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Recurrent Patterns in Traditional Afghan Settlements

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Fig. 1: Rural Housing in Panjshir Valley. Near Bazavak.

The architecture of traditional societies is commonly viewed as the direct translation of physical, social and cultural needs and values into physical built form.¹⁾ In a society characterized as ordered through answers and traditions rather than questions and change²⁾, one could therefore expect, and indeed does find, a recurrent theme of social, conceptual and spatial patterns in harmony with a traditional lifestyle. Of crucial importance is the question of the role such patterns may play in the ongoing urbanization of Afghanistan's capitol city.

As with other major cities of the world's developing nations, Kabul continues to undergo an era of rapid urbanization with ever growing demands being placed upon an already overburdened infrastructure. The immediacy and magnitude of these demands require fast yet farsighted planning strategies uncharacteristic of incremental growth within a predestined construct typical of traditional built form. Must the need for contingent thinking at the urban and regional scales necessarily forgo the intimate accommodation to traditional lifestyles which the traditional

architecture possesses? The importation of Western planning and housing methods embody the needed characteristics of rapid construction and larger scale integrations with Kabul's infrastructure yet also reveal inherent Western values and apparent cultural conflict.

There appears to be no reason why Western means can not be used in non-Western ways if given the guidance of a different set of cultural values. Traditional architecture may contribute to this guidance once one makes explicit its essential structure of characteristics which

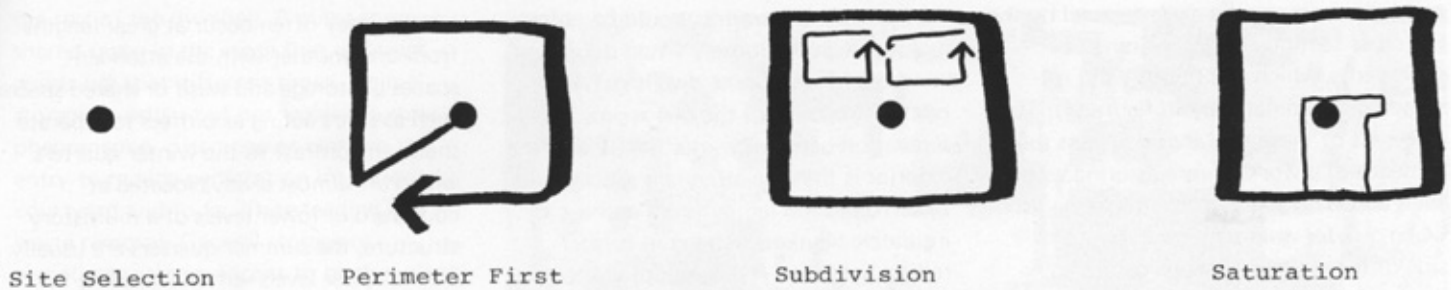


Fig. 2: Sequence of spatial Selection, Declaration, Accommodation and Saturation.

are a manifestation of continuous cultural directives being placed upon evolving built form.

A search for such an underlying structure within Kabul's old city and nearby rural regions has begun as a result of the growing body of documented case studies on this subject. The method underlying this search largely involves the construction and use of a computer information system which methodically sifts through case study data in search of consistent patterns of relationships. It is important to emphasize that the findings to date are perhaps best described as implications which require and will receive additional verification as more data is assimilated into the study.

There is neither a more appropriate nor more primary element of traditional built form than the wall. Mud walls, an attribute most familiar to strangers, no doubt play a leading role in defining place and purpose for an amazing range of traditional scales. The use of perimeter walls, in particular, can be seen to define the boundaries of tombs, single extended family houses—figure (1), rural kallas, urban neighborhood quarters and entire traditional cities. Throughout this hierarchy of scales one sees a continuity of a pattern of

encirclement represented diagrammatically in figure (3). Looking at the process of encirclement, one finds a consistent sequence of spatial declaration, followed by accommodation and proceeding sometimes to saturation. This process is expressed diagrammatically in figure (2).

