MORPHOLOGY OF SKYSCRAPERS:
Balanced Environment of the interior and exterior –
A Concept of Total Building

by

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ABSTRACT

Through the ages, man has sought, in the building of shelter, to fulfil two basic needs -
protection from the elements and the provision of an atmosphere favourable for both
spiritual and physical endeavours. With continual technological advancement, man has
made use of technology relentlessly to improve his living environment, improving
living standards, conditions and pushing for higher human comfort level. Inevitably, it
has resulted in the deterioration of our physical environment. Greenhouse effect, global
warming, ozone depletion stems partly from the excessive energy consumption, a large
portion of which is in the provision of lighting and cooling systems in buildings. Thus
the primary concern of achieving maximum energy efficiency at minimum energy input,
accounted by the use of HVAC systems in commercial buildings. Low energy cooling
techniques that have been used for centuries in various parts of the world, especially in
tropical vernacular architecture, are now being re-examined and re-engineered to be
adapted within modern built forms. Even the building form itself is evolving to
accommodate to the new design parameters that architects are grappling with,
responding directly to our surrounding in an ecological manner through the
enhancement of building and spatial performances, giving an extrapolation on the
possibility that ecological design will be the next big stylistic trendsetter. This paper
will attempt to look into these issues and parameters. In the first part, I will be
discussing the morphology of the office tower (skyscraper) in relation to the new work
behaviour, new demands and expectations of a work place, and how passive energy
with the external environment can be utilised to meet the new demands of the
millennium. In part 2 of the paper, I will be tabulating and analysing the data from a
survey of the external comfort level. This survey and tabulation is an attempt to look at
the acceptability and adaptability of the general public in the corporation of external
spaces into the internal environment.

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