the highest priority and the individual dwelling unit – usually the free-standing, single storey unit – is seen as the basic building block of urban environments. The pavilion is the image of the 'good' urban life – perhaps, to be fair, scaled down to the suburban dream. The first task, therefore is seen as the need to service the site (with water, sewage disposal, road access and – sometimes – electricity) and, in relation to this task, concerns of engineering efficiency, as opposed to any social or environmental concerns, dominate. The second task is to put in place programmes directed towards assisting individual households achieve 'acceptable' levels of shelter. Collections of individual units are then arranged into discrete clusters or cells (neighbourhood units and the like, in the naïve belief that this promotes community) usually scaled by the requirements of machines, particularly the motor car (even though the majority of people do not own cars and will not do so within the foreseeable future). These collections then give rise to a notional programme of standardised public infrastructure. These facilities are seen as independent, self-contained entities. Space for them is distributed evenly within the cells to optimise 'access' and 'equity'. In short, settlements are built from the bottom up.

The reality of all developing countries, including South Africa, however, is that financial resources are woefully limited relative to the demands made upon them. In this climate, a number of consequences inevitably result from the approach described. Firstly, levels of housing

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assistance, even to those who gain access to such assistance, are continually cut back (plots get smaller and levels of shelter and utility services are reduced to a point where the most common form of provision is minimally services sites), but always within the same model centred on the concept of the free-standing unit. Secondly, a continually smaller proportion of households gain public housing assistance. 'Islands of privilege' are created and these in turn give rise to waves of negative social practices (downward raiding, warlording, bureaucratic corruption, illegal occupations, political patronage, and so on). Thirdly, cuts also occur in terms of social services: on the one hand, not all the planned social infrastructure (such as schools, health facilities and so on) can be provided; on the other, those facilities that are provided are cut to a point where their operation is severely impaired – for example, in the case of schools, libraries are frequently minimally stocked, science laboratories are poorly equipped, sports fields are not maintained and so on. The 'equitable', 'accessible' pattern becomes inequitable and inaccessible since the facilities which exist are embedded; they are located to serve specified local communities exclusively and many households can therefore only gain access to essential social services, if at all, with great difficulty and at considerable expense. Since there is no way that individual households can substitute for these essential public services, the degree of disadvantage is enormous (it is precisely for this reason that access to community facilities such as schools is one of the priorities of many households and is frequently viewed as being far more important than improved levels of shelter). Further, the (usually excessive) spaces allocated for facilities that do not materialise fragment the urban fabric and frequently become dangerous, environmentally negative, liabilities. In short, the situation is worsened on all counts.

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Significant improvement to the performance of our settlements requires a totally different way of thinking. It requires embracing non-programmatic approaches to settlement-making. Non-programmatic approaches are driven by a concern with the quality of the whole, rather than the parts. They are driven by the search for the timeless qualities reflected in positive living environments. These do not depend on particular forms or levels of technology, or on minimum levels of personal means to operate well, since in their formation they are driven by universal human need. These environments can accommodate the requirements of the short-term programme which calls them into being but they are not dependent on that programme. They reflect in their making a generosity and generality which exceeds the requirements of the programme. They are based on spatial design.

Space and structure are central to non-programmatic approaches. Structure is the design device to create dynamic urban order (as opposed to orderliness which is the inevitable outcome of programmatic approaches).

Design involves the integration of the generic elements of structure – space, place, connections and institutions - to create a carefully considered system of reference points to order the landscape. Structure not only provides value and support to processes of living in its own right, but it also establishes the logic which elicits predictable responses from the myriad actors who make the decisions that impact on urban activities. It is essentially the configuration of the public structure which provides the constraint to which private initiative responds in a relatively predictable way. It is the nature of structure which determines the range and type of opportunities to which individuals and groups can respond. It is the quality of this public spatial structure – the common experience of many people – which

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profoundly influences the quality of the environment and the degree to which the environment enhances or detracts from the human activities which take place within it. The public structure, in turn, makes demands, and places responsibility, on private responses (such as housing) for these responses directly contribute to the quality of the public environment. The system of ordering, therefore, is a design device: it establishes the language and rhythms of the place and is thus integral to its uniqueness.

I now wish to indicate a number of starting points for thinking about design in this way. The first is the need to reconstruct South African towns and cities. At the heart of this lies the need to use new housing to compact, intensify and integrate urban settlements in order to make them more sustainable, efficient and convenient. This demands that the primary scaling elements of urban systems must be people on foot, for this describes the condition of the majority. It also demands efficient, viable fixed line public transportation systems. If the situation works at these levels, other forms of mobility are a bonus, adding choice. Achieving both of these conditions, in turn, demands much higher densities than is commonly the practice and it demands integrating different modes of movement. The current situation with respect to transportation has reached point in most South African cities and it has the real potential to lead to catastrophic urban break-down

A second is that it is necessary to move away from the overwhelming concern with the individual unit and to recognise that as a society is able to do less and less to meet the particular needs of individual households, it is necessary to do more collectively. The focus of public attention needs to shift towards the collective spaces and public institutions: to concentrate on gearing actions (public actions of a kind which individual households cannot undertake, which benefit many

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households and which increase the capacity of individuals and households to respond creatively to their particular circumstances and to meet their own needs).

