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URBAN BANTU HOUSING

A DETAILED STUDY AND RE-APPRAISAL OF THE POSITION IN SOUTH AFRICA

H. L. WATTS and H. J. SIBISI

AN APPLIED RESEARCH REPORT OF THE
INSTITUTE FOR SOCIAL RESEARCH
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H.J. Sibisi

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P R E F A C E

This report is an applied report, intended to reappraise the housing position in our urban Bantu townships in South Africa. As an applied piece of research, the whole design of the study has been strongly influenced by the needs and requirements of the architects who will work on the problem of evaluating existing housing designs for urban Bantu, and who will be responsible for the preparation of new dwelling designs if this report suggests that such new plans are required. As an applied report intended to be used for easy reference purposes, it attempts to present the findings fairly simply, with all except the most important statistical tables relegated to an appendix. Only the most important sociological aspects which emerged are mentioned, as the report is not in essence a sociological essay, but rather intended to be a guide-book for dwelling designers looking at the urban Bantu position today. Essentially it is a quantitative study, based on an analysis of over 1,000 pages of computer tables derived from over 300,000 items of information.

However, there was more to the research experience than just facts and figures, living habits and preferences, and outlines of dwelling alterations which interest the designers. As social scientists we had the opportunity not only to interview but to observe for a while the people living in the urban townships on the periphery of our South African cities and towns. We were left with a series of individual cameos which illustrated particular types of social processes, as well as overall impressions.

The importance socially of privacy was brought home to us by one man in Greytown. He and his family lived in one of the group of wattle-and-daub huts which have been erected by the householders themselves. These huts closely parallel the rural homesteads, with individual separate huts for different

parts of the family, rather than one dwelling with a number of rooms. This man and his family were to be moved shortly into one of the new houses, and we enquired as to how he felt about it. He was not at all happy about the move, and was asked why this was so when he knew the houses were well constructed, had a good appearance and were far more sophisticated than mud huts. The reason for the man's unhappiness was that he felt in the small house without internal doors socially-important individual privacy could not be obtained. He put his problem vividly in the pictureful language of the Zulu. 'In that house children will see me making them', he said simply. Here in a nutshell was the problem of maintaining social decency in a small house without internal doors. Outsiders looking at mud huts in town tend to regard them as undesirable, and yet such huts were meeting the needs for privacy and decency of this family better than the new brick house to which they were to move.

Illegitimacy is often regarded as a major problem amongst urban Bantu. That it is a problem there is no denying, but the problem is neither on the scale nor entirely of the nature that an outsider with a Western viewpoint believes. Babies born before marriage are not necessarily regarded as illegitimate. Amongst some ethnic groups, a baby born before marriage is a prerequisite for a formal marriage, and that child is regarded as fully legitimate. Again, other variations on this type of concept could be described, but it is not really appropriate here. Suffice it to say that this is one of the reasons why we felt that all families should be regarded as eligible for a dwelling of their own, and a 'broken' family of an unmarried mother and her child(ren) should not always be interpreted from the standpoint of Western values.

Do designers realise that sometimes the location of bedroom doorways in close proximity can present a social problem? That such positioning of doorways can present a social problem for the people living in the houses is clear from our fieldwork. We became aware that amongst the Zulu the N.E.51/6 type

of house, for example (where the bedroom doorways are arranged in such close proximity that a collision of two people coming out of the two different bedrooms at the same time is possible), is a problem. Amongst the Zulu there are very strict avoidance patterns between certain relatives by marriage. For example, if a father's son has just married, and the young man and his bride are staying with the father until such time as the young family can get a new house on their own, it is unthinkable that the father-in-law and the young bride should ever come into physical contact. Therefore they have to be particularly careful when coming out of these adjoining doorways that they do not collide with each other - because such a collision could have far reaching social consequences.

Witchcraft is an all-pervading element in Bantu life whether it be in urban or rural areas. It was very interesting to note that in an area such as Durban where the terrain is very rugged, it becomes a matter of concern to a family, when they are allocated a new dwelling, as to whether they will have a high position or be on low-lying ground with heights above them. The problem here is that if one is on low-lying ground with other houses above one, one could be injured by medicine and magic blown out by the householder above one - and it would be far easier for this medicine and magic to drift down to one than it would be for the reverse to happen. So it is that if there is ethnic division of a township, and it so happens that a particular tribal group is situated largely on high-lying ground, that group would feel in a far stronger position than the group on the low-lying ground. It would be important in these cases to see that there was an equal division of high and low level ground between the different ethnic groups!

We have commented in the report on the importance of outdoor living areas for the people we have studied. It was clear that there were ethnic variations here, and that for example amongst the Sotho-speaking people the outdoor area

was far more important amongst the Zulu. Many of the developments of the garden round a house which we saw in the Transvaal were carry-overs of the 'lapa' from rural Sotho areas.

