Indigenous Building and the Third World

Development Workshop ,Tehran, 1975

Written nearly thirty years ago, it seems poignant how many issues in the world remain the same.(DWF 2003)

Indigenous systems

By indigenous systems we mean those systems that are traditional to a country. Many traditions, far from being backward or illogical, do in fact have an underlying rationale or 'system' which is highly relevant to their particular region.

The potentials of indigenous systems have been neglected in most Third World countries. Instead they have been replaced by Western methods often inappropriate to local conditions and needs - physical, economic, social, cultural and aesthetic. The visible material success of the Western industrialized world has made it the obvious model for Third World countries. The very terms 'developing' and 'developed' countries implies that the latter is an ideal that the former should aspire towards. Our view is that the so-called 'developed' countries are in many ways 'over-developed.' It would neither be realistic nor desirable to follow their example. We use the independent term 'Third World' because we believe that more viable models can be drawn from the indigenous systems within these countries.

Over the years, the values, objectives and methods of the West have been adopted by the other countries through a combination of imposition and emulation. Western ideas of health care have been unquestioningly applied, often to the complete neglect of long practiced local methods of healing. Similarly, mechanized capital intensive building technologies from the west have been imported to the detriment of established indigenous building industries.

Today[1] there is a growing awareness that such literal transference of methods rarely works. Nor is it adequate to start with basically Western objectives and methods and then modify them to local conditions: The Third World has very different social, cultural and economic bases (and in most cases, different physical environments as well.)

Furthermore, the Third World is now in a very different position from that in which the Western World developed, when it had the rest of the world to draw its resources from. Yet today the Western world itself is beginning to have grave doubts about the validity of its own socio-economic models. Profligate consumption of energy and resources has precipitated the energy crisis and aggravated a major economic recession. Over-specialization and institutionalisation have taken control out of the hands of the majority of the population and left them alienated. Moreover, at the time that the Western world was developing, it was concurrently shaping the socio-economic systems of the rest of the world, often to its own advantage and to the detriment of the country in which it was acting. Much of what is considered 'modern' today in a Third World country was fathered by this shaping process and continues to work to the detriment of the country. However, those indigenous systems that were through neglect least affected by this shaping process may paradoxically have the most to teach us. Most of the indigenous socio-economic systems allow people direct participation and control, are based on low and local use of energy and resources, and work in harmony with our environment.

For an example that illustrates the above points, let us consider housing. An old Arab saying loosely translates as 'The day you stop building your house you will die.' This is not some mystical quote but factually reflects the indigenous system of housing. In Southern Oman, the occupant of an old town house, whose family had lived there for generations described to us how his house had been built. The house had started as one room on the plot of land and had gradually been added to as family size and fortunes increased, until it reached its present three-story courtyard shape. And today on the top floor yet another room had been built, and a second room, still in timber and corrugated iron, was soon to be converted into more permanent materials to house a new arrival in the family. In the recently allotted plots in the town the same process could be observed. The new arrivals lived in a tent whilst building their first limestone room, the longer established house - owners had already inscribed a courtyard on the ground floor and were making further additions.

The indigenous system of housing is one in which it is very much a process, intimately related to the users' needs and resources, and very much in the users' control. The idea of housing being the production and distribution of a number of units by the government or a private institution to a passive,

[1] This article was written by DW in 1975.

recipient population is one of the misleading models set up by Western countries. Today, with chronic and increasing housing shortages in the wealthiest industrialized nations, leading housing specialists are saying that the idea of housing as a 'product' is unworkable[2]. Instead they are turning to the housing 'processes' found In the indigenous systems of the Third World to draw lessons for their own countries. Meanwhile in developing countries housing as a product continues to be sold as the most 'modern' idea along with a whole range of other dubious ideas on design, construction and building types. Thus as Western architects begin to realize the damaging social costs of high-rise apartment living, they become a major feature in many Third World countries.

The successful selling of Western ideas depends on the assumption fostered in people in developing countries that Western methods are superior to their own. Perhaps the most insidious effect has been their loss of self-respect and identity. In Oman, when we asked a ten year old school boy (with just two years formal schooling) to draw his own flat roofed mud brick courtyard house, he drew us a pitched-roof Western bungalow with a front garden. He drew his family and himself in shirts and rousers, although he was still dressed in the traditional gelabeya gown.

