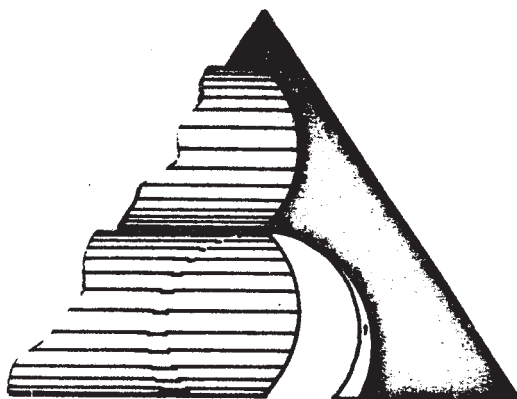


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— social problems

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Augustyn Bańka
Atime Agnou

PSYCHOLOGICAL DIMENSION OF DOGON ARCHITECTURE

Introduction

The domain of this paper is research relating psychological background of African architecture to its cultural context. Our focus is on research that attends simultaneously to culture, psychology and patterns of house holding. When anthropologists do such research, they frequently call it "psychological anthropology", but when psychologist do it, they usually call it cross-cultural psychology (Segall 1986).

In Mali society, as elsewhere, the vernacular architecture was moulded by different factors like geology, climate, social and historical development. Although these factors are apparently very important in determination of form and structure of habitat, they are not unique. Among the main psychological variables must be considered determinants of architecture. It is due to the well known remark, that "first we shape our buildings and afterwards buildings shape us". It means, on the one hand, that some of the innovations in architecture arouse from the psychological structure of human being, and, on the other hand, architecture in itself is the main source of variations in psychological functions like emotions, perceptions, development or communication.

Architecture and psychology are interrelated domains. Likewise the house holding environment and psychosocial activities constitute one interactional unit. This is especially true in what is known as primitive societies or, in other words, in the traditional ones. Most of the developing countries belong to this type, however, they differ from each other. Some of them are in everyday life steered stronger by tradition (sometimes several traditions), and some of them by new patterns of life assimilated from Western civilization.

Our analysis undertakes such an interconnection of psychological and architectural factors of the Dogon habitat in Mali. This is one of the most ecologically oriented culture in Africa, whose problems are typical for all underdeveloped countries (Berrz, Annis 1974; Mondot-Bernard 1981; Moughtin 1985). The term architecture is not used here in the narrow sense of building types, form, construction and detailing; but is wid-

ened to include the arrangement of buildings in space as functioning elements within a settlement. Architecture, then, is a people's use of an accumulated technological knowledge to control and adapt their environment for individual, social, economic and religious requirements (Moughtin 1985).

Psychological background

Today Mali is African state where most of the people still cultivate traditional style(s) of living (old African, Arabic), and where accelerated processes of westernization (acculturation) have dangerous consequences both for natural ecology (expansion of desert) and human ecology (psychological misadaptation). Dogon area is situated in the south-east of Mali (including four prefectures: Bandagara, Bankass, Douaentzaand, and Koro) and in the north-east of Burkina Fasso (including the subprefectures of Thiou, Kanhi and Djibo). This area belongs to the Sahelian climate, which is semi-arid, and where vegetation is savannah type. Rain-fall is very irregular from May/June to October. There are also a few hills and numerous plains.

From time immemorial inhabitants of Dogon area formed society with an ecological dimension. Like most African traditional societies it is essentially a civilization of one place, where locality is most important (Bourgoignie 1972). The psychosocial regulation is directly related to the ecological substrata (Hardie 1989; Pellow 1986).

Tradition embodied in the ecology imposes demands on group and individual behaviors according to age, sex and responsibilities (Berry 1967, 1974). Tradition is the product of ecological factor and conversely it forms a special kind of milieu which functions in a self-perpetuating manner. In archaic order a man has no sufficient technology to compromise seriously the natural equilibrium. The accommodation to the environment is the functional consequence of the union of two dynamics of unequal forces: the individual needs and natural supremacy. The pattern of harmony is seen as expressed in the nature, where everything is in balance, in spite of natural hazards (fire, epidemic). An individual finds his values and balance by accepting both the natural demands of the environment as well as the demands of community tradition.