The above are some of the interesting sidelights to the many hundreds of interviews conducted. Overriding all other impressions is one general impression. We can describe it in the following way. We have known the South African scene long enough to have personally had acquaintance with the post-war slums which challenged the planners. These slums have now been almost entirely wiped out, and certainly the actual areas which were slum areas after the war have long since disappeared. In their stead extensive housing areas have been created. What intrigued us as social scientists was not merely to look at these townships with their row upon row of stereotyped houses, but to look at the people and the way they live. Bearing in mind that many of the homes we visited were occupied by people who a decade or two ago were slum dwellers, living in shacks with the most rudimentary of household equipment, and under conditions of filth and squalor, what met our eyes when we conducted our fieldwork was an urban population. True, as the previous remarks show, it was not a Western population. True likewise, was the fact that there was still a considerable amount of poverty present, and some of the homes were dirty and untidy. However, unmistakably, the people we met and talked to, the people into whose homes we went - we and our interviewers visited every room of every house sampled - these people were urban people. Their tribal roots were in many instances still clear, but in the final analysis they could not be classed as anything other than urban dwellers. As the results of this investigation show, they have acquired the housing tastes of an urban population. In fact, looking at studies of other groups, we can say that the tastes they have acquired, and the living patterns they now exhibit are those of a working-class urban population. In many instances this has all taken place within the course of one or two decades - this is a fascinating transformation.

The vast majority of the homes, whether the people were very poor or not, were neat and tidy. Their personal furnishings showed a desire to acquire urban Western standards of living - often one felt at a great sacrifice for the family, and perhaps at the cost of food. The radiogram, the dining-room table and the settee were commonplace, as were many of the other trappings of urban life. It was only by realising the background of these people, and by consciously thinking of the transformation that had taken place in the lives of many of them, only since the war, that we were able to appreciate the full significance of what we beheld. Here was a people grown from slum-dwellers into house-proud families; a people with a non-Western background who were adapting successfully and rapidly to an urban industrial way of life; a people indeed who could no longer be classified by the social scientist as anything other than urban; people whose life and labour were making a contribution to the development of South Africa, and helping to further its economic prosperity. The changes which had taken place were astonishingly far-reaching and rapid. The comments one often hears about whether non-Western people with a subsistence economy background can be expected to make the transition to an urban industrial civilisation in less time than the many centuries it took to build up the civilisation itself seemed strangely naive - here during the lives of the people we were studying the transformation from illiterate shack-dwellers to urban people with a growing class-consciousness, and an increasing rank of professional workers, had taken place.

This pattern of social and cultural development of under-developed peoples, once they are brought into urban areas, is taking place throughout the world, whether it be in Africa, or Latin America, or the deep south of the United States, or India, or the Far East. The fact that this process is so widespread does nothing to lessen the fascination and wonder of it for the social scientist. This is the living human background to the research report which follows. These are

the people for whom the dwelling designers have to plan for the future - Bantu people unmistakably, but also unmistakably people of the modern urban world.

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CHAPTER I

THE PURPOSE AND DESIGN OF THE RESEARCH

1.1 General Need for Housing Survey to Guide Planners:

It is a truism to say that one of the basic needs of human beings, wherever they live, is shelter from the elements. The provision of housing in one form or another is one of the important activities with which man as a social animal is concerned. In primitive societies, which are characterised by little or no division of labour, the individual household provides its own dwelling. The satisfactoriness or otherwise of the accommodation depends on raw materials available, and the skill and the labour which the household brings to the task. This was the position in Bantu society under tribal conditions.

Today, more and more of the Bantu peoples in the Republic of South Africa are being drawn into the circle of urbanisation and westernisation[1]. Large urban populations have developed with the increasing development of the South African economy. In our urban areas raw materials are not available for huts to be built. Furthermore, from the point of view of public health conditions no local authority would ever allow huts to be built in urban areas. In addition to this, because of the nature of urban employment, the Bantu in the towns do not have the time to build adequate buildings for themselves. This means their homes must be built for them. As nearly all of the Bantu are members of the working class, they do not have an income level which would allow them to have their own homes built to individual plans prepared specially by architects. Therefore, the local authorities have to provide houses. These houses have to be designed. The problem of dwelling design is

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1) For instance, given present trends, about half of the total Bantu population living in South Africa by the year 2000 A.D., or about 15 millions, are likely to be living in urban areas. (See Watts, H.L.: (to be published shortly) 'The Role of Migration in the Development of South African Towns, with Special Reference to King William's Town and East London': Paper to be published shortly as part of the *Proceedings of the 'Focus on Cities Conference'*, University of Natal, 1968.)

in the hands of the specialist - the architect. If the architect is to play his part in planning for a contented and orderly population living in suitable dwellings, he must design in such a way as to cater adequately for the living habits, preferences and housing needs of the population to be housed.

The architect can plan adequately only if he has an adequate idea of the living patterns of the population for whom he is to plan. It is necessary to know something of the rent-paying ability, housing preferences, and living habits of the population concerned. While it is clearly impossible for the individual architect to visit hundreds of homes, the sociologist can come to his rescue. By means of a social survey it is possible to build up a picture of the population involved - of their living habits, needs, and preferences. Using social survey information the designer can then prepare more appropriate designs. Where such information is not available, experience has shown that the architect (who is very often a middle-class citizen), uses assumptions which are appropriate to his own level of life, and these are often unsatisfactory and inapplicable when applied to a working class population. Many examples of this type of experience can be quoted, but it is sufficient to state the general principle.

