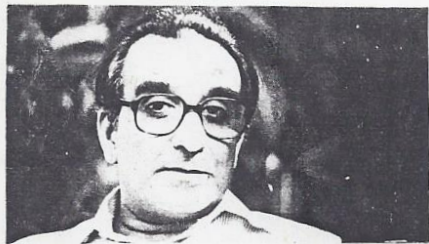


With Respect to Nature

Ravindra Bhan discusses
*a radical approach to
Landscape Architecture
with A.G. Krishna Menon*



LANDSCAPE architecture in India has yet to be fully recognised and applied in practice as a discipline in itself. Ravindra Bhan's work in this area spans 28 years and covers the development of highways, trade centres, residential areas, hotels and embassies, industrial complexes and townships, a golf course and the Asiad swimming pool. In 1980 he won the Aga Khan award for his contribution to the Mughal Sheraton Hotel, Agra. In today's India, where man-made interventions have brought environmental degradation to a dangerous high point, the counsel of ecological planners like Ravindra Bhan is of profound importance.

How did you get interested in landscape architecture? Who were the major influences in your education as a landscape architect?

Bhan: I suppose I was interested in landscape architecture right from the beginning when I started my training as an architect, though I didn't know much about the subject then. I have always admired our traditional buildings and the buildings of Frank Lloyd Wright and those of his contemporaries who designed with respect to nature. I must mention my gratitude to Mrs. Elizabeth Ghuman who was Head of the Delhi School of Architecture where I did my first two years of architectural school. She was taking an Elective in Landscape Architecture and encouraged my interest in the subject. When I went abroad to study further and came into contact with people who had specialised in landscape architecture, it was only after a while that I could

really understand what it was all about. At that time there was a choice — to practise landscape architecture in the traditional way as it had started in Harvard, basically concerning direct physical embellishment, or from a different angle, that is an ecological approach, where you take into account both the natural and the man-made environment and resolve the two to produce a harmonious whole. The only person who was trying to do something in this direction was Ian McHarg, and he happened to be the Chairman of the Department of Landscape Architecture and Regional Planning in the University of Pennsylvania at Philadelphia. After I graduated in Architecture from Washington University, St. Louis, I went to meet him and gave him my background and told him of my interest in landscape architecture.

What do you think was the genesis of McHarg's approach? For instance, in the

'50s, people like Rachael Carson were writing on the ecology of ponds. Do you think that had any influence on McHarg's thinking?

Bhan: Yes, McHarg really admired Rachael Carson's books. Then there was Henderson's book, *The Fitness of the Environment*. Anything that had to do with the inter-relationship between the living and the non-living, which influenced physical planning and design, really formulated the core of McHarg's philosophy. Not many people subscribed to his ideas at that time. They all said it was only theory and would never work in practice — but in ten years' time he had taken America by storm. Most of the Schools in the U.S. by the mid-'60s, including Harvard, had swung to an ecological approach. Initially, McHarg had to almost thrust his ideas on people who did not understand what he was talking about. We did a project on a long highway between two cities which had been planned by the corps of engineers in the usual way as the most direct or most economical route in terms of mileage. But McHarg questioned this and pointed out that there were numerous other important material and man-made factors that could determine whether the highway should be put on alignment A, B or C. . . . What is environment? Everything that you see or experience. It encompasses the natural surroundings in terms of the geology of the area, climate and micro-climate, physiography, soils, water resources — surface and underground — plants and animals, as well as the man-made components like individual structures, transportation corridors, sewer systems, surface drainage, social and economic constraints etc. You then analyse all these components with respect to the facility or design which is required to be incorporated and you come up with a solution where all this put together can function. Because when you de-

sign, you are really altering, to some extent, a living system. This system will not function if you don't understand the inter-relationships which keep it going, because if you disturb one part of it you are disturbing the rest. But if you want the system to function properly you have to know the extent of change which the system can tolerate and then plan accordingly.

Can you give us some examples of the problems one encounters?

Bhan: I think the most glaring example of this is the road alignment

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to Srinagar. From Jammu onward the terrain is mostly hilly, and earlier one had to cross 9000 ft. over the Banihal Pass. This route is built on a soft rock formation, mostly shale, and within the shale there are areas of swelling shale. These areas, when wet, expand to ten times their volume. So if your road drainage resulting from melting snow and rains is not properly taken care of you are going to have problems. No matter what you do you are going to lose the road in wet weather. It is wiser not to build on shale at all especially in a mountainous region. There are other roads to Kashmir — the Moghuls used the road from

Poonch going into the valley — which are definitely longer but more stable. If this route had been properly planned and built, money would have been well spent only once, but now crores are spent every year on just maintenance. A conventional approach to planning of a sensitive area has set off a chain reaction. You have firstly built on an unstable system, in addition you have disturbed the fragile slopes by digging up areas and thus stripped away the stabilising vegetation, which you cannot replace easily on very steep slopes. So you have created by your own ignorance problems of continuous erosion and landslides.

The sensitive and sensible way to go about something on this scale is, first, to map the natural parameters — such as the geology, climate and micro-climate, physiography, soils, hydrology, vegetation and fauna — birds, mammals and fish — and the scenic potentiality of the area. Then we take the physical or man-made parameters — location of towns, villages, etc., historical landmarks, transportation corridors, land values, land availability, agricultural land, socio-economic factors. We understand the place in terms of opportunities and constraints resulting from analysis of man-made and natural components — and this rational methodology evolves a strategy where the design opportunities are preserved and strengthened. Constraints are either removed completely, if possible, or minimised by taking appropriate design measures so that the ultimate result is a healthy compromise between man and nature. From this elaborate synthesis we choose the route, which may be a very broad corridor, and by subjecting it to other aspects of physical planning, we get to choose the path of least resistance where we can really get the best of both systems. This can also be done very easily with a computer working out all the alternative