

Twenty Years of Change in the Built Environment of Yemen

(Part III)

FERNANDO VARANDA

DECONFINEMENT AND URBANIZATION

The 1962 Civil War dramatically proved that strategies for the defense of settlements based on impregnability by land were futile in the face of air raids. The progressive control by the Republican government over the local conflicts which had once justified confinement of settlements within secure sites and walls also meant that safe living

was possible without such protective measures. Development of the country's road network proximity to small settlements also carried the expansion of settlement alongside the new roads, usually initiated by the construction of shops. Sana'a typifies the urban coexistence of new typologies and street spaces. Generally, new development has been heralded by the construction of single - storey commercial buildings.

To these, upper floors may be added later, their aesthetic treatment ranging from complete indifference to determined formal expression. In the new villa neighborhoods a more uniform image is provided by the lining of wide streets with high yard walls. Since flat land in central Sana'a is most costly, low-income quarters have developed spontaneously on the slopes of surrounding hills. Such areas have grown by the process of filling in all available space, leaving only the most essential channels as streets.

The problems that afflict yemeni towns are similar to those experienced in other developing countries. Characteristic impacts from the post- Revolution period have included great increases in cost of land, number of motor vehicles, water consumption, and generation of refuse (with the concomitant problem of its disposal). As the result of a general movement of population from countryside to town, in Sana'a, for example, the resident population increased tenfold between 1962 and 1990, and land coverage increased 25 times. Such problems have also taken a toll on the more vulnerable fabric of rural settlements.

PLANNING

Following the Revolution, physical planning was initiated by the Ministry of Public Works with the assistance of Egyptian advisors. The first document approaching a contemporary city plan was the "Egyptian Plan" for the country's three largest towns. This still provided the basis used in Sana'a by surveyors in 1973. In 1970 a formal physical Planning division at the Ministry of Public Works became operational with the assistance of the United Nations Development Program, having the responsibility to prepare, first of all, a Master Plan for Sana'a and development plans for various provincial capitals. But, given the conditions of the time, the planning

process for several years was largely based on securing a ring road system and creating subdivision plans in the form of neighborhood units that could be provided with essential services and connected to a collector-street system. Such a basis for land development was still being applied in 1990 (FIG.17).

By 1990 the basic planning documents for Yemen's largest towns were still the master plans commissioned in 1978 from a foreign consulting firm. In Sana'a these envisioned sectoral development extending from the densely built-up core, with each sector equipped with a central commercial zone and government offices designed according to a recognizable Western "plaza" model. Peripheral sites were designated for institutional use, industry, refuse disposal, and restricted development, historical -protection districts were established in the Old City and the former jewish quarter of Al Qa'a. The charge of implementing these plans fell to the Main Cities Planning Department of the Ministry of Municipalities and Housing, and there were reportedly many difficulties in the enforcement process.

The next step in countrywide municipal planning was the creation in 1981 of a "Secondary City Section", concentrating on the preparation of master plans for secondary cities. The aim of this program was local development through decentralization and the training of local planning officers. Municipal engagement with the development process also increased during this period to include such additional responsibilities as laying down street and infrastructural networks, collection and disposal of refuse, and administration of new building-permit requirements.

In the traditional model, streets spaces had not seemed to be the object of much special concern, their aesthetic quality was gener-