1.2 Bantu Housing Research and Development After World War II:

World War II left an aftermath which included very serious housing problems for the urban Bantu populations in South Africa. The war had played a major part in the injection of industrialisation into the urban areas of South Africa. A consequence of this was an increased cityward movement of the rural Bantu. Squatters' shacks and slums developed on the peripheries of all large South African cities. During the war there were neither the manpower nor the materials to provide housing for all newcomers to the towns. Once the war was over a serious problem had to be faced. The National Building Research Institute played a major part in tackling this problem, and low-cost dwelling designs were evolved. These were designs which could be put up cheaply, on a large-scale basis. As a result of the combined effort of local authorities and the central Government, the urban slums were virtually wiped out.

As part of the research necessary for this mammoth post-war rehousing project, in the early 1950's the first Bantu housing survey on a national scale was undertaken by the South African Council for Scientific and Industrial Research. The report was eventually published in 1960[1]. The findings that

1) Committee on Socio-Economic Surveys for Bantu Housing Research (1960): *A Survey of Rent-Paying Capacity of Urban Natives in South Africa:* South African Council for Scientific and Industrial Research, Pretoria.

a large proportion of the Bantu population at that time could not afford economic rentals gave added impetus to the research into, and design of, low cost dwellings. Accompanying this research was the development of standardised plans which have been applied throughout the country on a large scale. The N.E. 51/6 and N.E. 51/9 type plans for houses are typical examples of this[1].

As early as 1949 an interim report on minimum standards of accommodation had been published[2], while in 1951 minimum standards of accommodation for non-Europeans were brought out[3]. These were in fact incorporated into the plans adopted for large-scale township development.

These same housing plans are still being used today. To all intents and purposes the problem of Bantu slums in the large cities of South Africa has been solved. While some of the small communities still contain Bantu shacks and huts, these are steadily being replaced by houses.

1.3 A Reappraisal of Urban Bantu Housing is Required:

During the past two decades the economic development of South Africa has progressed significantly. It is known that Bantu wages have risen, and it is often said that the standard of living of the Bantu has risen. Large parts of the Bantu population have developed from the slum groups they once formed into clearly-established orderly urban populations. The people are obviously Bantu, but at the same time they are equally clearly an urban population. One expects them to show the typical effects of urbanisation as found throughout the world, and find that they have improved their standard of living to an extent, and have to a significant extent lost their rural (in this case, tribal) ways. One expects them to have changed

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1) National Housing Office (1951): *Minimum Standards of Housing Accommodation for non-Europeans:* National Housing Office, Pretoria: (mimeographed). See plans at the back of the report.

2) Research Committee on Minimum Standards of Accommodation (1949): *Interim Report of Main Committee:* National Building Research Institute, Series DS 9, Pretoria: (mimeographed).

3) National Housing Office (1951): op. cit.

their patterns of living and to have developed distinct housing preferences and tastes, which approximate to those of working-class Westerners. If so, are the dwelling designs which were prepared years ago to solve the serious post-war housing problem still appropriate? Are they still applicable in terms of the cost-level of design, bearing in mind the present-day standards of living of the Bantu? Are they applicable in terms of the present living patterns and preferences of the people? Should the new dwellings, which are continually being erected continue to be along the lines which were planned 15 to 20 years ago? Or, has the time come for a revision of dwelling designs? - not only for the development of new designs, but also for diversification, so that more than one type of basic dwelling is erected in future in townships? These questions are appropriate whether one is thinking of an urban Bantu dweller living in the biggest city in Southern Africa (Johannesburg), or of one living in one of the developing homeland townships associated with Border Industry.

Research is necessary to answer these questions. Part of the impetus which led to this present study was the findings of a member of the National Building Research Institute, C. Tod Welch. In a paper on 'Urban Bantu Townships' published as a supplement in the *South African Architectural Record* of December, 1963, Welch records his observation of new housing in the Reef townships. One of the most striking observations was the extent to which some of the Bantu householders had improved their dwellings and gardens. Photographs which are given in the paper indicate often elaborate improvements and well-cared for gardens. It is worth quoting from the paper:

> 'Sixteen years have now lapsed since the design and erection of the first homes, and it was felt that it would be of interest to examine the townships and observe to what extent the basic housing units built originally had been developed and improved, if at all.
>
> 'When first established, these townships presented a stark, bare appearance due to some extent to the limited, natural vegetation typical of the whole of the Witwatersrand. This was clearly illustrated by aerial photographs, which, because of the unnatural viewpoint accentuated the starkness, and highlighted the fact that there were as yet no trees, shrubs or individual gardens. Impressions in aerial photographs of these early stages tend to give a somewhat exaggerated picture of an impersonal, monotonous chain of stereotyped dwellings, stretching endlessly into the distance.
>
> 'Although most of the houses built are similar in character, it is interesting to note the often ingenious ways in which the basic units have been improved

> 'upon and extended. The freedom of expression intended at the outset has been exploited by many who, by virtue of better incomes, have been able to add to the original house, provide a home more in keeping with their present status. A large proportion of the residents have directed their efforts mainly towards establishing gardens..... It is the modifications of these basic structures' (houses) 'and the development of their gardens' (that) 'at best demonstrate the importance which the individuals attach themselves to their homes'.

