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Socio-Psycho Logical Considerations in Housing for the Low Income Group

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SOCIO-PSYCHOLOGICAL CONSIDERATIONS IN HOUSING FOR THE LOW INCOME GROUP

by

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SUMMARY

Studies reveal that many of the housing schemes that have come up in the last few years are short of standards of acceptability from the point of view of the occupants. This paper discusses some of the findings of recent case-studies and brings out the importance of carrying out comprehensive surveys into the living pattern, users' requirements and economic capacity of the prospective inhabitants. Observations of a study into the squatter settlements at Delhi have been analysed and an architectural interpretation of the results has been suggested.

INTRODUCTION

The architect today has to work under two major constraints - ignorance of the users' requirements and the restriction on cost. Consequently many low cost housing schemes that have come up in the past few years have been found to be short of the standards of acceptability from the occupant's point of view. A survey (1) conducted in the Oldham city under the urban renewal has indicated the unfavourable attitude of women towards living in flats. This has also been shown in a few case-studies undertaken in African and other developing countries. (2)

SOCIO-PSYCHOLOGICAL EFFECTS OF MULTI-STOREYED HABITATIONS

The shortcomings of living in multi-storeyed housing have been summarised by Walter Bor, (3) John Macey (4) and others as lack of privacy; lack of adequate space for free movements, noise, lack of space for recreation; limited playing facilities for children, crampedness, poor aesthetics and monotony and visitors' inconvenience etc. The impact of these living conditions could prove grave, both for the society as also for the individual.

It has been found to be true in a case-study undertaken by this Institute, pertaining to the socio-psychological impacts of multi-storey living. (5) 72 families living in four storeyed low income residential schemes formed the sample for the study. Table 1 shows the likes and dislikes of the heads of the families, the housewives and children. About 71% preferred single storey houses and 28% were agreeable to live on the first floor in a double storey unit. 65% of the heads of households reported a positive change in their interests because of living in restricted and confined environment of flats. In case of women living on upper floors, they did not touch the ground for weeks together sometimes. On the social side major effects have been reported in the form of loosening of family ties, lack of social intercourse and mutual help among neighbours; and overall inconvenience caused to the visitors. 41.6% of the parents felt that their overall control over children has decreased and 37.8% were of the opinion that the habits of their children have been spoiled.

TABLE 1: LIKES AND DISLIKES FOR THE MULTI-STOREYED LIVING

Respondents	Likes %	Dislikes %	Neutral %
Heads of Household	32	44.4	23.6
Housewives	44	56	-
Children	29.6	70.4	-

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SOCIO-PSYCHOLOGICAL REQUIREMENTS IN SLUM REHOUSING

The lack of socio-psychological considerations is most profound in rehousing schemes undertaken for the slum dwellers, industrial workers and squatters. This cross-section of population, because of their different socio-psychological hierarchy, needs proper care at each stage of rehousing. The economic constraints restrict us to provide the desirable. It is therefore necessary to find out what best we can so that every utility we provide is truly useful to them.

With this object in view, the Central Building Research Institute took up a limited study to provide guidelines for the preparation of rehousing schemes for squatters and slum dwellers.

SAMPLE AND METHOD OF INVESTIGATION

The cluster of squatters settlement selected for conducting the survey consisted of about 800 units along a railway embankment comprising four distinct regional communities. All these groups were following different vocations and leading a typical family life. The sample was so chosen that there could be a balanced representation of all these communities. Approximately 10% of the total households were carefully selected and their respective heads were interviewed with the help of a pre-designed questionnaire schedule. Simultaneously sketch plans of their huts, showing the typical dimensions and layout of various belongings were made. Figures 1a and 1b indicate some interesting features in these huts. A four member family was found to be living within a covered area of 1.77 m^2. The room height is only 1.21 m and the door height is .91 m. The plinth is .3 m below the adjoining level. This is due to the reason that they use mud for the walls which is taken from their own areas. There are no windows or other means of ventilation in these huts.

OBSERVATIONS AND ANALYSIS

The squatter colony under observation is a cluster of single storey units and it has grown up in a haphazard manner. There are no roads, drainage, water supply or community facilities. The passages connecting one hut to the other is sometimes as narrow as half a meter. The huts are mostly built up of mud walls, mud floor and thatched roof, except in some cases where bricks have been used for walls.