In spatially restrictive urban areas such as Kabul's old city and hillside housing, the process of building the perimeter wall first raises some interesting architectural questions. What assurances does the builder have that the spatially restrictive volume he has generated by his perimeter wall, often partially or wholly inherited from adjacent neighbors, can be successfully partitioned and enclosed to fit his current and future needs? This question is not so simple when one bears in mind the considerations he must make for necessary socio-spatial patterns related to gender, time of year and particular intended activities as well as numerous physical restrictions such as available land, building materials, sunshine, air movement, drainage and waste removal. There is certainly no evidence to suggest the occurrence of a formalized approach, such as completely designing the entire dwelling prior to building the perimeter wall. Likewise,

traditional houses do not all look alike as illustrated by the large variety of perimeter wall configurations for old housing. One can, however, identify the presence of certain elementary patterns of order recurring throughout many traditional dwellings. This suggests the presence of certain working rules for house building which might well be followed regardless of whether the builder understands why!

An especially interesting example of this concerns an apparent regard for spatial proportioning. Upon reviewing a housing cluster represented by Kazimee³⁾ located within the Shor Bazaar, the varied perimeter configurations of the houses were found to be consistently subdivided by internal proportioning of 1:1, 1:2, 2:3 and occasionally 3:4. When proportioning was analyzed in cross-section, no particular pattern was observable for interior spaces, however the proportions of the north-south cross-section of the courtyards often were near that of 2:3 (height to breadth) although in some of the densest configurations they occur as nearly 1:1.

A most interesting fact is that at noon on the winter solstice, the sun is striking the ground at an angle of approximately 32°–25' off the horizon. This angle is very

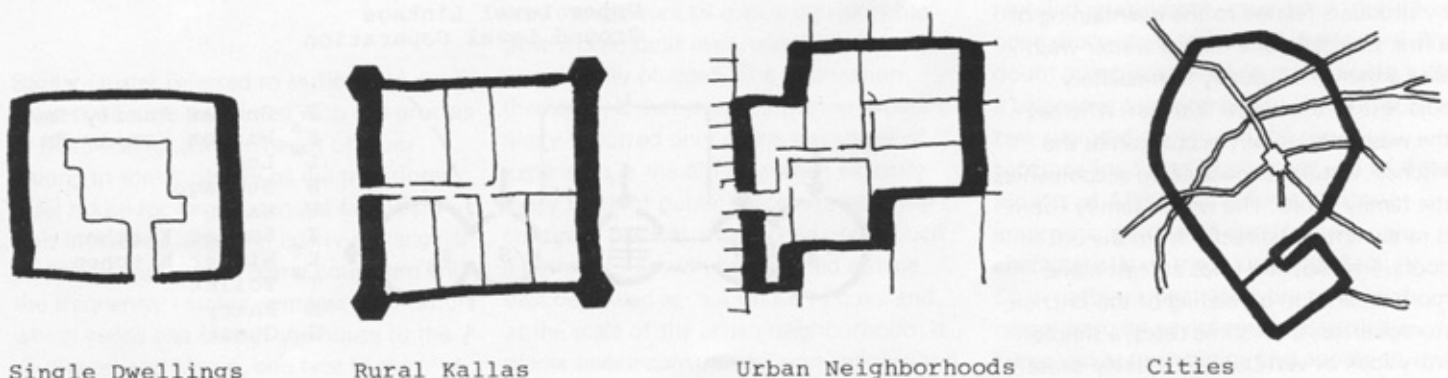


Fig. 3: Hierarchies of Encirclement.

nearly the same as the angle formed by the 2:3 cross-sectional proportioning of courtyards, which is 33° – 40° , and is shown diagrammatically in figure (4). The closeness of these two angles suggest the presence of a working rule assuring winter solar access and solar assisted heating for living quarter walls adjoining the north side of the courtyard and provides an illustration of a direct translation of physical needs into the built form of traditional dwellings.

Socio-spatial patterns were studied in terms of activity space locations, adjacencies, and interconnecting pathways. Since recent

that cold air infiltration would be quite high through the loosely fitted doors and windows of traditional dwellings. Another related provision of the one rooms separation between winter family and the exterior is that the attendant spaces tend to surround the family room and act as insulative blankets helping to further reduce heat loss. A diagram of winter related activity adjacencies is shown in figure (5).

Not surprisingly, the summer quarters are found to be quite the opposite. No longer does one find the need for the immediate adjacency of the kitchen and family room.

Indeed, they often occur at great lengths from one another with the attendant spaces of storage and wash or shared spaces such as stairs acting as buffers to separate them. In contrast to the winter quarters which are almost always located at courtyard or lower levels of a multistory structure, the summer quarters are usually on the upper levels—often including the rooftop. The summer kitchen is often located in an exterior space and shared socially when located in the courtyard. Diagrammatically, the summer quarters circulation and adjacencies may be characterized as in figure (6).