Welch's findings highlight the feeling of experts that the time is now ripe for a reappraisal of the housing position among the urban Bantu. So it is that the Institute for Social Research at the University of Natal agreed to undertake, on behalf of the National Building Research Institute, a new social survey.

1.4 Aim and Purpose of this Research Project:

This present research is intended to study and re-evaluate the housing position among the urban Bantu. In view of the developing economic conditions in the country, and the improved wage scales, it was felt that a re-assessment should be made of the rent-paying capacity of urban Bantu. Such an analysis will indicate what cost levels of housing are appropriate at the present time. Has the rent-paying capacity of the population improved since the previous survey which commenced over 15 years ago? Or, has the rising cost of living kept pace with the rising wage levels, so that relatively the position is unimproved? This is a basic question for the designer, and is one of the important points investigated by the present study.

Secondly, the current research aims at establishing the size of Bantu households and their composition, with a view to indicating how far the existing housing standards produce overcrowding. Is it necessary to consider revising the minimum standards of accommodation? The study of household and family composition in relation to dwelling types will give some idea of the answer.

Thirdly, the survey is designed to ascertain the present living patterns of the Bantu population, as far as the pattern of dwelling usage is concerned. This aspect of the research is essentially a description of how the various rooms in the houses are used. Where does the family eat, congregate as a social unit, and so on? This type of information provides the architect with an idea of the functions which the various rooms in the dwelling serve. If the present-day functions

which the rooms are called upon to serve are different from those which were originally conceived of when the existing dwelling designs were prepared, then there are strong grounds for altering the designs in future.

Fourthly, the research is planned to analyse the housing preferences of Bantu housewives in relation to various design features and finishes. (Housewvies were interviewed on the grounds that women are more concerned with the needs of the family than men). As the women are likely to spend more of their time in the home than the men, and can talk for the children as well as the adults, their views are important. Information on attitudes to various types of design features and finishes, would assist architects to plan where possible alternatives exist. Such information will allow rational planning-decisions to be made in the future.

Mr. Welch has already shown from his study that a not unimportant number of Bantu householders have improved the dwellings in which they live, and their gardens. The present survey attempts to provide quantitative evidence of the extent to which alterations and improvements have been made, and will indicate the most popular type of alterations and design features. This provides objective support for the study of preferences, and will help architects to choose appropriate design features for new plans.

Individual houses are never set by themselves, but form part of a township. This involves the whole question of township planning and layout. An opportunity such as this present research was not to be missed, and so the survey has been designed to obtain some information on particular aspects relating to township planning. Certain attitudes and opinions of Bantu in relation to township layout were obtained.

1.5 Previous Studies which have Greatly Influenced the Present Investigation:

This study owes a big debt to preceding investigations. The shape it has taken has been in no small part determined by previous housing research in the Republic during the past two decades. Studies which have had a major bearing on this project are (showing in parenthesis the dates when fieldwork for the studies were undertaken), the Payneville survey (c.1949); the Survey of Rent-Paying Capacity of Urban Natives in South Africa (1951-1954); A Study of Africans in Grahamstown (1956);

and the Coloured Housing Survey (1959)[1].

1.6 The Sample:

After consultation with the National Building Research Institute, it was decided that this research should investigate the three largest urban areas in the Republic, (taking as criterion the size of the Bantu population of a city). In order of size the three cities concerned are Johannesburg, Durban and Pretoria. A stratified random sample of Bantu households was selected from each of these towns separately. About 400 cases were selected from Soweto (Johannesburg), with about 200 each from Durban and Pretoria. Appendix 'A' gives details of sample design and response and non-response. The picture obtained from these three cities will indicate the housing needs of urban Bantu in the largest cities in the Republic.

In addition it was decided to obtain information from two important Reef townships. This was on the grounds that a large portion of the urban Bantu population is located on the Reef. Daveyton and Kwa Thema were deliberately selected, after a lengthy discussion with the National Building Research Institute. These townships are the two main ones in the Republic as far as Bantu township layout and design are concerned, and were therefore also important for a study of the attitudes of Bantu towards township design. Approximately 100 households were drawn at random from each of these two townships.

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1) The references are as follows:
van Beinum, H.J.J. (1952): 'A Study of the Socio-Economic Status of Native Families in the Payneville Location, Springs': *Bulletin of the National Building Research Institute:* No. 8, June 1952, pp. 60-68.
Committee on Socio-Economic Surveys for Bantu Housing Research (1960): op. cit.
Irving, J. (1958): *Economic Rent and Household Income Among the African Population of Grahamstown:* Institute of Social and Economic Research, Rhodes University, Grahamstown. Occasional Papers, No. 2. (mimeographed).
Watts, H.L. (1962): *Survey of the Housing Requirements of Coloureds in Towns of the Western Cape Province:* National Institute for Personnel Research, Johannesburg. (mimeographed, confidential).