EXISTING SPACES AND THEIR USE PATTERN

Table 2 shows the detailed analysis of the various spaces found in different hutments. It may be of interest to note that 92.5% of the households have only one room (size varying from 2.60 m^2 to 22.30 m^2) with an average net area of only 7.43 m^2. It is used for such diverse activities like sleeping, childrens' study and play, entertaining casual visitors and accommodating guests, eating meals, storage of household articles, storage of fuel and sometimes cooking as well. Average built up area per household including the area under covered verandah comes to only 9.10 m^2. Keeping in view the number of activities performed within the four walls of these huts, it can be safely said that the huts are being put to the most intensive uses. This is being achieved by staggering the timings of different activities.

HOUSEHOLD COMPOSITION AND ECONOMIC CHARACTERISTICS

Table 3 gives a picture of the household composition and their social and economic characteristics. It indicates that 66.25% of the total sample belonged to the nuclear family followed by 16.25% conjugal and 11.25% extended families. It may be further seen that whereas the average size of the household for the first two types is 4.25, it is 5.11 for the extended families.

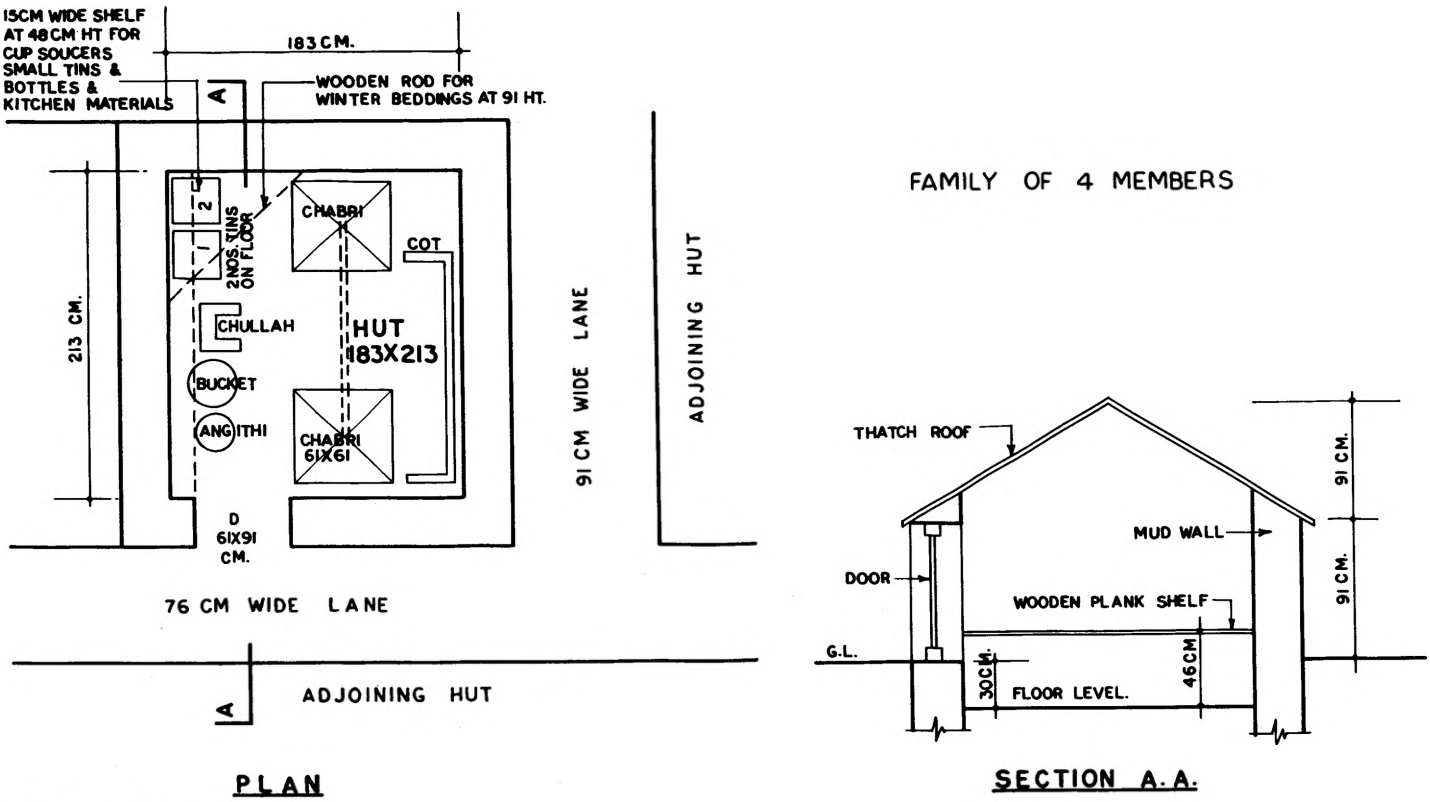

Fig. 1a. Observations
- Thatch Roof: 198 cm Height
- Mud Walls: Thickness Varies
- Floor Sunkin: 30 cm
- Kachha Flooring