Ecological context of African mentality and architecture reveals inadequacy of the Western science and semiotics. Contrary to contemporary Western civilization, in which tradition something is transcendent, the Dogon society is still connected with psychoecological relations to

cosmogony, religion, archaic social structure, archaic space organization, and archaic patterns of government (ruling). Moreover, traditional man has the tendency to treat those relations as a reality of higher order in comparison to natural realm. All these relations influence also architecture giving special kind of interactional entity - milieu. Western concepts like home, village, architecture and so on, possess quite a different meaning. In the next sections we are going to reveal a specific sense of these concepts in Dogon culture.

Cosmogonic foundations

In the Dogon culture psychoecological context of architecture is apparently determined by the cosmogony. The earth (*izubahi*) is mother of life, while the sky (*yerumana*) is father who (through rain) makes his wife (*izubuhi*) fruitful, that is, in consequence life becomes possible. Dogon cosmology is confined to the study of sky elements such as stars and the moon. They have symbolic values, which express the meaning of life, namely order, power, hope, and which should be maintained. For example the eclipse is perceived as distortion of order, power and hope, and the beginning of the end of the universe. In such situation people make spiritual activity to divert it and to reconcile it.

Building a house in the Dogon society is in fact not only an engineering issue, but also a matter of symbolic creation of spatial order, for which order cosmogonic elements must be integrated progressively. The materials like mud, straw and wood used in building are obtained from the *izubahi* that provides all things necessary for life. The place to build as well as to plan the orientation of the houses are important and must be previously fixed. According to Dogon beliefs the place afflicted by evils or *djins* have to be avoided.

Architectural forms for life are always oriented from west to east, and these for death from east to west. Most of the houses have their length oriented from west to east, and the width from south to north. The reverse is true only in a few cases. Room doors are oriented toward the west, north and south, but never toward the east. It must be stressed, however, that the living room door can be oriented to any direction (fig.1).

The reason of such orientation is unclear, nevertheless the most probable cause is connected with cosmogonic beliefs. Naturally the symbolic facts of spatial orientation for most of Dogons are hidden dimen-

sion, which always comprise esoteric knowledge approachable exclusively by traditional religious chiefs (Macleod 1912).

Psychosocial structure

Lifestyle of the Dogon family complies with principle of self-identity expressed in two words: *batru* (father) and *natru* (mother). The interpersonal and community relations based on this principle determine social rules in time and space. Everybody in relations to other members of the community must consider this principle because it is sacred. Thanks to this principle the family acquires consolidation of relationships called *minrin* (union). It is symbolized as a string binding different people and families.

The plan of traditional habitat is determined by psychosocial structure and values based on the above principle (Prussin 1974). This is true in accordance to the spatial organization of settlement as well as to familial households. In the Dogon family the basic type of settlement is constituted by a clustered village, in which the majority of inhabitants have a common ancestor. The ancestor house is located in the center of the community space, and makes a core for the clustering of the familial buildings. The notion of family differentiates two structures. First of them is 'the family in the narrow sense, consisting of the husband and his few wives. They make a household including a number of buildings. Several households of that type make the extended family whose members are spatially united or separated. The different extended families are organized into a form of quarter, whose main characteristic element is *to-guna* (big hangar). Different quarters are separated from each other by narrow streets. The family houses are close to each other, but the quarters are distant from each to other.

Dogon family is patriarchal, thus the succession of power is from father to son. Despite such a vertical stratification of ruling in Dogon family there is a complex of differentiated interrelationships among members. The extended family includes grand-parents (ancestors), parents (father, mother, uncles and aunts), and children (i.e. brothers, sisters, nephews, and nieces). In the extended family one's grand-father's brother is at the same time your grand-father. His sister is a kind of your aunt. Your grand-mothers's brother is your grand-father, and her sister is your grand-mother. Your father's brother is not your uncle but your father (double), and his sister is your aunt. The son of your father's

