

A grand design for steering change is needed. Concerted efforts at all levels are needed so that a life supporting environment is ensured. This will mean man's survival.

" Ecology is the science which seeks to elucidate the principles governing the interaction of the natural processes of land, water and all living things. "

Arvill (1967 : 8)

The principles of ecology applied to failing environments can help them to be life supporting once again. These principles are essential to planning for survival. One of them is the need for balance in the environment. Where soil is too acid to support life nutrient salts and lime must be added to enrich and neutralise the soil. As a landscape becomes less and less capable of sustaining and fulfilling man's life he looks to the city which offers possibilities and opportunities that are greater than those experienced on the land. As man moves to the cities, the cities are called on to support life at an increasing rate. Urban design is about making cities liveable and meeting the challenge of increased numbers.

Before going into how man can intervene to change his environment positively, let us look at projections for the environment in the year 2000. These projections are based on the continuation of existing trends.

A GLOBAL SCENARIO FOR THE YEAR 2000, CURRENT TRENDS IN CHANGE

" If present trends continue, the world in 2000 will be more crowded, more polluted, less stable ecologically and more vulnerable to disruption.

Serious stresses involving population, resources and environment are clearly visible ahead. Despite greater material output, the world's people will be poorer in many ways than they are today.

For hundreds and millions of the desperately poor the outlook for food and other necessities will be no better. For many it will be worse. Barring revolutionary advances in technology, life for most people on earth will be more precarious in 2000 than it is now - unless the nations of the world act decisively to alter current trends. "

Barney (1982 : 1)

The trends referred to in the quote above speak of change. Some of the global changes are referred to below.

a) population

The world population is expected to be 6,35 billion by the year 2000, an increase of more than 50 % on current figures. 90 % of this growth is expected in the world's poorest countries. This figure does not take war or disease into account. Aids is expected to have an effect on this number, 5 million Central Africans are sero-positive - 30 to 70 % are expected to contract the disease.

b) economics

The economies of less developed countries are expected to grow faster than industrialised nations, but the G.D.P. per capita will remain low.

c) food production

This is expected to increase by 90 % by 2000 but most production will be in countries where consumption is already high. In Africa and Asia production is expected to be at less than present levels.

d) arable land

This is expected to increase by 4 % by 2000.

e) fuel production

The industrialised nations should have no real problems in meeting energy needs, but the situation for the poorer countries will be very different. 25 % of mankind depends on wood for fuel. By 2000 demand will exceed supply by 25 %.

f) finite fuel resources

These are supposed to be sufficient for centuries to come. Supplies are not evenly distributed geographically and economic problems are expected.

g) non-fuel mineral resources

25 % of the world is industrialised. This portion of the world uses 75 % of the world's minerals. Industrialising nations will find themselves having to fight for their mineral needs.

h) regional water

Severe shortages of this water are expected. By 2000 the demand for water will have doubled. Deforestation affects the water cycle in that transpiration of water vapour to the atmosphere is lessened.

i) forestation

Significant losses of forest are expected due to fuel wood and forest product demand. Stocks of commercial size timber will decline by 50 % . Forests disappear at the rate of 18 to 20 million hectares per year. This is mostly in Africa, Asia and in South America. In less developed countries forests will be 60 % of their current size by 2000. Forests are essential to the atmosphere for oxygen and carbon dioxide.

j) deterioration of agricultural soils

Reasons for deterioration are erosion, loss of organic matter, desertification, salinasation and water logging. The spread of these conditions is expected to accelerate.

k) the atmospheric conditions

Carbon dioxide and ozone depleting chemicals are increasing at rates that could affect the upper atmosphere by 2050. Acid rain as a result of the combustion of fossil fuels damages lakes, soil and crops.