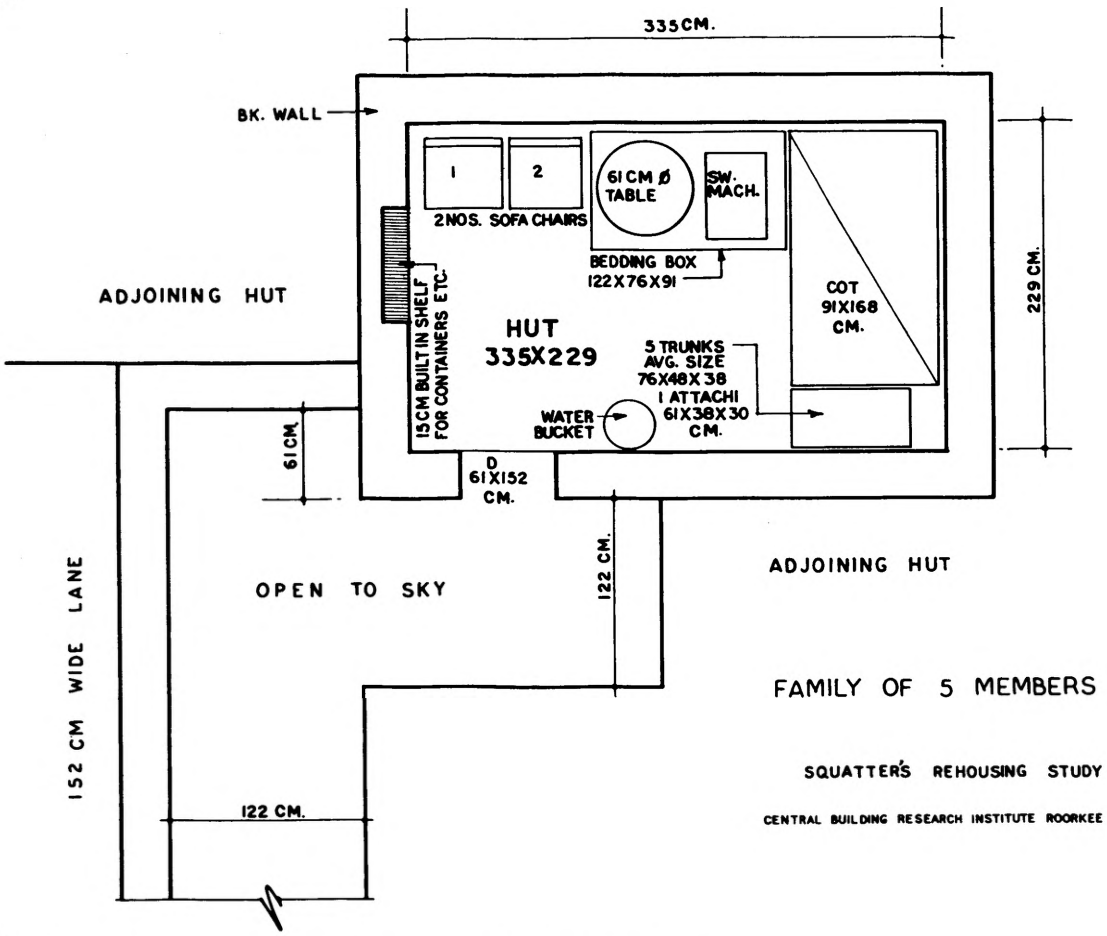

Fig. 1b.
- 22 cm Walls Mud Plaster
- A. C. Sheet Roofing 243 cm Lev.
- 15 cm Floor Sunkin

