Chapter 2

High-rise Buildings

vis-a'-vis the Quality of Urban Life
High-rise Buildings vis-à-vis the Quality of Urban Life

2.1. High-rise Impact on Neighbourhood Livability:

Behind the news reports in dailies, weeklies and political conflicts concerning high-rise buildings lay their effects on the everyday lives of those who live in and around them. Obviously, one significant question is: Do such buildings make the city more livable? Reason would say that they have positive as well as negative effects. However, there is very little hard empirical evidence of the impact of the effects of high-rise buildings on people's lives. A few studies of the effects of high-rise housing on their inhabitants have been carried out (Newman, 1972) but there has been almost nothing on the external impacts of high-rise buildings on cities (Dornbusch, 1975). Hence, much better predictions and simulations of impacts are needed prior to construction. Better understanding of public attitudes towards projects, full disclosure to the public of all possible impacts, and efforts to ameliorate impacts by cutting the size of projects, changing the locations, or altering other qualities should be part of the process. Professionals involved in planning or controlling high-rise development should have to attempt to assess objectively the environmental and socio-psychological impacts of each new building through conducting substantive empirical research studies.

But how should one investigator go about measuring socio-environmental impacts as its definition is a complex task and can only be dealt with a number of propositions.

1. The environmental impacts of high-rise buildings must account for their effects on different population groups because the same environmental impacts may have an entirely
different meaning from one population group to another. As for example. Population groups impacted by an office building may include:

a) the users: executives, office personnel, visitors, merchants, building management, owners etc.;

b) neighbours: neighbouring building owners, office workers, neighbouring households, the street public;

c) the public: the citizens of the city, public agencies, interest groups, visitors from other cities.

2. The impact of different kinds of high-rise buildings, particularly office buildings, hotels and apartment buildings may be so different in nature that they should be treated as quite separate environmental issues.

3. The external environmental impacts of high-rise buildings on surrounding neighbourhoods and the city may be as important as their internal impacts on their inhabitants or office workers.

4. The external environmental effects of high-rise buildings can be direct or indirect and cumulative. The direct effects may be the loss of old buildings and meaningful places, and view blockage, shadow effects etc of the new building. The indirect effects may be increased traffic on the streets and land use changes - more high-rise buildings, restaurants, parking garages etc. one building can therefore bring with it a chain of impacts.

5. Environmental impacts are relative over time and between alternative choices. The simplest relative measure is one comparing before and after conditions, that is, ambient
environmental conditions before construction of the building and ambient conditions when the building has been built. A careful study of the environmental impact may examine conditions (a) before construction, (b) during construction, (c) immediately after the opening and (d) after an impact stabilization period – if impact stabilizes.

The pre-construction period is usually the time when the negative impacts of a project are most acute. The eviction of an existing population, often of low or low-middle incomes, the tearing down of beloved buildings, places, trees and views – all of these are sometimes felt as acutely as the loss of close friends and relatives (Fried, 1963). The construction phase with its noise, dust, danger, and street blockage can create misery for others, and occasionally put neighbours out of business. Dr. Pongthep (quoted by the Bangkok Post on July, 17, 2002) reported on the basis of a study conducted in the Northern Thai city of Chiang Mai that people living near tall buildings were more prone to respiratory problems, high blood pressure and heart disease because the buildings created pollution during construction and blocked air circulation after they were completed. The study found that 86% of respondents felt irritated by a decline in the environment around tall building, including waste, noise, air and water pollution during and after construction.

The opening period is a time when the image of the building – for better or for worse – is finally confirmed. This is a time when the occupants begin to crowd the local streets and the patterns of change. The neighbours accept the new facility with pleasure or resignation. Finally, over the years the impact of a building may lessen as it becomes embedded in the changing urban fabric, absorbed into the public’s image of its city.
6. Cumulative impacts may be of more concern than the impacts of each successive building, that is, the vast consumption of energy, the generation of traffic and sharing of city resources etc.