Actions of this kind may include creating access to opportunities to engage in urban agriculture, as a supplementary form of both income and nutrition; large-scale planting in low income areas, to improve environmental conditions; to yield alternative and supplementary sources of energy and building materials; to create recreational opportunities and to control the wind and sun; and really positively made and celebrated urban spaces which give dignity and a sense of permanence to environments and which can become the locus of community social life and of informal urban events; the public provision of economic infrastructure which allows small-scale operators access to opportunities to manufacture, trade and supply services at viable locations with very low overheads; information and communication kiosks which use public television to increase levels of developmentally-related information; building materials caches supplying materials at wholesale prices; and so on.

Even when utility services are being provided, it is necessary to think more socially and collectively: for example, in situations where potable water cannot be delivered to every plot, it is sensible to view places of communal water distribution not just as taps but as social facilities like the village well and to design them accordingly, for many people, particularly women, will spend a large amount of time around them; if not all households have water, a collective bath-house and laundry – again a social centre – becomes an important facility; and so on. Further, a central principle should be that public facilities should be clustered to facilitate 'one-stop' access and co-ordinated with public transportation so that they are made as accessible as possible, as

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opposed to being imbedded so that they conveniently serve only a limited local community.

Part of a new approach also demands rethinking standardised forms of social service delivery – a reappraisal informed particularly by the principles of maximising multi-functional use and sharing between user groups. For example, in situations of scarce resources, it is no longer economically possible to think of schools as self-contained entities. Rather, it may be necessary to disaggregate, or atomise them - to think of networks of classrooms (comprising a number of schools) served by, and sharing, fewer but really good more public elements such as sports fields, resource centres (containing libraries and audio-visual aids), halls and so on. Many of these elements can also be shared by community user groups, particularly in the evenings and at weekends: time zoning becomes an important management tool. Kadar Asmal's concept of school as community hub needs to be embraced from a settlement-making perspective.

In this way, the important issue of equity is defined not terms of access of households to privatised resources (for example, shelter) but to public facilities and services. This does not imply that shelter-related programmes should not be vigorously pursued: of course they should. It does recognise, however, that shelter-related assistance will always be uneven and therefore, by definition, equity cannot be defined in terms of this. Depending on the size of the budget, it may also imply allocating proportionally less to shelter and proportionally more to other forms of public assistance.

Finally, it is necessary to rethink the basic structuring elements of urban settlements. The prevailing modernist model of, or approach to, urban development, which views the free standing building as the basic

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building block of towns and cities has not always been the dominant one. In fact 'rational' scientific planning of this kind is a relatively recent experiment, which consciously sought to break with the experience of the past. It is now clear that the experiment is failing and that it is necessary to relearn from the lessons of the past without, of course, naively attempting to recreate past forms.

Precedent suggests that high performance urban settlements (those settlements which most positively accommodate human needs and activities) have always been structured not by houses or roads but by the collective institutions that have been valued by society – religious and educational institutions, place of political power, of health care, markets, recreational and cultural centres – and by the public spaces that celebrate these. Historically the relationship between these institutions, spatially scaled by movement on foot, created locational diversity, choice and a guiding urban order, and housing simply infilled between these.

Precedent shows, too, that the quality of public space is particularly important in positively-performing urban environments. The public spaces are the places within which people experience the city and engage, both formally and informally, in its collective life. They are the primary elements affecting the quality of cities as experienced by all people. While being important for all, the role of public spaces in the lives of the urban poor is critical. When people are poor, the full range of a household's needs cannot be met through the individual dwelling which represents the locus of one family's (be definition limited) resources. The public spaces, however, can become the focus of an entire community's energies and resources. If properly made and celebrated, they give dignity – the starting point of our constitution - and a sense of permanence to environments, even in informal settlements.

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They are the place where most social experiences are played out and they act, operatively, as extensions to the private dwelling unit: they take the pressure off the individual dwelling. It is the framework of public spaces, institutions and facilities, therefore – not houses – which must be seen as the basic structuring system of urban settlements, if genuinely liveable environments, which improve with time, are to be created.

CONCLUSION

The evidence is now overwhelming that the real urban design issue – the issue of generating positive, enabling, total living environments rather than simply shelter – cannot be significantly advanced by tinkering with the dominant model of development which currently drives urban settlement formation in South Africa. It is the model itself which is the problem and which must be changed.

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