SKETCH PLAN OF EXISTING HUTS

TABLE 2: INCIDENCE, AREA ANALYSIS AND USE PATTERN OF VARIOUS SPACES

SPACES	Percentage Incidence	Area Range m^2	Area Average m^2	Sleeping and resting	Children playing	Entertain. & accom. guests	Cooking	Eating meals	Cleaning and washing of utensils	Storage of HH articles	Storage of fuel	Clothes washing	Clothes drying	Bathing
1 ROOM	92.5	2.60-22.30	7.43	*	*	*	+	+	=	*	*	-	-	-
2	7.5	1.86-8.92	5.57		-	-	-	-	-	*	-	-	-	-
Ind. KITCHEN	6.25	1.48-3.62	2.51	=	-	-	=	=	=	-	=	-	-	-
Shar. §	6.25	2.88-5.85	2.23	-	-	=	=	-	-	-	-	-	-	-
VERANDAH	26.25	0.74-10.22	5.30	+	*	*	=	=	=	-	=	=	=	-
STORE	2.5	1.86-3.72	2.97	=	-	-	-	-	-	=	-	-	-	-
Ind. COURTYARD	41.25	2.23-34.84	8.36	*	*	*	+	+	*	-	=	=	*	*
Shar. §	33.75	4.64-49.05	7.90	*	*	*	+	+	*	-	=	=	*	*
TOTAL BUILT-UP AREA		3.44-23.78	9.10											
TOTAL DWELLING AREA		3.44-52.67	15.14											

ACTIVITIES PERFORMED *#

§Nos. of Households sharing one kitchen and courtyard ranges between 2 to 3 and 2 to 7 respectively.

*#Symbols in the Table represent the % of the occurrence of an activity in a particular space in the following order:-

* Above 50%
\+ Between 25 to 50%
= Below 25%
\- Nil

TABLE 3: HOUSEHOLD TYPES AND THEIR ECONOMIC CHARACTERISTICS

Household Types	Percentage of the sample	Range of members per HH	Average members per HH	Income Range per HH p.m.	Average income per HH p.m.	Range of earners per HH	Average earner per HH
SINGLE MEMBER	6.25	1-1	1.0	70-100	91	1-1	1
EXTENDED	11.25	2-10	5.11	135-850	388	1-8	3.68
CONJUGAL	16.25	2-9	4.39	100-750	276	1-3	2.15
NUCLEAR	66.25	2-8	4.15	60-640	219	1-3	1.74
TOTAL/AVERAGE	100	1-10	4.1	60-850	248	1-8	2.14

As to the economic status, average income per household ranges between *Rs 91 to Rs 388 per month. The lowest range of income (Rs 70-100) occurs in single member households while it is highest (Rs 135-850) in the extended households because of more earning-members/family.

LIVING PATTERN

Demographic data (Table 4) shows that almost all the adult males, 41% of the adult females and 6% of the children add to the household income by taking different types of jobs. Adult males go as far as 8 Km for earning their bread and remain out of the house for an average 10 hours a day. The other earning members are also away for 6 to 7 hours during the day. This does not take into consideration their being outside for any other purpose, e.g. children going to school or adults out for recreation or shopping etc. Most of the domestic functions by the housewives are performed during these hours, when other members are away. Houses are occupied to the maximum limit during the night when almost every member of the household is in for sleeping. Domestic activities were found to be staggered throughout the day so that a space for cooking could later on be used for eating, sitting or even sleeping.

Observations were also made as to the mode and places of sleeping. Except for the place of sleeping, no perceivable change has been reported in the overall pattern of sleeping due to change in weather. 62.5% of the households use cots for sleeping, 32.5% use both cots and floor, while only in 5% cases all members of the household sleep on floor. A fair number of children share the cot with adults or two adults share the same cot. During winter, because of the shortage of space in the hut, some of the members slept outside under some sheltered space.

As to the other routine activities such as cooking, utensils cleaning, bathing, washing and drying. Table 5 shows the detailed analysis. In the absence of any toilet facilities the majority of the population go out in the nearby open fields. For other activities, courtyard is the most used space. 80% of the respondents indicated no objection in having common bathing facilities, but all have indicated the wish to have independent water closet.

Regarding fuel used for cooking and the procurement of rations, the majority of the population arrange it on a week to week basis. Coal and wood are the main fuels used, and in the absence of any sheltered space, it has been found being stored inside the huts in most cases. For keeping other belongings, only a few households have adopted their own methods of storage by providing wall shelves and hanging lines. In the majority of the cases these were found lying on the ground.