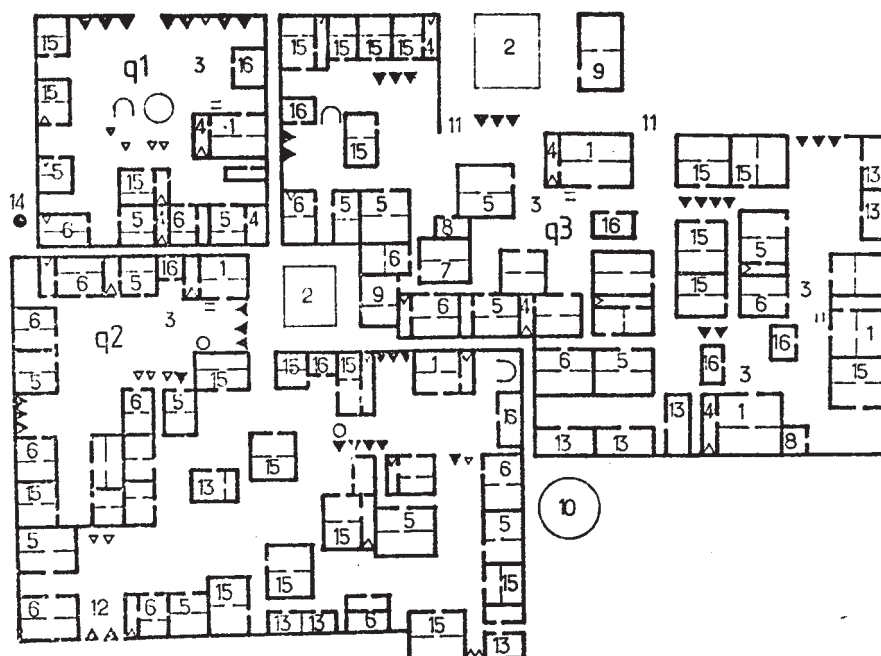


Fig. 1. Plan of three quarters in the Koro village
(q1: Soi non gu; q2: Alpenongou; q3: Bononongou)

- | | |
|---|---|
| ▲ Granary (go o aran) | 7: Third wife's house |
| △ Granary (go o ya) | 8: Festish house |
| ∩ Goat pen | 9: Sadjakuru: house for women
durring menstruation |
| ○ Gnoumna goulo: circular
support of millstone | 10: Refuse dump |
| ○ Laying place for oldmen | 11: Main gate |
| 1: Urona: chief house | 12: Secondary gate |
| 2: Toguna: quarter hangar | 13: House for single |
| 3: Main courtyand | 14: Well |
| 4: Private courtyand | 15: House for one monogamous
couple |
| 5: First wife's house | 16: Kitchen |
| 6: Second wife's house | |

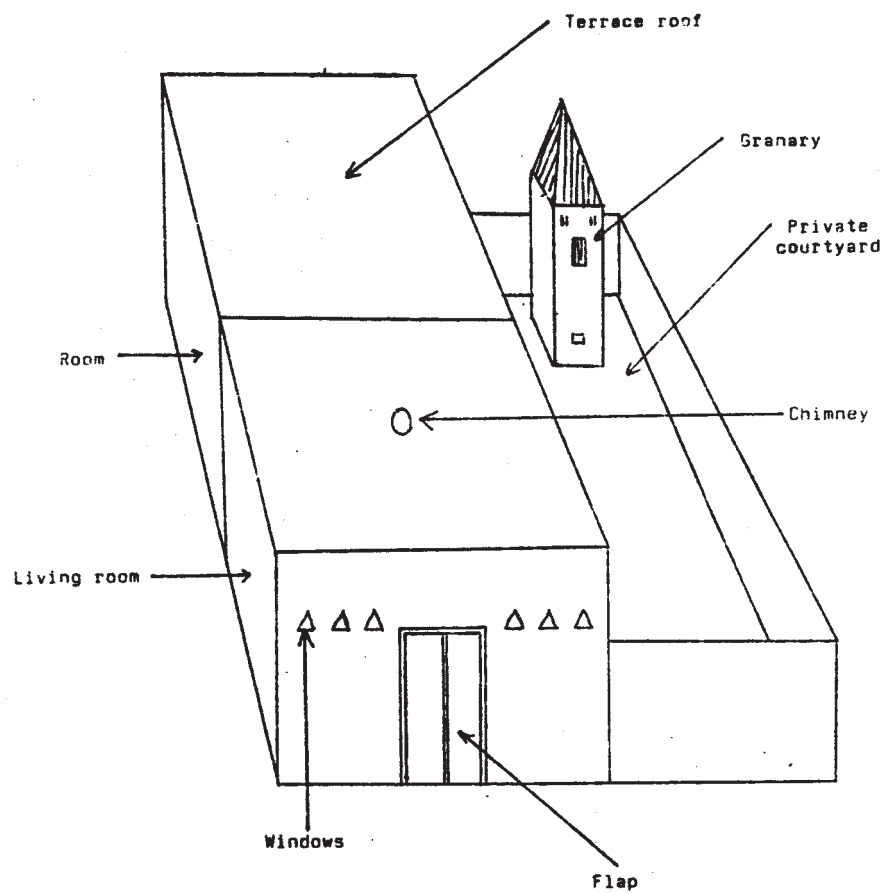


Fig. 2. Pattern of house for oldmen

brother is brother, his daughter is your sister, and so on. The grand-parents and parents, as well as children live in the same family, so space have to fulfill demands arising from that fact. Personal space in such an enlarged family is restricted because of the great number of people to living together. But the common property of land and the common ancestor are factors encouraging people to live together.