In Luristan, Iran, the situation was similar. When asked about their houses most villagers immediately indicated their preference for the steel and glass buildings being erected in Iran's rapidly expanding cities.

These were preferred because they were said to be 'modern.' However, when questioned more closely, the same villagers were able to point out the appropriateness of their own houses to the local living conditions. The short comings such as durability were largely those that could be overcome by simple improvements.

It is often the educated professionals and policy-makers of Third World countries who are the most convinced of the superiority of models offered by the Western countries. Their training and education is too frequently limited to these Western models. Since the majority of their people are still operating within indigenous systems it is the professionals who are alienated in their outlook and in what they can offer. A re-evaluation of their own countries' indigenous systems would not only help these professionals regain their self-respect and identity, but also realign them with their own people and equip them better to be of service. In China, medical professionals seriously re-evaluated the ancient indigenous system of acupuncture so that today it largely replaces Western anaesthetics.

The indigenous built environment

By 'the indigenous built environment' we mean the built-environment of the rural areas, the older traditional sections of the cities, and to an extent the unofficial settlements (such as squatter settlements) of the newly urbanizing areas in the Third World. It is in these areas that the traditional methods of building and design are most apparent. That they are often also the most run-down areas is more to do with wider economic conditions such as overcrowding, poverty and neglect than with the traditional methods themselves.

Housing

In his book "House, Form and Culture,' (3) Amos Rappaport writes:

All housing needs to achieve four objectives in order to be successful.

- it needs to be socially and culturally valid (here traditional housing possibly works best.)
- it should be sufficiently economical to ensure that the greatest number can afford it (in primitive contexts most, if not all, people have houses.)
- it should ensure the maintenance of health of the occupants Cm relation to climate, traditional housing succeeds; in relation to sanitation and parasites, it usually fails.)
- There should be a minimum of maintenance over the life of the building. Traditional housing may, therefore, be much more acceptable — if not in fact, desirable —
- than has been assumed, and housing attitudes should be adjusted accordingly. At the very least this offers a fruitful field for research.

Whether one agrees with Rappaports' objectives or not, they act as a useful set of criteria against which one can assess indigenous building. Unfortunately, indigenous building has inspired formalistic mimicry more often than serious assessment. For example, in Sudan the conical roofed, mud and thatch family house cluster is recreated in concrete and brick, with a back yard, and laid out in straight rows as a low-cost housing scheme. The indigenous social and cultural validity is lost in the transition of form from the family cluster to the rigid layout. The change of materials decreases the climatic performance of the new house and increases its costs beyond the range of most Sudanese. It also places the building of the house out of the owners' control. On the other hand, the materials are more

[2] J. Turner and R. Fischer, *Freedom to build* (Macmillan, London 1973)

permanent, require less maintenance and harbour fewer insects and parasites. However, these latter improvements could have been gained without losing the more fundamental advantages of the traditional example, if the approach had been to work from a thorough understanding of the indigenous system.

Rural development

The lessons that can be derived from the indigenous built environment can be applied not only to housing, but also to more specialised buildings such as schools, workshops, markets, and public baths, and also to infrastructure design, such as layout, and access for people and services. Probably the clearest example of this potential remains Hassan Fathy's Gourna village, which was built in the late 40's. (4) The village, near Luxor, Egypt, is built entirely of sun dried mud brick, and the whole design frown housing to communal buildings and layout is based on traditional concepts. Perhaps more importantly, Fathy worked out an economic and organizational base, so that the production in the village derived from local crafts and local organisational patterns.

A quarter century later, Fathy's approach is of increasing relevance as rural development becomes more of a priority. To quote Barbara Ward[3]: If de-centralised operations are ta be supported, then development must be concentrated on the village, the market centre and the intermediate town. To prevent people from leaving the villages only ta become unemployed in the big cities, intermediate centres are needed, with local storage units, and co—operatives, local banks and light industry, local family clinics, schools and health services.