Heads of households were asked to list the facilities they would

*1 U.S. Dollar = Rs 7.0 (approx.)

TABLE 4: CHARACTERISTICS OF THE POPULATION

Composition	% age of the population	% age earners	Nature of Jobs: Casual labour %	Other service %	Petty Business %	Average distance to work place/school	Average time spent out (hrs.)
Adult/Male	39	100	49	39	12	8 Km	10
Adult/Female	24	41	92	8	-	3 Km	7
Children 5-14 years	22	6	6	-	-	3 Km	6
Children below 5 years	15	-	-	-	-	-	-

TABLE 5: VARIOUS HOUSEHOLD ACTIVITIES AND PLACES OF THEIR PERFORMANCE

ACTIVITIES	PLACES						TOTAL
	Courtyard Ind. or Shar. %	Inside Hut %	Verandah %	Kitchen Ind/Shar. %	Outdoor Lane %	Nearby JJ colony %	
Cooking	21.25	42.00	24.25	12.50	-	-	100
Bathing	55.00	-	-	-	12.50	32.50	100
Utensils cleaning	60.00	6.25	5.00	1.25	27.50	-	100
Clothes washing	46.25	-	3.75	-	21.25	28.75	100
Clothes drying	57.50	-	1.25	-	26.25	15.00	100

like to have in the new housing schemes. Almost all favoured single storey living, 66% want running water facilities, 59% have stressed the need for community spaces, 47% indicated that there should be an electric supply and 20% were eager to have educational facilities along with paved roads, proper drainage and other public health facilities. About 50% of the respondents expressed their readiness to build self-help housing on developed plots provided they were given necessary design and technical guidance.

INTERPRETATION OF THE SURVEY DATA

On analysing the above observations we can arrive at some planning guidelines for programming future rehousing schemes for the squatters:

A The rehousing schemes should preferably be single storey. The main reasons are:
   (1) that the majority of the urban squatters are rural migrants. Their activities and living are ground-oriented;
   (2) single storey development can be inexpensive provided the land cost is not too high. Since most persons travel 8 to 10 km to the place of work, the rehousing schemes could well be located away from the city centers;
   (3) a single storeyed development also cuts the external circulation space and provides maximum flexibilities in planning;
   (4) with a proper layout, reasonably high density of 30 to 40 dwellings/acre is possible.

B Two types of housing may be planned for rehousing the squatters--family dwellings and night shelters.

Four types of distinct household: nuclear, conjugal, extended and single membered, have been found among the squatters. While the first two require a proper dwelling for performance of various domestic activities, the last two require only a shelter for sleeping at night.

The extended and single member households are mainly composed of earning male members. They are mostly sub-urban or rural immigrants living in cities to earn while their families stay back in their villages. They need a night shelter for sleeping, a storage space for personal belongings and bathing and lavatory facilities.

For the nuclear and conjugal type of households basic facilities required in new schemes should include provision of -

   (i) a water closet,
   (ii) an enclosure where apart from bathing, activities like washing, utensil cleaning etc. can be performed.
   (iii) a cooking space wholly or partly covered.
   (iv) a storage space for rations and fuel for two weeks,
   (v) a room for multiple uses, e.g. sleeping, resting, eating, childrens' play etc.
   (vi) a courtyard with provision for sleeping out in summer.

Only one room has been suggested from the following considerations: -

   (1) To meet the large demand of housing within limited economic resources, it is necessary to phase the investment in two to three stages of development.
   (2) The survey has shown that the immediate need is for the nucleus of a dwelling, which provides for a planned growth in future. A sketch plan showing various stages in a developing house is shown in Figure 2. The main intention to build less today is to curtail any investment which will place the economic rent beyond the individual capacity to pay.

C The rehousing scheme may be planned in the following three broad categories:
   (1) Aided self-help housing on rental basis on developed plots.
   (2) Tenements for outright sale.
   (3) Single or multi-storeyed night shelters with common bath, w.c. etc.

D Rents -
   (1) The monthly rent for a family dwelling should not exceed Rs 20 to 24 per family.
   (2) Monthly rent for a night shelter should not exceed Rs 10 per person.

These are based on the income and rent paying capacity of various families. Any increase beyond these will force them to leave the housing schemes and put up a new squatter's settlement somewhere else. This is one of the main factors which has resulted in a large percentage of desertion of the new housing schemes recently provided at various places.