High-rise buildings impact upon the character of city districts and neighbourhoods in two primary ways. Some effects may result from the increased densities of people and motor vehicles generated by intensive development in a limited area. Other, perhaps more subtle effects include the dramatic physical changes high-rise buildings produce by virtue of their size, their design, perhaps even their symbolism. The context of high-rise impacts on neighbourhoods is one of contrasts, between the high-rise structure and surrounding low-rise buildings and between the high-rise and low-rise populations. Not only does a high-rise building multiply the resident population on a block, but the high-rise residents in the surrounding low-rise buildings, whom they suddenly outnumber.

Gelb (1977) focused upon the relative livability of residential blocks with and without high-rise buildings where livability was defined to express the continuity between individual dwelling units and the rest of the block (including semi-private and public open areas as well as other dwelling units): the extent of territory residents perceive as home base. Involved in this concept are aspects of territoriality, or the extent to which residents individualize and defend their living spaces, as expressed in their visibility on the block and their use of outdoor areas as extensions of the individual dwelling unit. The tension between neighbourliness and personal privacy is also an important component in this overall concept. In one study (Pongthep, quoted by the Bangkok Post on July, 17, 2002) people living near high-rises were found to be afraid for their safety in the event of fire or earthquake. Some of the respondents felt an intrusion into their privacy due to the presence of tall structures near their homes.
Thus it may be hypothesized that high-rise buildings, by changing the physical form of living space on the block by closing down views and openness, by shadowing and overlooking neighbouring buildings, and by increasing the resident population – especially if the high-rise tenants were very different from surrounding low-rise occupants – could impair the livability of the block.

2.2 High-rise Impact on Quality of Urban Life:

Obviously, a cluster of questions may arise in this context. Would residents on the high-rise blocks take advantage of surrounding open areas as extensions of home territory available for their use to the same, greater, or lesser extent than residents on comparable low-rise blocks did? Would it be possible to assess the relative degrees of neighbourliness by noting the frequency of conversations between residents and passersby? Would the physical features observed in the two blocks offer evidence of different degrees of security or concern with privacy and the safety of individuals and personal property? In other words or in a broader spectrum the following queries also seem to be relevant.

What is the relationship between tall buildings and the urban setting? Do they affect urban life? Can better skyscrapers really improve the urban environment? What counts overwhelming today are the multiple ways any building serves a complex and sophisticated set of environmental needs. What is it part of? How does it satisfy the needs of men and society as well as the needs of the client? How does it fit into the larger organism, the community? What does it add to, or subtract from, the quality of life?

Again when we say “good” and “bad”, in connection with high-rise buildings, we do not mean the structure alone or the architecture alone. We are, also, may be most importantly, talking about their “planning and design” in a larger context. On the one
hand, there is internal environment. Besides the normal concerns that apply to all buildings
this can cover such things as (1) vistas and views from windows and balconies and
associated orientation with regard to adjacent buildings, (2) internal courtyards and access
to individual units, (3) creation of a "sense of place" both of internal regions and for
individual units, (4) tallness criteria as regards occupancy category, and (5) a
consideration of life style of those who are perhaps not yet accustomed to city living.

On the other hand, there is the external environment. The tall building is part of the
urban system, a system whose quality it creates. Thus, the planning and design must
necessarily include not only structure and architecture, the adjacent buildings and street
space, but also the interface with people's interest at the street level, with the
transportation system, with business and residential activity, with the cultural life of the
city at its centre, with the basic urban service of power, sanitation, water supply etc. it
even extends to the surrounding communities and affects adjacent cities. It is a matter of
evaluating the contribution which the high-rise building makes to the urban environment,
its effects on the local, community, and regional life, on land use and even space use, on
the social and human factors, and need for communications, contact, choice, opportunity
and mobility which underlies the very existence of cities.

So the planning and design of tall buildings is concerned with much more than
safe and economical structure of the engineer, energy-efficient systems and aesthetic
solutions by the architect. It is intimately concerned with the complete life system of our
society that is becoming so rapidly urbanized. Here in lies the significance of the statement
that the quality of urban life can be enhanced by improving its skyscrapers.