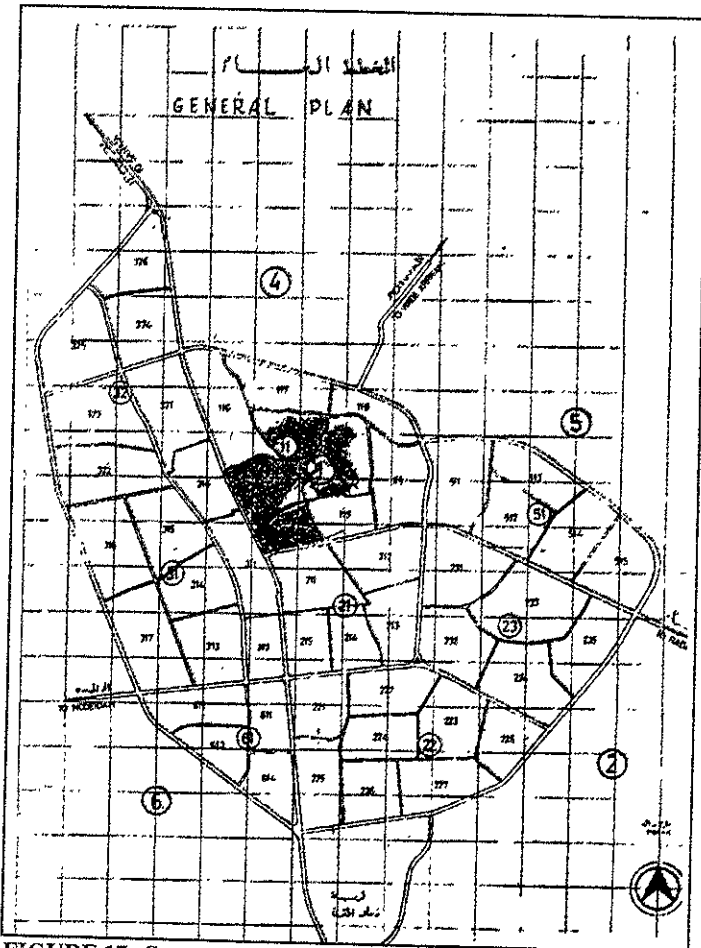


FIGURE 17. General plan of Dhamar, 1990. The shaded area corresponds to the area occupied by the town in 1973. (Source: Main Cities Planning Office, Ministry of the Municipalities and Housing, Sana'a.)

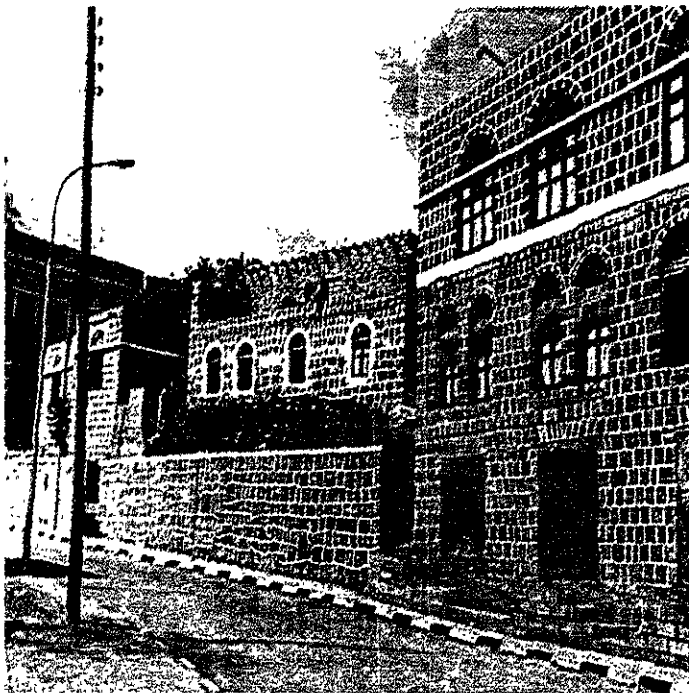


FIGURE 18. *New street in Hajja, 1990*

ally the result of the combined effect of buildings that fronted on them. In a small community maintenance and care of public areas would be undertaken as needed in a shared manner, and in the larger towns a skeletal municipal administration took care of basic aspects of public sanitation. The process appeared efficacious within a traditional context, but proved vulnerable to the impact of post- Revolution development. Nevertheless, as the most convulsive aspects of new construction settled down, pleasant results of new urban design notions could be seen in the expanded areas of both the capital and the provincial towns (FIG.18).

Part of the work of new municipal governments was aimed at beautifying public spaces. These efforts have ranged from such activities as sidewalk tree-planting and the creation of town parks to the ornamentation of streets for a variety of public activities. Street sculptures, seen at their best in the capital, where they first appeared during the 1980s, reflect various tendencies , from free-form, Western-originated monumental place-markers to enlarged stone versions of objects in common use, such as the janbyia, which echoes the cast-concrete coffeepots seen in road roundabouts of Gulf states. Examples of such public artwork in fashioning stone (FIG. 19).

BUILDING PERMITS

At the end of the Civil War all

that was needed to build a house was possession of land and compliance with a few basic rules concerned more with local sociability than with centralized land control. The first step toward centralized land control was the institution of a building permit procedure within urban areas in 1968. At the time the granting of a permit was concentrated at the planning Division of the Head Office (later Ministry) of the Municipalities, and both the procedure and the enforcement of it were rather loose, mostly a question of obtaining the signatures of various bureaucrats on a sheet of ruled paper- a process which normally took a week at most. No building plans were required, and no special rules or regulations existed concerning the design of buildings.