The third group of activity spaces which are shared seasonally and/or socially, include the entry, courtyard, stairways, toilets, guest rooms, and animal storage. A single entry through a strongly defined and constructed compound wall characterizes the traditional extended family dwellings and is accordingly shared by all for all purposes. Similarly, one courtyard is most frequently shared by the members of an extended family; however, multiple courtyards sometimes develop as a result of subdivision and internal growth of the dwelling. Subdivision of the courtyard is also a common result of the transition of an extended family dwelling into rental housing. Stairways are almost invariably shared activity spaces and their number appear related to the constraints against through traffic and available building space. Toilets are often located in the courtyard against the public corridor wall although their location in multistory living arrangements sometimes forces traffic through other shared spaces. Guest rooms are treated with even more independence than family rooms and are usually separated from the circulation of

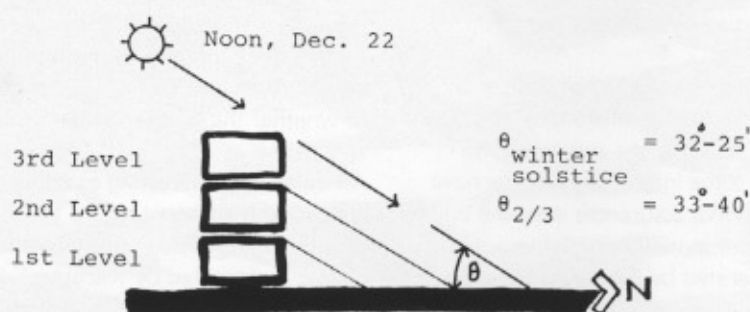


Fig. 4: Solar Implications of North/South Cross Sectional Massing.

studies have identified the presence of seasonal migrations and the sharing of certain activities within the extended family compound, it was decided to consider domestic activities according to three categories, namely: (1) private winter spatial usage, (2) private summer spatial usage, and (3) shared usage both seasonally and/or socially. For winter usage the principle activity spaces appear to be a family room and winter kitchen which are almost invariably directly linked and intimately share all products and by-products related to the maintaining of a fire. Logically one finds a winter wash area either in or usually immediately adjacent to the winter kitchen. Whereas the wash area usually accompanies the kitchen, a storage space often accompanies the family room. The winter family room is rarely entered directly from the out-of-doors. Instead, one finds at least a one room separation consisting of the kitchen, storage areas, or in some cases, a simple entry lock or vestibule. One likely cause for this arrangement stems from the fact

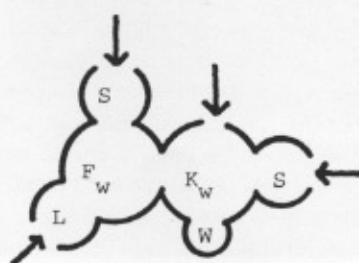


Fig. 5: Winter Adjacencies.

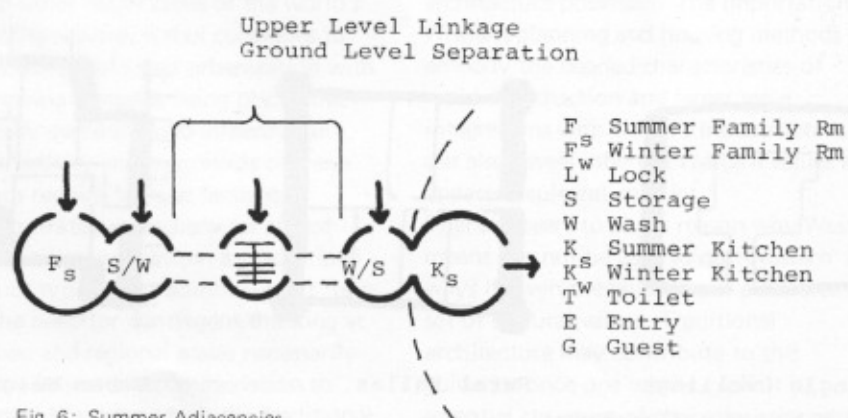


Fig. 6: Summer Adjacencies.