The Dogon society has a polygamous structure, and this fact influence the architectural space of the household as well as the settlement. The crucial problem is life space for women. The polygamous system creates the situation in which any wife is sure to be alone with her husband. To protect the women against the lack of the minimum of dignity and independence from other members of the family (especially from co-wives) traditional habitat gives them their own spaces like home and granary for storing food and goods (*go oya* - female granary versus *go o* - male granary) (fig.2).

Like in most of the polygamous societies Dogon men maintain that women can not keep their words, thus they are dismissed from some religious ceremonies spaces (e.g. fetish house), and excluded from the family during the menstruation period. All women are married except for the handicapped. Usually a married woman experiences life in two families, because the exogamic system prevails. As long as the woman follows the principle of minion, she has no problem to integrate into a new family on the one hand, and to continue participation in the old one, on the other. This is possible not only thanks to the traditional code of behavior, but also owing to specific organization of architectural space.

Spatial organization

In family habitat the most important building is the house of the elder, named *upon* (pro - house, *ha* - big, genuine). It means literally a big-house, whose courtyard is wider than those of other ones (see fig.1), and narrower than the street. The *urona* is the central place of the family, where important decisions concerning the family are made. The elder named *nurubanga* is a chief of ancestor worship (*nuru* - death world, *banga* - owner).

As was shown in fig.1, all the *urona* are oriented back to the street. The reason for this fact is connected with the religious principle of separating death space from life space. In accordance with this principle *nanubanga* is supposed to maintain the relation between the living people and the dead. But after death *nanubanga* he should not have any further

contact with life space, so when he dies the hole is made in the room wall from the street side, and his corpse is taken out to meet the *nurunam* (death soul), who accompanies him to the new home (cemetery). Space of the *urona* is formally forbidden to a wife who gives birth to a child, to women with a baby before baptism (33 days for a boy and 44 for a girl), to women during the menstruation period, to circumcised boys, and to excised girls.

Old men and young single lives in separate houses. Generally the house consists of two room, which have rectangular shape. The length is about 7 m and the width 4 m for old people, and 4,5 m x 3 m for all others. The buildings are mud-wall, whereas the anteroom is made of straw. In old people's houses the chimney is in the anteroom, which functions as living room, whereas in adult houses the chimney is in the room serving as the bedroom. Old men have their houses close to the main gate (see fig.1), whereas young-people have their rooms in the back of the family, close to the small gate, from which they *get* privacy from the elders.

Kitchens (see fig.1) are structures independent of the living part of the house and they are close to the *urona*. It is because the *nurubanga* food is subject to many taboos, totems and interdictions, so it must be controlled. If *nurubanga* failed the prohibitions the *nurunam* takes him his life.

The fetish house is a form and place for worshipping of God . Like many other sacred spaces it is forbidden for women. People concerned with the worship, especially the chief, are subject to a strict obedience to the interdictions.

In polygamous households the house of the family in a narrow sense must follow a certain order, because it is the home of the husband, the wives and small children (usually until 3 years of age) of different wives. The first wife should occupy the eastward house, and the second wife the westward one, and so on (see fig.1). Such an arrangement may be changed only in the lack of free place. Rooms in the polygamous house fulfill different functions i.e. bedroom, living room, kitchen. They are used mainly for sleeping at night and are rarely occupied at daytime, except for illness or indisposition.

A special house named *sadjakuru* is assigned for women who have menstruation. It is a building outside of the family house, where the woman is waiting to the end of her period. The *sadjakuru* is always at the proximity of the *loguna* (see fig.1). Such an arrangement protects the

women against dangerous moments, and at the same time satisfies their security needs. The distance from the *toguna* to *sadjakaru* is about nine meters. The form of *sadjakaru* provides the women with the necessary privacy that they could not get at familial home.

Every house, despite of that for the young single, possesses a private courtyard. This is some kind of personal space which fulfills many functions like toilet, privacy, cooking. It also plays the role of a cemetery for small children, because there is no special space for them. From the private courtyard one can see what is on the main (public) one or outside, according to his position. The female granaries called *go oya* are generally inside the private courtyard. Thanks to that arrangement the owners feel psychological comfort.