Later on, building permits became obtainable only at municipal offices, and the procedure became more rigorous, with building plans mandatory for all projects except smaller buildings on minor streets. The tendency, however, has been to generalize the requirement for a project. This was particularly true after the earthquakes of 1982. Small municipalities have not rigorously enforced the permit requirement, especially when traditional construction procedures were followed in which a master mason also served as designer.

STANDARDIZED HOUSING

The first public housing programs



FIGURE 19. *Multicolored stone monument, Sana'a, 1990*

in the country appeared in the early 1970s. Based on plans prepared by a U.N. expert at the Ministry of Public Works, they included schemes for several thousand units at Hodeida and in Sana'a which were to optimize floor- area ratios and be built in rawearth blocks. However, these projects were either never built or were built only in a highly distorted manner, and in the years that followed governmental housing never amounted to much

within the overall scope of housing construction. A few peripheral projects were designed , adopting fairly conventional notions of the single-family detached unit or of apartment buildings. A greater priority for government expenditure has been to provide utilities to the spontaneous development growing at the urban fringes.

There was, however, one significant event mass housing , which was originated as the result of the



FIGURE 20. *"Earthquake housing," Al Wasta, Ma'bar, 1990*

1982 earthquake in Dhamar province. The extent of the loss following this disaster justified intervention by various foreign-aid donors, which led, ultimately, to the construction of 15,000 housing units by contractors, all with minimal areas (36-48 sq.m.) and the same elementary design. These units were built using cement blocks and the simplest types of windows and doors, and they were sited according to rudimentary grids on flat ground, often at quite a distance from the original settlement (FIG. 20).

Supported by their shaykhs, villagers responded both by refusing to live in these units and by initiating their own developments, often on the slopes between destroyed settlements and the new government-built houses (which were left empty or given over to nonresidential uses). In the proximity of the larger population centers, such as Dhamar and Dhawran, where the cost of housing was more critical and where tribal ties were more tenuous, need did lead people to adapt what was available. In these instances, the standard model was often modified through the addition of walls to enclose several units for a single family, or by the infilling of street space with ancillary constructions. On the positive side, earthquake relief funds paid for more less extensive repairs to some 27,000 damaged structures, humanitarian agencies also provided professional training to local masons on earthquake-resistant techniques.

REFLECTIONS

The image of wholeness given by the building traditions of Yemen always incorporated sedimented ingredients from other cultures with which the country had contact. Yet assimilations were generally only textual: since pre-Islamic times, the options for built structure in Yemen remained based on bearing walls with monolithic shafts or tree trunks to span the spaces between. The technology of arches was only mastered in Yemen to a limited extent, while vaults were fairly rare and domes were only built by local masons to cover the small spans, for example, of mosque bath stalls. Large domes were considered the responsibility of specialized craft workers under foreign supervision.

The underlying character of Yemen's traditional built environment

is structural. Its originality lies mainly in the way deceptively simple techniques of wall building, at the service of such elementary needs as human shelter, resulted in volumes with the scale of a grandiose landscape. Concrete is, on the other hand, a technique of voids rather than volumes. In this way, the introduction of concrete structures after the Revolution has represented a change more radical than the mere substitution of materials. Concrete structures respond to the preference in the country for construction in height, which the last 25 years has confirmed. Yet, if mud or stone buildings five or more stories high once represented a distinct structural achievement, this claim cannot be made for the same heights in concrete. The crucial question may now concern whether techniques of concrete construction will attain equivalent levels of audacity. Pre- and post-Revolution attitudes may be presented in the form of dichotomies, as for example, rough/polished, dull/glossy, monochrome/polychrome, and stereotyped/personalized. These represent milestones in the progression toward individualization of the house, with distinguishing marks made possible by the access to new products and technologies. By contrast, the tendency toward uniformity in dwelling construction has been represented by government or private efforts, in which inhabitants are grouped into categories expressed in terms of project cost and tenant income. Overall, the twenty years spanned by this study have appeared to illustrate a tendency to evolve from a built environment that betrayed no class distinction to one in which status is demonstrated through architecture.

The urban/rural polarity has also undergone a change of contours. In this regard, urbanization can be seen not only to result from the physical displacements of country to town, but also from the dissemination of urban values and methods to the country. This is now possible in less time than that needed to solve the infrastructural problems created. Part of the process of urbanization is now the proliferation of intermediaries, whose number multiplies as building becomes increasingly governed by paperwork within a complex bureaucracy.