ACKNOWLEDGEMENT

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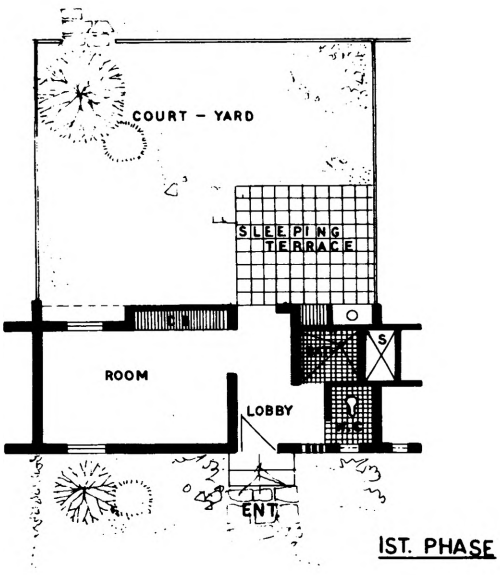
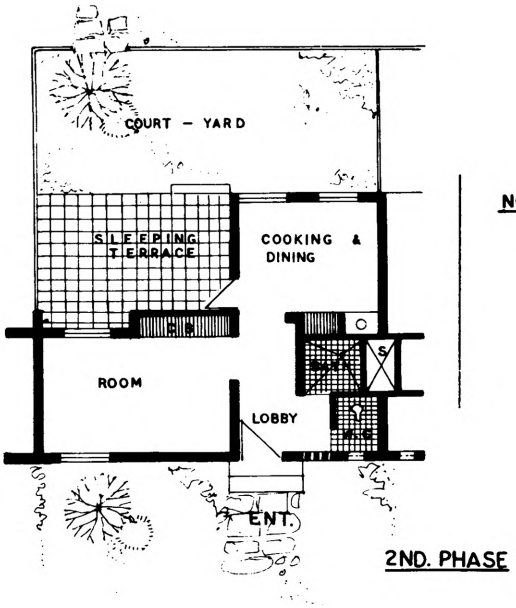
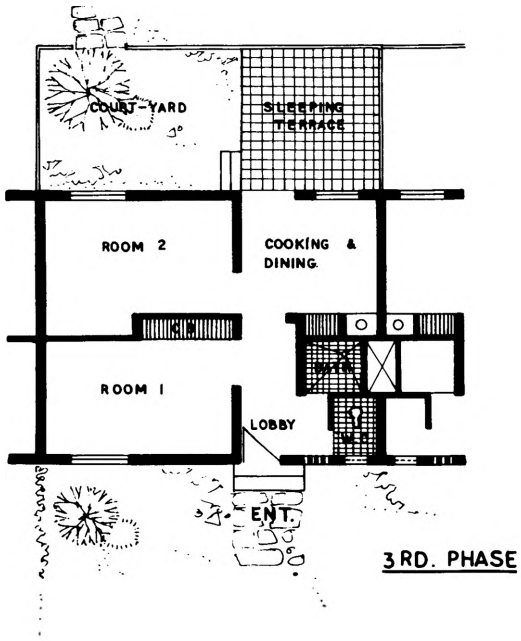




NOTE

THIS SCHEME IS SUITABLE FOR SINGLE STOREYED DWELLING.
A DWELLING DENSITY OF 30—40 PER ACRE CAN BE ACHIEVED.



IST. PHASE

ACCOMODATION	PROVIDED
ROOM	11·0 SQ. M
BATH	1·4 ,,
W. C	1·1 ,,
COOKING PL.	1·0 ,,
STORAGE	1·0 ,,
TOTAL	15·5 SQ. M.

2ND. PHASE

ACCOMODATION	PROVIDED
IST. PHASE HOUSE	15·5 SQ. M.
COOKING & DINING	8·4 ,,
TOTAL	23·9 SQ. M.

3RD PHASE COMPLETE HOUSE

ONE MORE ROOM (2·8 X 4 M.) ADDED TO THE 2 PHASE.
HOUSE WILL BE A SPACIOUS DWELLING FOR 5 MEMBERED FAIMLY WITH A SMALL COURT-YARD AND SLEEPING TERRACE
TOTAL PLINTH AREA 46·50 SQ. M. (APPOX.)

SQATTER'S REHOSING STUDY

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Fig. 2. Concept of a Developing House