For Dogons the main courtyard has special meaning. It plays the role of some kind of the living room for the extended family. There problems of the whole family are discussed, children play there, feasts and funeral ceremonies taking place there. The main courtyard is hierarchically divided into seven symbolic spaces: *nuru* (death world), *dara* (courtyard), *ninru* (genetic), *bana* (grand-mother i.e. fathers mother), *djinguin* (twin), *kuso* (child whose mother has been pregnant without having menstruation), and *kun-hu-amma* (head-god).

The *djinguin* and *kuso* are considered as the people having a greater personality than the other ones. If the twins or *kuso* have some trouble they might sacrifice something to their space to find their psychological balance. The *nuru* space belongs to those having a common ancestor even those living in another family. This fact has a great importance because the *nuru* includes also the other spaces. It holds the familial council concerning any problem (wedding, baptism, traditional feasts, funeral ceremonies, worship). At this place members of the family try to find psychological adjustment by worship. That kind of space is emotionally experienced by every member of the family. The *dara* space concerns only the people living in the family in real time. It has the same functions as the *nuru* space, and may be used by those who were born in this family and want to continue to exploit it.

The *ninru* is the space connected with personality traits. After baptism the mother goes to the geomancer to ask the *ninru* about her child. The *ninru* is inherited genetic personality. For the boy the *ninru* comes usually from one of his grand-parents, and for the girl from one of her aunts. The parents strive, through education, to encourage, support, and develop the *ninru* trait of child personality (i.e. singer, hunter,

hero, hard worker). Functions of the *ninru* space are mainly genetic, and support personality development and socialization of the individual.

The *bana* space creates the prerequisite for the individual success, dealing with the problem of marriage, as the first condition of success in Dogon society. In other words this space is the sphere of optimism and hope. The last space named *ku-hu-amma* is a personal space, and it is rarely used. A person should use his *kun-hu-amma* space in the situation of extreme lack of prospect. This space provides absolutely the last chance of a lifetime.

One of the most important elements of Dogon archaic architecture is the *toguna* i.e., big-hangar. It is the place reserved for men, but access is not forbidden to women. The *toguna* is a place where men spend their freetime mostly during deadtime season (from December to May), and where old people are rest. It has an outside look on the quarter and the entrance. In this place the family community shares their social values, identity, and individual differences. A *toguna* is some kind of school of life where the young learn from the elder the community philosophy, social knowledge and life experience.

The great number of granaries are a characteristic feature of the vernacular settlements in agricultural societies such as Dogon. That kind of architecture has different meaning for the owners. Subsistence is the most important meaning from which there arouse other values such as the symbolic ones. In agriculture societies, which belong to the subsistence societies (Berry 1967, 1974; Mann 1980) with high food accumulation ratio (farmers and shepherds versus hunters and fishermen), the having full granary of cereals is the sign of freedom from the others, and the source of the proudness as a higher value. When one is afflicted with the misfortune of losing crops he says that "death rather than shame". So, granaries are the places most often chosen by the people who commit suicide. Yet granary in spite of the storing function is also a place to secure religious food by ancestral practices. But spiritual practices, people make sure to be able to get cereals in their granary at any time. Although such beliefs are refuted by the daily experience Dogon peasants do not lose their faith.

Cultural contact

Culture do not exist in isolation. Aspects of one culture penetrate those of others. Humans, metaphorically and in a very real sense, carry culture from place to place, and sometimes they return to their culture

of origin and face reentry problems (Martin 1984, Segal 1986, Hardie 1989). Everywhere a process known variously as modernization, westernization or acculturation is proceeding rapidly. In much of the world, the modernization process includes urban migration, on the one hand, and transformation of traditional milieu into the new one, on other hand.

These processes take place in Dogon society too. More and more people come to live in the "cities", despite existence of only few towns (Bandigara, Bankass and Koro), and some administrative villages. The process of westernization is visible in the modernization of traditional habitat, however western technology does not appear clearly in the form and plan of a building, which remains in fact basically a small barracks made of traditional materials.

Two religions - Islam and Christianity - parallel to technology, have replaced progressively the traditional order of Dogon villages. The Mosque and the church have replaced fetish house. Another determinant of modernization is the housing policy of the government, which leads to forced coping with the challenges of the requirements of general development. In reaching this goal many villages have been destroyed that straight streets should be built, in most of the cases, against the wish of the inhabitants. As a result of the new housing policy the extended family and its milieu as natural base have been destroyed.