The housing problem of urban Bantu is not merely one concerning the cities or the Reef complex. It also is a problem with small towns. Perhaps in some ways Bantu housing might at the present time be a more acute problem in the small towns than in the large ones. No comprehensive study of Bantu housing problems and needs in small towns has yet been made[1]. Therefore it was deemed highly desirable to obtain some *preliminary* idea of how far the housing needs and problems of the Bantu in the smaller towns differ from those in the larger areas. To this end one small industrial town and one small non-industrial town were deliberately selected. Witbank was selected as the small industrial town. This was both on the grounds of its size and the presence of industry, and also on the grounds that a considerable amount of the original developmental work in the field of Bantu housing undertaken by the National Building Research Institute was centred in this town, leading to the Bantu township of Lynville. Also from the cost point of view Witbank had the advantage that it was not too far from the Reef, which was to be included in the project. Therefore Lynville was surveyed. As the small non-industrial town, Greytown near Durban was chosen. This latter town was close to the University of Natal, and therefore would not involve great travelling costs. Among the towns of Natal it was notable for not having a very large Indian population (which might have introduced special features which would make a study of Bantu housing of limited significance). Approximately 50 Bantu households were selected from the municipal township of Lynville in Witbank; while in Greytown 50 houses from the municipal township, and 10 wattle-and-daub huts from the group of shacks were chosen.

The overall sample size thus amounts to about 1110 cases. This represented the largest sample that could be afforded by the research budget. Further details, including reasons for the sample size, are provided in Appendix 'A'.

Taken together, the findings will give some indication of the position in regard to the housing needs and requirements of the three major urban areas in the country, and the extent to which new dwelling designs are now required. In addition, very preliminary indications are given of whether or not important differences in housing needs and problems occur in the smaller towns in the Republic, in contrast to the cities. An indication will be given of whether special detailed research into the smaller towns is likely to be required. All the findings refer

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1) Previous studies of Bantu housing needs in small towns have concerned problems such as overcrowding and rent-paying ability. Housing preferences and living habits have not been studied, as far as we are aware. See for instance: Irving (1958): op. cit.

to township populations of households, and do not deal with the housing problems of single persons, who normally are expected to be housed in hostels.

It must be noted that the research design deliberately excluded even a preliminary investigation of the housing problems and needs of Border industrial areas. This was because of the limited research budget available. Border industrial areas are increasing in size and importance, and it cannot be assumed that the housing needs of the people in such areas are sufficiently similar to those of the cities for the same dwelling designs and cost levels of construction, to be appropriate. It is important that special research be undertaken at some stage in the foreseeable future, as townships serving such industrial areas are growing in size and number.

CHAPTER II

A DESCRIPTION OF THE BANTU POPULATIONS STUDIED

2.1 The Nature of our Knowledge of the Bantu Populations:

Our knowledge of the three cities, the three townships, and one small town studied, is derived from the sample survey. Throughout this report it must be remembered that sample results are always *estimates* of the true position in the populations being analysed. As estimates they are subject to a margin of error. Appendix 'A' discusses this point. The sample results therefore can be regarded as mirroring, albeit imperfectly, the cities and townships with which we are concerned. Because we are dealing with samples, and because the samples for the individual towns are fairly small, we must not pay too great attention to minor differences between the results for various towns. Such differences could well be the result of chance sampling-variation and nothing more. Rather, the broad patterns should be examined, and individual towns compared on this basis rather than on detailed specific points. It must be stressed that our results concern not the total Bantu population of the towns studied, but only the township populations consisting of households, In this sense we can talk about the Bantu families living in the towns, and where applicable about such relatives and additional lodgers as may stay with the families themselves. Single persons living outside of family dwellings are not our concern, and no picture of such adults can be provided by this report.

2.2 Estimated Population in the Towns Studied:

It is estimated that at the time of the survey in 1966 there were in Johannesburg (Soweto) about 386,000 Bantu of all ages living in family dwellings. In Durban the figure was about 172,000, and in Pretoria about 164,000 Bantu. The three smaller townships are estimated to have had the following number living in family dwellings: Daveyton 96,000; Kwa Thema 58,000; and Lynville almost 13,000. Finally the small town of Greytown had an estimated 8,000 Bantu living both in the official municipal township and in the wattle-and-daub huts adjoining. Greytown is 48 times smaller than Johannesburg in terms of the Bantu population living in family dwellings.

2.3 Sex Ratios:

The balance of the sexes in any community is measured by the sex ratio. This represents the number of males to every one female. Typically in 'normal' urban populations throughout the world we expect to find a sex ratio of under 1.00. That is to say, in urban conditions there is usually an excess of women over men. This pattern is found in each of the towns studied. In Johannesburg the sex ratio was 0.86, while in Durban it was 0.91, and in Pretoria 0.86. Allowing for the influence of chance sampling variations, this suggests that the balance of sexes in these three cities is very much the same, with possibly somewhere about nine men to every 10 women in the dwellings in townships. Turning to the smaller areas, the sex ratio for Daveyton was 0.94, for Kwa Thema 0.91, for Greytown 0.92, and for Lynville 0.74. Apart from Lynville, the other areas show a balance of males to females which is similar to that of the big cities. The low sex ratio for the (new) Lynville township in Witbank is surprising, and may point to the presence of problems in the area. More is said about this below.

2.4 Age-Sex Distribution:

In describing any community, it is important to give a picture of the age-sex distribution, as this indicates the youthfulness or age of the population concerned, and gives an important picture of the type of population for which the architect and town planner has to design. Appendix 'C', in Tables C.1 to C.7 gives figures for the estimated age-sex distribution in the seven areas studied. These figures are portrayed graphically in the same appendix, Figures C.1 to C.7.