l) extinction of plant and animal species

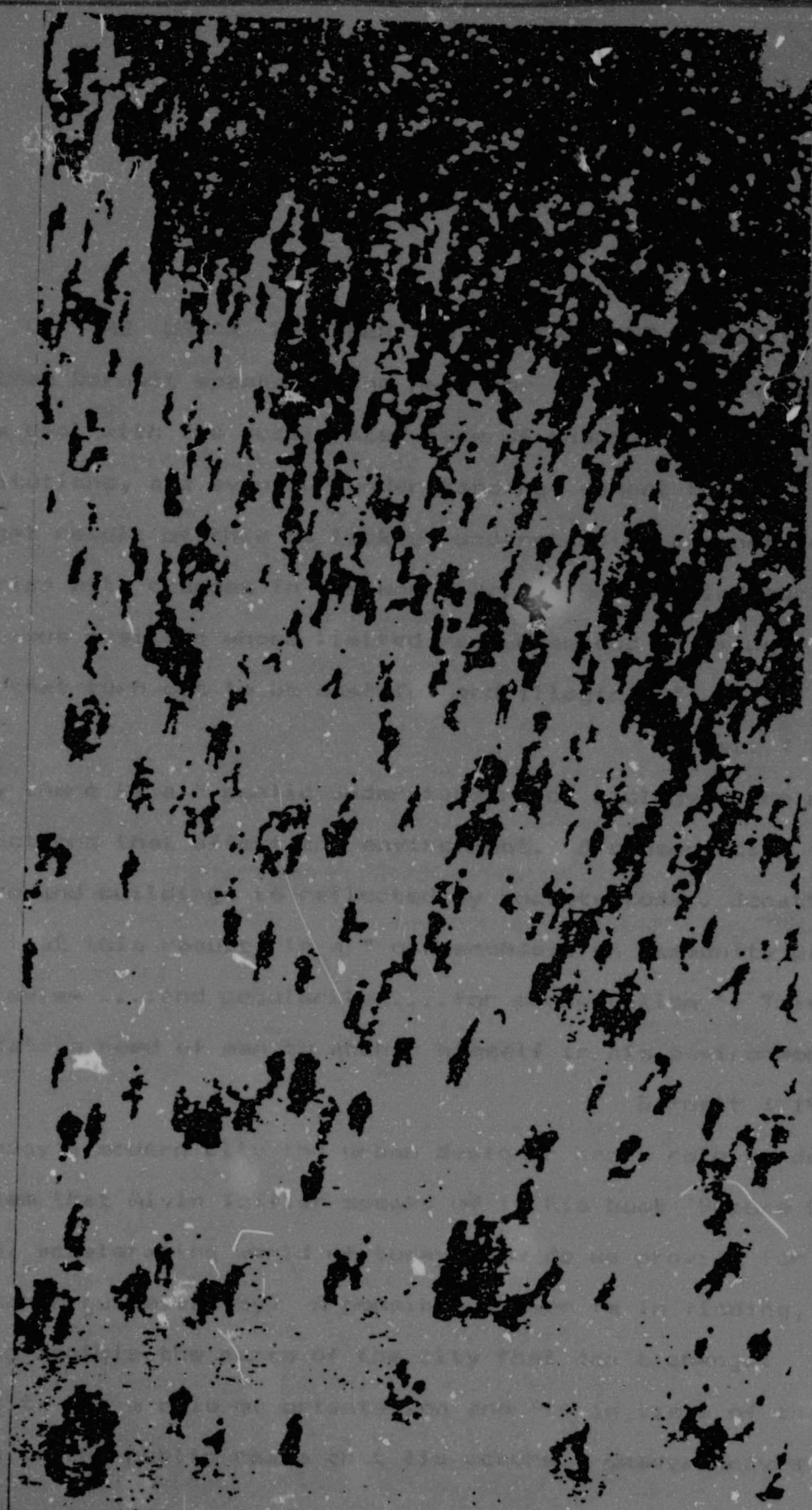
Up to 20 % of all current animal species will be lost if their habitats vanish, especially those in tropical forests.

These changing trends infer that the gap between the world's poor and wealthy countries will grow wider and the current situation of inequality and tension will be aggravated. As the balance of the environment is affected, the earth's ability to support life will diminish. The worst hit regions will be the less developed countries.

Concern goes beyond national boundaries. The "global commons" the oceans and the atmosphere are international issues. An era of cooperation and commitment is upon us if we wish to affect the environment positively. Cities are part of this life supporting environment. Urban design is about making liveable cities. This is where urban design fits into the grand design of steering change in the environment. Urban designers steer change through a system of policy guide lines and controls.

Barney (1982 : 4)

A look at the role of the urban designer in a changing world follows. The role of the urban designer is to steer urban change in the direction of a positive environment. A positive urban environment is an environment that is supportive of social and economic advancement in pleasant surroundings.



