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THE USE OF SPACE IN THE NIGERIAN HOME

NIGERIAN BUILDING AND ROAD RESEARCH INSTITUTE

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FOREWORD

The architectural design of a home is a creative work of the professional architect. He conceives a design around the personality and the needs of his client. The architect's design is therefore expected to satisfy both the aesthetic ideas and functional needs of his client. The design is functional if, among other requirements, his client can undertake his activities in the home comfortably. In this respect the architect's final design is made easier if he has standards for the use of space for various activities in the home. This is particularly invaluable for areas where land is expensive and economy is necessary, for example, in the design of low cost housing in urban areas.

Up to now the Nigerian architect has relied on standards of foreign countries whose cultural life styles are different from those of Nigeria. Naturally these standards do not specifically cover activities peculiar to Nigerian culture. For example, no foreign standard on the use of space gives any recommendations for the pounding of yam or tying of wrapper by a Nigerian woman. Besides foreign recommendations for the use of space in the home are based on the "average height" of inhabitants in those countries. It is therefore necessary that an exercise be carried out in Nigeria to evolve recommendations based on local data.

The proposals made in this report are derived from the anthropometric survey undertaken by the Nigerian Building and Road Research Institute in Nigeria. Special attention has been given to those activities which are peculiar to our cultural life style. It is hoped that architects will find the recommendations in this report an invaluable aid to the design of the Nigerian home.

As far as it is known, this is the first publication of this type in Nigeria. Naturally, it may require modifications with time. To this end, constructive suggestions from practising architects will be most welcome.

A. O. MADEDOR
Director.

February, 1988:

INTRODUCTION:

This publication covers two areas of architectural research carried out at the Nigerian Building and Road Research Institute, Lagos. These areas are:

(a) Anthropometric dimensions for household activities in Nigeria.

(b) Building design detailing

ANTHROPOMETRIC DIMENSIONS FOR HOUSEHOLD ACTIVITIES IN NIGERIA

Anthropometry, the science of physical and psychological measurements of the human body, is one of the basic requirements for the functional design of buildings. Various studies have shown that within any sample group, there exists a relationship between human height and other dimensions of the human body.

Due to the lack of relevant anthropometric data for Nigerian households, the Nigerian Building and Road Research Institute, Lagos, in 1982 undertook a study to determine:

(i) the average Nigerian standing height

(ii) various household activities, associated furniture and equipment, mode and place of performance, with a view to determining the minimum space requirement for various household activities.

Initially, a sample survey of 1000 adults from different parts of Nigeria who are resident in Lagos was conducted. Later, another sample survey of 1000 adults from the representative states of Anambra, Borno, Kano, Plateau and Sokoto was conducted. The survey also covered various household activities, associated furniture and equipments in many representative low and medium income households.

An analysis of the survey revealed that the average Nigerian adult standing height is 1.71m while the average Nigerian adult male and female heights are 1.76m and 1.66m respectively. It was also established that household activities were basically governed by the living habits, social customs and income. Hence people of different living habits, social customs and income may perform the same activity differently. Based on the result of the survey, minimum but optimum dimensional space requirements for various activity postures have been worked out. These activities have been grouped and related to their places of performance. For example, bathing, dressing, sleeping and cooking are all different groups of activities. Care has been taken to include such activities that are not only indigeneous but of daily occurence like the wearing of *agbada*, tying wrapper, pounding, grinding and bathing.

BUILDING DESIGN DETAILING

Many architects and planners spend considerable time over space allocation but end up paying very little attention to the detailing either due to ignorance of the effect of bad detailing or a bid to meet up with deadlines. This often results in defective building design detailings which may cause space wastage, inefficient performance of space, high maintenance cost, accidents, user inconvinience and irritation. This study draws the attention of designers, especially architects to proper building design detailing by highlighting some defective detailings and recommending some comparably simpler solutions. While the list of defective building design detailing is considerable, efforts have been concentrated on a few of the most common ones. These range from the wrong placement of openings to inappropriate floor slope in kitchens and toilets.

The result of these studies are presented graphically for easy understanding and for reference purposes. Since the diagrams are not drawn to scale, appropriate dimensions have been given where necessary.