Examining the age-sex composition for the various areas, a common pattern emerges. In terms of Sundbärg's classification of population (ranging from regressive through stationary, to progressive populations), all of the populations studied can be classified as progressive[1]. (Table C.8 in the appendix provides details). Progressive populations have a high proportion of children under the age of 15 years, and a high rate of growth.

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1) Sundbärg, A.G. (1900): 'Sur la répartition de la population par age et sur les toux de mortalité:' *Bulletin de l'Internationale de Statistique* (Norway): 12, 89-94.

In terms of the theoretical model built up by Sundbårg, 40 per cent of a progressive population consists of persons under the age of 15 years, 50 per cent between the ages of 15 to 49 years, and only 10 per cent aged 50 years and over. It is notable that sample populations conform very closely to his model, ranging from Daveyton with 47 per cent under the age of 15 to Lynville with 41 per cent. Generally one could describe the populations as being younger and therefore more rapidly growing than the theoretical model of a progressive population.

The fact that the populations are young is emphasised by the estimate that one-quarter of the population of Johannesburg is aged 8.85 years or less. Other figures are Durban 7.75 years, Pretoria 8.85 years, Daveyton 7.10 years, Kwa Thema 9.60 years, Lynville 8.45 years, and Greytown 7.40 years as the age below which a quarter of the population falls. The median ages of the populations are young. (The median age is that age below which half the population falls, and above which the other half lies). In Johannesburg half the population are estimated to be under the age of 17.95 years; in Durban 17.75 years; in Pretoria 18.50 years; Daveyton 16.55 years; Kwa Thema 18.50 years; Lynville 20.40 years; and Greytown 15.20 years. Table C.9 provides further details, in Appendix 'C'.

The age-sex pyramids for individual towns should be interpreted with caution, as chance fluctuations can affect the position. Furthermore, age reporting amongst Bantu is not as accurate as it is amongst Whites, and even amongst Whites inaccuracies in reported ages are notorious. Johannesburg, Durban and Pretoria, as the three cities, all have a fairly regular pattern, and follow the same general distribution. In the case of Johannesburg and Pretoria, either we are dealing with populations which tend to send more young children out of the city to grow up in the rural areas than is the case in Durban, or we are seeing the start of a dropping birthrate. The bulge in the 5 - 14 year age group indicates this. In the absence of further information it is not possible to say which of the two interpretations is the correct one, but the sending of children to the Bantu homelands is a practice that used to occur and is probably still continuing.

Daveyton shows some irregularity but we must remember that the sample is smaller than for the big cities and therefore we are more likely to get irregularities due to sampling fluctuations. Nonetheless, bulges in Figure C.4 suggest that Benoni has been attracting male workers in the 30 to 39 year age group, and female workers in the 25 to 34 year-old group. Kwa Thema by contrast, shows less departure from regularity, but it is interesting to note that again we are either dealing with a population which is starting to show a declining birthrate, or where a significant proportion of younger children are being sent to the Homelands to grow up. (See Figure C.5).

Lynville (the new and main Bantu township in Witbank) shows some rather interesting peculiarities, which suggest that special forces might be affecting the smaller towns. First of all there is a marked preponderance of women, and this could be due either to an excess of women being attracted to the town, or men being attracted to the larger areas. However, there is a notable bulge on the men's side in the middle 20's to 30's age group, suggesting that men are attracted to the town, possibly to work in some of the factories there, but if so, this does not compensate for the excess of women. What is surprising is that the excess of females apparently occurs even in the young age groups. If this is not a sampling error, but a reflection of a real pattern in a town, then it looks as though there is both a greater tendency to send young male children away from the town to grow up in the Homelands, keeping the girls at home with the mother, and also perhaps a higher infant death rate amongst males. (It is known that typically the death rate amongst male infants is higher than females, particularly so when the environment is not very favourable). However, further speculation is not fruitful in the absence of additional information.

Finally, Greytown shows a pattern suggesting that from the age of 20 onwards, workers are attracted to work elsewhere - probably in larger towns. There is a marked drop once the working age group is reached, both in the case of women as well as men. This supports the idea that a pattern which is often observed in many parts of the world is occurring in some small towns in South Africa - that these towns are forming population reservoirs for our large urban areas, and that the groups from working age onwards are skimmed off to the cities[1]. The gap in the 0 to 4 age group is similar to that found in the big cities, and can either be an indication of a commencing decline in the birth rate and/or a continuation of the tendency to send young children to relatives in the Bantu Homelands.

The marital status of the population in the areas studied, is estimated in Table C.10, appendix 'C'. The table shows the distribution of marital status at all ages. It is notable that there are no major differences between the various towns and townships studied, and generally speaking the differences could be accounted for by chance sampling fluctuations from a common pattern. Essentially somewhere about a quarter to three-tenths

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1) The same phenomenon has been found amongst White populations in small towns in South Africa. See for instance, Watts, H.L. (1966): *South African Town: Some Community Patterns and Processes in the White Population of King William's Town:* Institute of Social and Economic Research, Rhodes University, Grahamstown: Occasional Paper No. 8, p. 21.

of the population are married or living together. As we know from previous studies, divorce is rare amongst the Bantu population, largely because of the cost factor. The widow or widowered population accounts for under five per cent (ranging from two to about four-and-a-half per cent in the various towns), while the unmarried mother without a 'husband' in any form is a small but significant element in the situation. Between roughly one to three per cent of the persons are in this category. Finally, the never married group is the largest, accounting for nearly two-thirds of the population. This stresses the very young age of the population we are dealing with.