It is not possible to predict at this point the degree to which changes underway in the culture of Yemen will allow a continuity with the country's building traditions. By 1990s, conservation and adaptive reuse were part of an effort to retain the inspirational value of traditional structures. At the same time, "cultural tourism" had gained weight in the country's economy, contributing to the maintenance of outward appearances. Conservation and rehabilitation campaigns lay stress on the importance of creating the conditions that will keep the populations in their historical quarters, but concessions must also be made to repay the financial effort involved. In consequence, situations may occur with names like "suqification", the term used in the early 1990s to describe the transformation of the ground floors of Old Town Sana'a buildings into shops catering to tourists. The word implies the subversion of the traditional system of neighborhood codes, which may undermine the way of life that once formed the very spaces meant to be preserved.

Concern has also been voiced as to whether the skill to build traditional structures will be lost once the education of master builders ceases to be authenticated by a rigorous process of apprenticeship and strict admission into a professional league. Schools of building crafts have today been prescribed as part of rehabilitation efforts, but their materialization was, in 1990, at almost utopian levels. The fact remains that traditional structural solutions, in spite of their virtues, have not been able to compete economically with industrialized methods. Thus, by 1990 the use of traditional materials for structures had tended to become limited to rich urban or remote rural populations. The continuity of tradition is recognized in formal affectations, but different types of building initiatives - entrepreneurial, architect - designed and "popular" - are developing identities of their own.

At the same time, there may be reason now to speak of the emergence of a new type of "vernacular" architecture, one represented by manifestations marginal to mainstream building which reproduce structural options in continuity with pre-Revolutionary days, or which develop decorative treatments of a more personalized nature. ❀

Synopsis

* Subject of the Issue
The preservation of historical buildings and the upgrading of the surrounding environment. (The Turkish experience - Part 1)

Dr. Hassan Abou Mahmoud
 The issue of investing and preserving historical buildings of cultural value is lately considered one of the main problems that attracted the attention and concern of many local & international organizations. Researches and studies have proved that the best way to preserve historical buildings and to safeguard their maintenance is to re-invest and renew their utilisation. The aim is to preserve these buildings and protect their income to cover the expenses of maintenance by caring for the buildings & the surrounding urban environment. The subject presents one of the most successful experiences namely that of Istanbul in Turkey where they cared for the region as a whole. Some examples in El Sultan Ahmed and Aya sofia region are presented. They were changed to a touristic compound and Heisiki bath turned to become an exhibition for porcelain, carpets and Mohamed Afandi school that was changed to become a center for handicraft.

* Projects of the issue :

- **The mosque in the faculty of engineering - Cairo university**

Dr. Mohamed Mahmoud Oweda.
 In the course of developing the existing buildings in the faculty of engineering - Cairo university, the old prayer area was pulled down to prepare an area about 300 m² on which to build a new mosque to hold about 360 persons. The mosque is composed of a ground floor of a square plan, on a top, an octagonal dome and side windows of coloured meshed glass. The minaret has the form of tangent intersected squares and different repeated sections and this is also the final shape of the Mosque.

- **Faculty of commerce English language - Cairo university**

Dr. Mohamed Mahmoud Oweda.
 The project is located in the campus. The building is on a rectangular plot of land of an area of 1080 m². It is composed of four floors, the first one is for the main lecture room that can hold four hundred students and also the offices for the administration and the student affairs and the main hall for the students gathering on which all the floors overlook. There are three main entrances, on the ground floor, the first one for the students, the second for the teaching staff and the third for emergency exit.

- **Villa on the northern coast - Sidi Kri**

Arch. : Fakhir Mohsen
 This villa is located on the northern coast in Sidi Kri on a land of an area of 1600 m². It is composed of two floors, plus an area for services and a garage, and a swimming pool with underground with lavatories and showers and also covered areas to be used as a terrace that has slopes besides the stairs to facilitate the service. The facade is designed in such a way as to allow the view of the swimming pool and the green area.

- **Interior Design**

Cafeteria & restaurant - Oasis Hotel

Architect : Hany Maher Ibrahim
 The designer is concerned about the interior design in order to have restaurants and privacy. He cared for the colours and lighting and the elements of the interior design that suit the surrounding environment. The project presents an example of a cafeteria and a restaurant showing some elements of local craft used in a modern way and with materials and with matching colours and shapes.

- **Interior Design Education and the Role of Architect in contemporary Society**

Dr. Ashraf Salama