the rest of the dwelling. A guest room is shared space in the sense that different guests use it at different times. Animal storage, mostly—but not totally—a rural phenomenon, often occurs close to the entry to reduce penetration into the courtyard and to facilitate feeding and waste removal. General storage or sometimes garages appear to be the urban equivalent to animal storage. A composite diagram of activity space adjacencies and circulation flows appears in figure (7). A particularly interesting question concerns how patterns such as those already discussed can continue operating throughout a time of growth and change such as that experienced within Kabul's old city. Early 20th century photographs of Kabul's old city reveal a greatly reduced density of construction than what now exists and one can see certain homes having an appearance not unlike their rural counterparts. The photographs are consistent with the fact that the Old City has undergone a transition since the early part of this century from mostly large extended family houses to densely populated rental housing for numerous minorities. By closely scrutinizing the geometries at work within the Shor

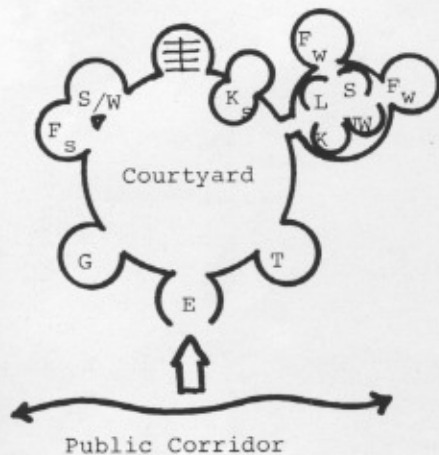


Fig. 7: Composite Diagram of Adjacencies.

Bazaar cluster referred to earlier, one can see sets of clues associated with the process of historical layering. One set of clues belong to the attributes of the traditional rural house for large extended families. This includes a large and nearly rectangular perimeter wall, large central courtyard and the frequently rotated compass orientation which yields one face of the house to the southwest and Mecca, one face to the southeast and morning sun, and the other



Fig. 8: Perimeter First Encirclement on Kabul's Hillside Housing.

two faces to turn their back against the cold winter storms from the north and northwest. One such housing pattern is evident within the Shor Bazaar cluster and it now has its large courtyard subdivided five ways which suggests its transition to rental quarters. A different pattern of growth can be seen where a series of houses share a linear linkage and all of their courtyards are essentially one linear contiguous space. Partitioning has segmented this space into separate courtyards which again suggests a transition to rental housing. A completely different clue to historical layering involves comparing the overall form of adjoining houses to the normal simple rectangular form. In several instances within the cluster, the overall form of the residence has taken on a contorted form not at all characteristic of dwellings but rather of public corridors and courts, and suggests how the network of public corridors has slowly been built over, constricted and occasionally plugged. The implication, therefore, is that these contorted dwellings likely occurred only at the last stages of expansion in the old city when virtually every nook of public space not receiving continual use was encroached upon. Such a pattern of growth has reached a stage best described as *saturation*, and, at the scale of the urban neighborhood, it places severe constraints upon changes and improvements in city services.

Saturation levels can also be seen within individual dwellings as well as at the larger scale of the urban neighborhood quarter. Unlike the larger neighborhood quarter whose latter period shows houses radically departing from the norms of overall rural housing form, a closer look at a cluster of older homes shows evidence of preserving proportions of open to enclosed space consistent with that observed by Kazimee⁴⁾ in rural kallas. Figure (9) is an overview of a cluster of dwellings within the Chendawal quarter of Kabul's old city. Such a perspective leaves the impressions that the old city is virtually a solid mass of building enclosure. However, the same cluster when viewed in plan, figure (10), shows that open spaces within the dwellings are much larger than suspected and even identifies some courtyards entirely unseen in the aerial view. A comparison of open to enclosed space within each dwelling revealed an apparent upper limit of 40% open space compared to 60% enclosed. No doubt a key ingredient to maintaining such a balance is a general height limitation to two enclosed stories and the use of rooftops for added open space. All of these aspects of Afghan built form illustrate an organic pattern of development characteristic of traditional architecture. Such patterns illustrate a time honored response to an environment essentially perceived as unchanging and appear to possess many layers of meaningful rules