2.5 Household Size:

A young population and a progressive population in each of the towns and townships studied suggests that family size and household size will be large. Our estimates support this. It is estimated that the average size of Bantu households in Johannesburg is 6.2 persons. For Durban it is estimated to be 5.9 persons, Pretoria 6.5, Daveyton 6.3, Kwa Thema 6.4, Lynville 6.4, and Greytown 6.5 persons. A household is a person or group of persons sharing a common housekeeping budget - i.e. keeping house together. In practice this usually means that they eat together at a common table. (Single-person households were excluded from these averages as they fall outside the scope of the study. A single-person household, for example, would be a lodger staying with a family, where the lodger provides his own food and in that sense keeps house for himself). We can therefore expect the average household size to be between about six to six-and-a-half persons. Full details of household size are given in Table C.11 in the appendix. This information is vital for designers when planning dwelling size - this point will be discussed later.

2.6 Family Size and Type:

A household may consist of a family only; or it could consist of a group of persons (related or otherwise) who are not a family; or finally it could consist of a family plus additional persons such as an elderly father or mother-in-law, or additional relatives or unrelated persons. A family consists at least of a man and a woman living together. This would be an *incomplete family*. *A complete family* consists of a man and a woman (or women, as occasionally we found polygynous families), and their dependent child(ren). A *broken family* consists of either the man or the wife, with the other partner missing, and dependent child(ren). Taking all types of families together, the average family size was 4.7 persons in Johannesburg, 4.9 in Durban and Pretoria. In Daveyton it was 4.7, in Kwa Thema 4.8 persons.

In Lynville and Greytown the figure was slightly higher at 5.1 and 5.4 persons per family respectively. The averages for family size are lower than those for household, as some of the households have additional non-family (but usually related) persons, or smaller additional families living with them. Table C.12 gives details of family size.

It is possible to classify families in a dwelling into *main families and additional families.* Main families are those which contain the person officially responsible for paying the rent for the dwelling, and who by definition is also the head of the main household in the dwelling. Additional families are any families in a dwelling in addition to the main family. Additional families tended to be smaller. Whereas in Johannesburg for instance main families averaged 5.1 persons per family, additional families had only 3.3 persons, or almost two persons less. Comparative figures for the other towns were Durban 5.4 as against 3.1, Pretoria 5.4 as against 3.2, Daveyton 5.0 as against 3.4, Kwa Thema 5.4 as against 2.4, Lynville 5.6 as against 3.2, and Greytown 5.5 as against 4.9 persons. Notwithstanding the sampling errors which must effect our estimates, these averages are surprisingly consistent, and show that while the main family in a dwelling tends to be about five-and-a-half persons, in the additional families usually there are only about three or so persons. This is understandable in view of the fact that in all towns the majority of additional families were broken families - very often a daughter with her illegitimate child(ren) living with her parents who had their own family. However, by no means an insignificant number of additional families were other than broken, as Table C.13, appendix 'C' shows. Depending on the town concerned, somewhere between one-in-ten to one-in-three of the additional families were complete, consisting of a man, woman and dependent child(ren). This points to a possible housing shortage in all the towns. This point will be taken up in Chapter III.

In appendix 'C', Table C.14 summarises in tabular form the average sizes of households and families, given above.

2.7 Type of Household:

Many social scientists have pointed to the great importance of kin in the life of the Bantu peoples. A study of the household composition suggests that even in the largest cities kin is still important, with over one-third of the households including some relatives in addition to the family. Table C.15 may be consulted for details. The relatives tend very largely to be on the head's (man's) side rather than his wife's side of the family.

2.8 Level of Education:

The educational level of those who have ceased their schooling or other type of education, is shown in Table C.16. Except for Durban and Greytown where very roughly one-in-six of those who were no longer children and were not furthering their education, had never been to school or passed any standard, the figure without schooling was about one-in-four persons. This shows that in the populations concerned, there is a high level of illiteracy present. Although the position is undoubtedly improving, and while the educational levels tend to cluster rather heavily around the upper standards of primary school (standards four to six), there is a smaller but noteworthy proportion of individuals who have had high school, and in even fewer cases post-high school or its equivalent, education.

The average educational level (mean education) obtained by those who had ceased education, was standard three in the case of of all towns, except Durban and Greytown which had a mean of standard four. These averages included those who had never obtained any schooling. The average level of education for those who had passed at least a sub-standard at school was in all areas studied, standard five. This average level of education is low, indicating that the average Bantu adult has a primary school education and nothing better. This is likely to be reflected by a low income - Chapter IV will provide details on this point.