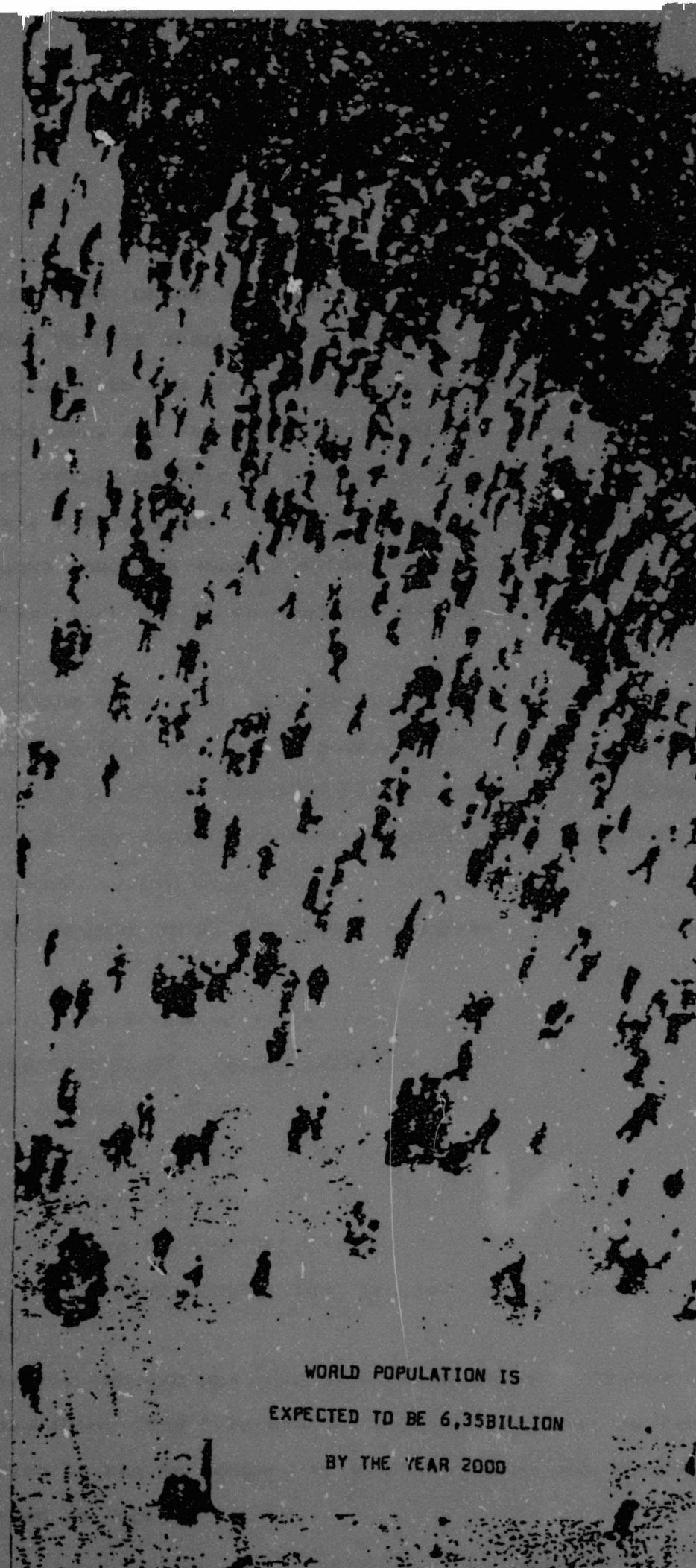
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ROLE OF THE URBAN DESIGNER IN A CHANGING SOCIETY

Jonathan Barnett speaks of the need for" a methodology that helps deal with the accelerated pace of change." He adds that " Our institutions, and even our understanding, cannot keep up with events." The net result of this is lack of understanding and not being totally at grips with changes in the world around us. We find ourselves in the invidious position where limited resources end up being allocated "in ways that turn out to be wasteful and illogical."

Barnett (1982 : 6)

Today there is a " public understanding of ecology - the relatedness of the actions that affect the environment." A conservative view towards nature and buildings is reflected by society today. Jonathan Barnett says that this results in a " new emphasis on community participation and reviewand popularityfor preservation ". This seems to indicate a need of man to anchor himself in his environment.

Barnett (1982 : 6)

In today's modern city the urban designer has a role in dealing with the problem that Alvin Toffler speaks of in his book 'Future Shock'. In the fluid, accelerating world of today, how do we provide for permanence to anchor ourselves by? A possible answer is in finding, defining and making legible the parts of the city that don't change.

The city has a role of orientation and fix in times of change.

It is in the public realm that fix occurs. Change occurs in the private realm.

Eventually man can not keep abreast of change. Change becomes unmanageable. The " accelerative thrust has now reached a level at which it can no longer, by any stretch of the imagination, be regarded as 'normal'".

Toffler (1970 : 39)

The normal institutions of industrial society can no longer contain it.

" Running parallel with industrial society in South Africa is a pre-industrial society, a rural society with little or no formal education, and no foothold in industrial society. The rural society finds itself having to compete with a fast moving industrial society. Rural society finds itself doubly disadvantaged, left behind, dumbfounded and numb, with little chance of ever catching up.