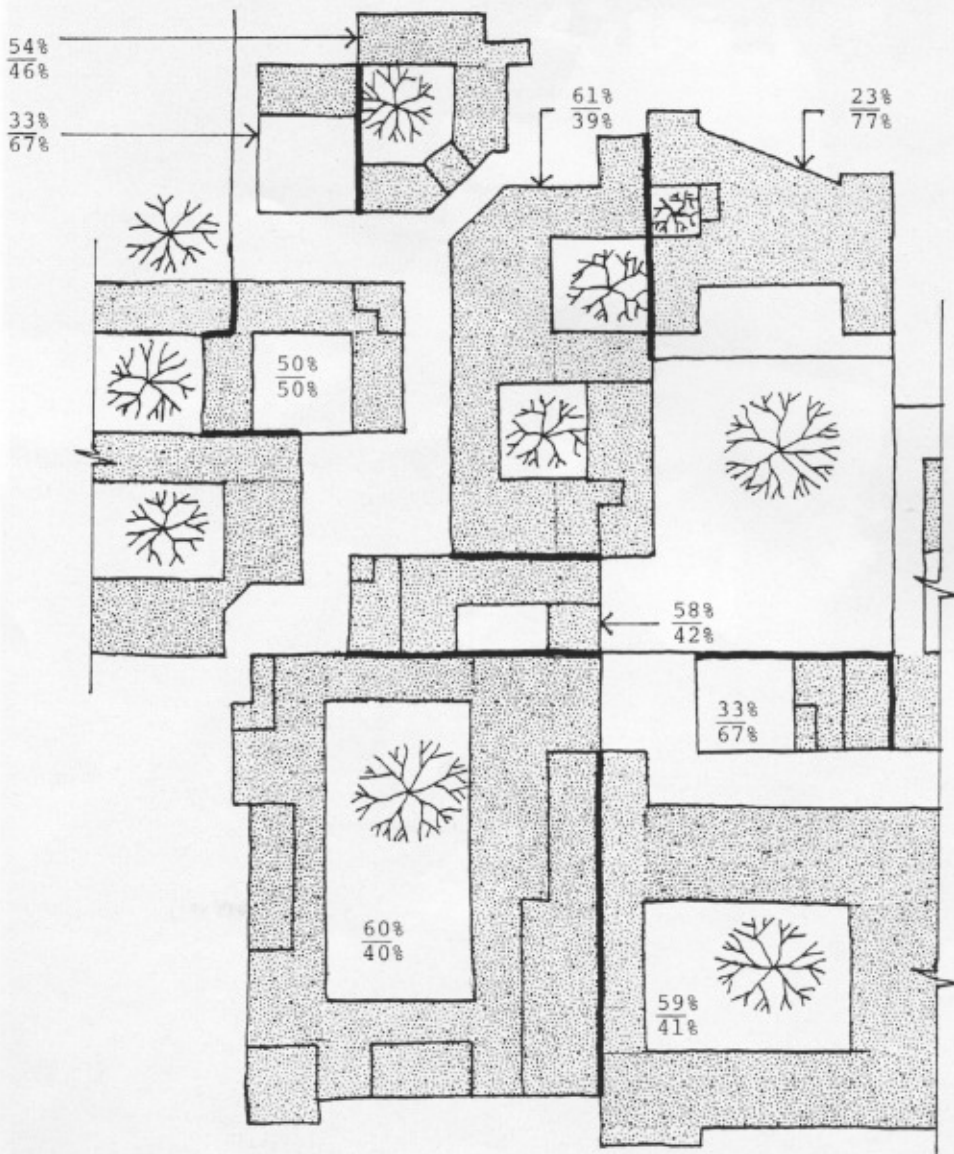


of order which relate to each other in varying degrees of subtlety. Of crucial importance is the question of the role this traditional architecture will play in the process of the rapid urbanization of Kabul. At face value at least, the processes of modernization and tradition are at odds with one another. The extent to which the larger ordering system of the traditional urban scheme are in conflict

with the changing needs of urban services serves as a multiplier for conflict at the subsidiary domains of spatial organization. These domains, after all, geared their metabolism to the dictates of the larger systems of a traditional order. The traditional method of committing from the outset the highest levels of order which direct urban growth to a specific end is obviously an inflexible and unrealistic

overall strategy for Kabul's rapid urbanization. However, there do appear to be valuable lessons in how traditional housing clusters can realize a remarkable degree of successful habitation within very demanding circumstances. I believe that an awareness and understanding of such lessons in traditional built form may provide insight and direction towards finding more successful strategies for managing overall city growth and development and, lastly, that the hardest way of learning the lessons of the past is trying to completely ignore them.

*
% of Enclosed Floor Space/Total Floor Area
% of Open Space/Total Floor Area



* Total Floor Area Includes All Used Levels of Space Both Interior And Exterior (Including Rooftops When Used)

Fig. 10: Limits to Enclosure within a Chendawal Housing Cluster.

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