Different versions of the development outlined in the quote have been put into operation in several Third World countries. An example from a village settlement in Oman serves to illustrate the pitfalls found in a too-simplistic approach in this case little attention was paid to upgrading existing buildings. The new buildings - hospital, school, and mayor's house - were located some distance away from the traditional centre, which they rivalled rather than complemented. The new building reflected the 'professionalism' of the city architects and contractors, a foreign firm. Neither in materials, layout nor design were they appropriate to the local environment both physically and socially. For example, in the hospital the patients complained about the glare and heat in the rooms, which was caused by the layout, the huge windows and the concrete block walls. The heat gain was even beyond the capacity of air-conditioning. Furthermore, by representing progress, the new buildings encouraged in the minds of the local populace ideas of what an appropriate building should be, and by implication denigrated the indigenous buildings. The only part the local population played in the development was through the few who gained temporary unskilled employment during the construction period. n the years to come the net effect could be the creation of a new settlement around the new centre, physically apart from, and alien in materials and form to, the indigenous buildings, life-style and culture of the people and the physical environment. The traditional settlement, being officially ignored, would be allowed to decay into a slum while still housing a large section of the indigenous population. If, however, the indigenous built environment had first been understood, if local materials and technologies had been used to the maximum (improved where necessary) and if local builders (perhaps a co-operative) had been in control of the building, there would have been a much greater and lasting benefit to the community. Government investment for the project would have gone directly into the community, and a local building industry could have been revived, capable of developing the locally built environment in a self-reliant way.

The urban environment

It bas been argued by Koeningsberger and others that indigenous methods of building are of limited potential, since they are mostly found in rural areas while the main problems for Third World countries are urban.[4]

This is true to a point, but not to the extent sometimes put forward. First, to refer back to Barbara Ward's statement that 'development must be concentrated on the village ... to stop migration from the countryside to the cities, increasingly rural development is seen to be the solution to urban pressures.' Secondly, there are many developing countries that do have long urban traditions. Many old city centres, such as those in Isfahan, Cairo and Delhi are examples of indigenous urban building methods. Up to now, cultural pride and the tourist industry have done more to preserve such old city centres than any belief in their relevance for today. Essential as preservation is, it can imply a

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[3] B. Ward, *'The triple crisis'* in the RIBA journal. London 12/74

[4] Koenigsberger, Ingersoll, Mayhew, Szokoley: *Manual of tropical housing and building'*, Longmans, London 1973

museum-place view, branding such areas as fossilised relics of the past. However, far from being relics, these old quarters should be studied from a number of aspects; in aesthetic terms: the sense of scale and proportion, vistas, and the juxtaposition of open and closed spaces: in climatically functional terms: the shaded streets, orientation according to the sun's angle, and the beneficial air-movement generated by the street layout: or more fundamental y in terms of socio—economic organisation: with lively and sociable communities operating with economic efficiency.

The fact that many Third World countries may not have an urban tradition does not exclude the possibility that lessons could be learned from a neighbouring country with similar environmental, social or economic conditions, and which does have an urban tradition. The urban traditions of Egypt or Iran could for instance be more relevant than the garden—city concepts of Britain to countries like Oman.

Finally, even in an urban environment, rural-based indigenous systems of building, social organization and values in general often seem to work. in his recent study of a squatter settlement in Lusaka, Zambia, Richard Martin showed how the indigenous rural methods of building, social clustering, and communal organization are adding up to more successful settlements than those officially laid out and run by government bureaucracies applying alien methods.[5]

Conclusions

Let us summarise why we believe Third World countries should thoroughly re-evaluate their indigenous systems. Firstly, while the policies of many Third World governments still emulate Western values and techniques, the daily life of most of their citizens still lie predominately in indigenous systems. Understanding and expanding the potentials of these systems to meet contemporary needs would enable development to be more appropriate and acceptable to the majority of the people.

Secondly, most Third World countries are also at a stage in which their comparative— y limited resources are being exhausted by the many demands placed on them. This is within an international context, with governments becoming increasingly aware of the f mite nature of the world's resources, and in which the costs of imported goods are rapidly rising. Indigenous systems represent hundreds of years of accumulated expertise on how to employ what is locally available to meet local needs economically —in monetary, energy, and resource terms. To realise this potential would give Third World countries greater self—sufficiency. n today's world such an approach to planning is perhaps the most realistic.

Tehran, DW 1975

[5] R. Martin: 'The art and architecture of underdevelopment' Architectural Design, London,10/74