Generally, changes are not yet fundamental but they are at the transition stage. In Dogon, like in many other African countries, the continuity of change in architectural forms involves three traditions: archaic, islamic and western (Pellow 1986; Schwerdtfeger 1982; Moughtin 1985; Centre National... 1982). Although the extended family is splitting, the polygamous system is always practiced. According to islamic influences the changes are observable in introducing a hall at the entrance of the building. Westernization is also visible in the plan and the structure of settlement, in the architectural fashion of individual forms, and in the technology of construction.

The westernization of the settlement plan is expressed by new spatial and functional forms: administrative buildings, schools, shops, and medical centers. The traditional division of work into farming, trading, fishing, craft, as well as the emergence of new occupations (teacher, physician) have largely contributed to the changes of traditional habitat. Now people engaged in public services do not need granaries. Innovations are seen also in the slowly dying out of *sadjakuru* and *toguna*. The

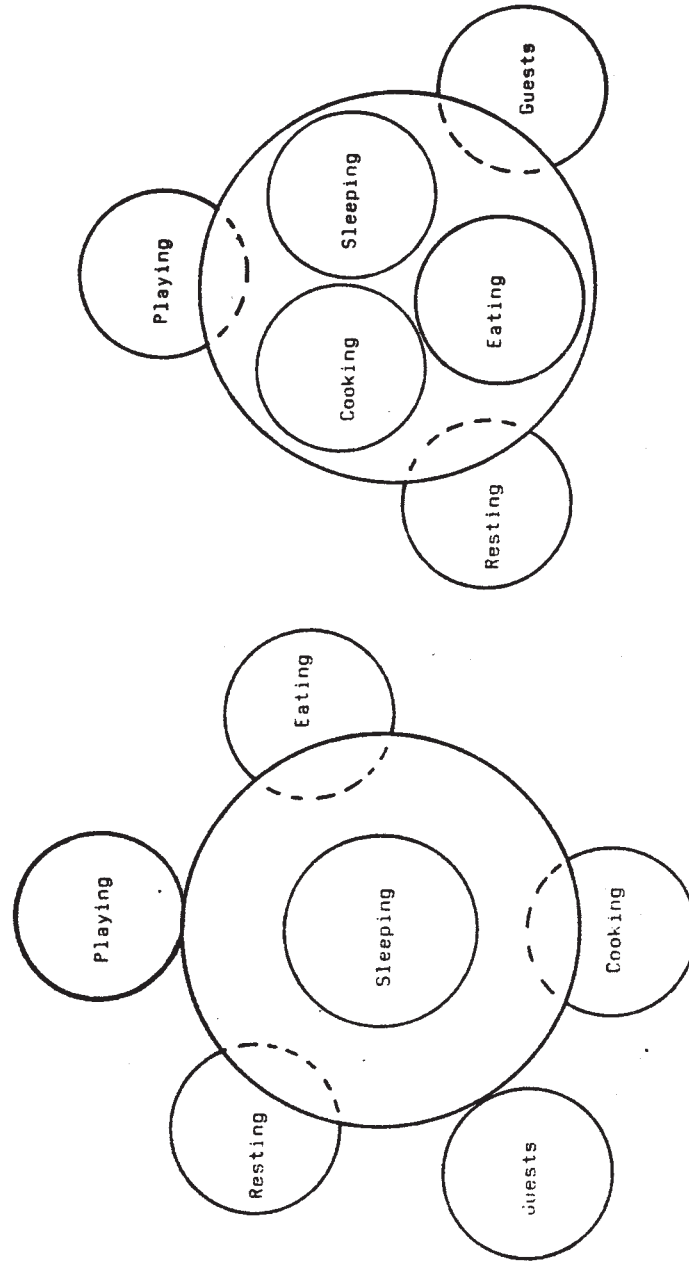


Fig. 3. Diagrammatic representation of activities and facilities that are commonly associated or demarcated in the old and new pattern house for single

architecture of the modern houses changes small windows to greater ones, giving a better view outside (fig.3). The modernization of the technology of building includes two issues. The first one, concerns the application of new building materials like cement and steel, and the other one concerns changes in the organization of building. No longer are buildings constructed by the whole community (Bethlehem 1975). Today everyone builds a house by himself with the help of one's own family.

Summing up, the westernization process has many consequences related to one another. The introduction of new elements into the traditional milieu disturbs not only archaic architecture, but also the whole structure of lifestyle beginning from the extended family, through social solidarity and we-feeling, down to the individual's self-identity (Muller 1984).

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