Human and institutional adaptability is finding itself challenged by the accelerating pace of change more each day. " To survive, to avert what we have termed future shock, the individual must become infinitely more adaptable and capable than ever before. He must search out totally new ways to anchor himself, for all the old roots - religion, nation, community, family, or profession - are now shaking under the hurricane impact of the accelerative thrust."

Toffler (1970 : 41)

" Design is a methodology that, when applied to public policy, can help to solve some of the problems of misallocated resources, misused land, and the unnecessary destruction of historic buildings." It tries to make cities coherent and less wasteful and through this makes the fixes that man anchors himself by.

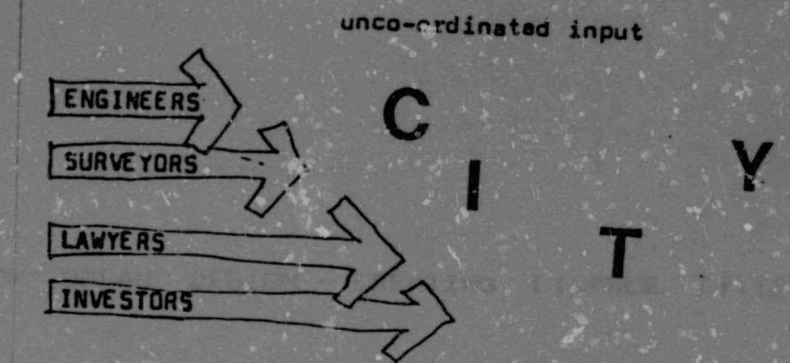
Barnett (1982 : 7)

Brunofsky in 'The Ascent of Man' speaks of the city as mankind's highest achievement. Civilization, today, has chosen to let the city develop in a haphazard way as opposed to in a controlled, coherent manner.

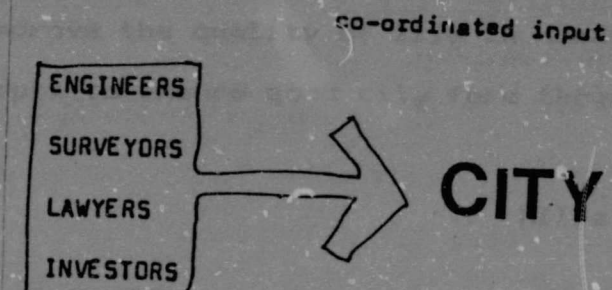
Barnett states that, " Today's city is not an accident. Its form is usually unintentional, but not accidental." The design of cities has been determined by engineers, surveyors, lawyers and investors, each making their own rational decisions for rational reasons, but not considering the design of the city as a whole. This reflects people working in isolation and the city being a by-product of their intervention.

Barnett (1982 : 10)

If a strong idea of what the city is and could be in its fullest sense, was a design guideline for the executives who make the city; the engineers, lawyers, surveyors etc. They would then be able to temper and humour their contributions so that the city is not a by-product of their intervention but rather the product. To achieve a controlled and coherent city with places of fix and flexibility, the planning profession must take an active role in the day to day decisions about the allocation of government money according to needs and political interests, and the economics of real estate investment. These Barnett says are the medium of city design.



with the view that design can happen later
this reflects an uncoordinated environment
with fragmented social and physical relationships



the input of the urban designer is in the city form
and the cities urbanism



THE BOSTON GOVERNMENT CENTER,
architects designed the built
form according to urban design
guidelines.

THE FUNCTION OF URBAN DESIGN - CREATING LIVABLE CITIES

The lack of urbanism in today's cities is a cause for concern. This concern has resulted in the creation of the profession of urban design. Urban Design has been defined as

" a design process for creating liveable cities....a process that seeks to improve the quality of life in human settlements and which attempts to ensure good city form through physical design ."

Mills (1984 : pamphlet)

It is said to

" occupy the territory between architecture and city planning and draws on a wide range of disciplines to solve complex design problems."

Senior & Wood (1981 : 12)

This approach grew out of a response to modern orthodox planning, a response based on a view that a " design vacuum " existed in the urban environment.

In today's world of specialisation we find a trend of job description where parameters of involvement are stipulated. This usually means that certain areas are well addressed and others not at all.

If we look at today's environment we find environmental specialists responsible for all parts of the physical environment. Each one works within the parameters of his own field. A necessity then exists for an environmental coordinator who can orchestrate the various inputs from road engineers, town planners, architects, ecological experts, sociologists, users, urban economists etc. to see that they collectively create an environment that is greater than the sum of

Author Clur G

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