2.9 Occupation:

Occupation as an indication of socio-economic status and earning capacity is important for the purposes of this study. Furthermore, if experience in the Western world is anything to go by, then we would expect that amongst the urban Bantu occupation would also be a moulder of housing tastes and preferences, and of social aspirations. Table C.17 in appendix 'C' gives estimates of the occupational distribution of persons aged 16 years and older in the areas sampled. As we would expect from census data and other studies, the higher grades of white collar work (namely independent commercial and managerial workers, and professional and high administrative workers) constitute only a very small proportion of the adult population. However, there is a not insignificant subordinate white collar group consisting of clerks, shop assistants, lower grades of independent commercial workers, clergymen with only a primary school education, and others of a low semi-professional rank. In the various towns and cities the percentage ranges from about 7 to 8 per cent through to maximum of 13 per cent. On average about one-in-twelve of the workers would appear to be in this category. Manual workers constitute the preponderance of workers. Skilled

manual work is rare. More important is supervisory manual work or manual work which has some element of responsibility, but this only accounts for somewhere around about four to six per cent of the workers. Semi-skilled work is important, but even in Johannesburg (where the position is best) only one-in-six of the adults work in this type of skilled level. Unskilled labour, including domestic servants, still constitutes the greatest proportion of workers in all of the towns. Between a quarter and to over a third of the adult populations are in this category. As far as traditional skills such as herbalism, divining, and such like are concerned, we are certain that these were under reported. Nonetheless, it is noteworthy that a proportion of our informants gave their sole occupation as this type of activity. Other categories of persons aged 16 years and over include the housewife who is not engaged in any other activity, and disabled and pensioned and retired persons and students. There is nothing particularly noteworthy about any of these categories in the towns studied. By contrast, however, there is in each of the towns a disturbing proportion of persons aged 16 years and older who were unemployed but seeking work, at the time of the survey. The proportions range from about one-in-ten in the smaller towns to one-in-six in Durban which was worst off. In the other two cities the proportion is roughly of the order of about one-in-eight of persons aged 16 years and older seeking work. The reasons for being unemployed are unknown, so that we cannot say whether this is due to mainly youngsters from school seeking work, or older people out of work, or whether it is a random cross section of the population that are unemployed, or whether it is a chronic group of misfits. Whatever the reasons are, the figures show that a problem exists. It must be remembered that the survey was done in 1966 to 1967 which was a time of economic expansion after the slump of the earlier 1960's, and before the credit squeeze. The position is one which deserves watching.

2.10 The Journey to Work - Type of Transport Used:

The journey to work is an aspect of the daily life which is of interest to the planner, as it relates to the transport needs of the workers. Table C.18, appendix 'C', provides details of how the working population in the seven areas studied travelled to work. A summary of the details is provided in Table C.19, which groups the forms of transport into private transport only, public transport, a combination of public and private transport, or walking only. This summary also includes the small proportion who are taken to work by their employer's vehicle, as well as those who live so close to work or actually live at work that they cannot be really said to undertake a journey. As we would expect, in the major urban areas studied, public transport is the most common form of transport. In Johannesburg and Durban about

four-fifths travel to work by public transport, while in Pretoria seven-tenths go to work by the same means. In Daveyton and Kwa Thema about three-quarters used public transport. The nature of public transport varies. On the Reef it is essentially the train that predominates, whereas in Durban where the nature of the terrain is difficult the bus is the major means of public transport. It is interesting to note that a not infrequent number of workers use a combination of a taxi or bus and a train as well - this is because their homes are fairly far from the nearest railway station.

By contrast with the large urban areas, private 'transport' (including walking), predominates in Lynville, and also especially in Greytown where almost two-thirds of the workers walk to work.

A private motor vehicle is, as yet, relatively unimportant as a means of transport to work. In not more than about four per cent of the cases in any one town, and often less than this, do the workers travel to work by motor cycle, scooter, or their own or a friend's car. No doubt the pattern will change increasingly over the years as the standard of living amongst the Bantu rises in response to improvement in wage scales.

2.11 The Journey to Work - Cost Involved:

The average cost of transport for those who have to use transport involving a direct cost (that is, excluding means of transport such as cycling or walking), varies with the town. This is not only a function of varying cost structures of transport, but also varying distances. In Johannesburg the average cost is R2-55 per month, whereas in Durban it is the highest of the towns at R3-80. This is no doubt due to the fact that most of the workers have to travel by bus, and bus service costs tend to be higher than those for operating a train service, given a large volume of workers in both cases. Pretoria has a mean cost of R2-91, whereas at Daveyton it is slightly more at R3-04. Kwa Thema has a mean of R2-19, as against R2-54 for Lynville. Greytown, the small non-industrial town studied, has a figure of R1-50. If we work out the average cost of transport to work for all workers, including those who have no direct costs involved, then the figures drop considerably, mainly in Lynville and Greytown where a large proportion of the workers walk or cycle to work. Details of cost of transport are provided in Table C.20, appendix 'C'.

2.12 Time Taken by Journey to Work:

The length of time of the journey to work varies with the size of the community. It is worst in Johannesburg, whereas at the other end of the scale, Greytown which is a small town has the shortest average length of time taken for the journey to work. The average length of the journey to work for Johannesburg is one hour 26 minutes. In Durban the figure is noticeably lower at one hour, which also is the same mean as that for Pretoria. In Daveyton and Kwa Thema the average length of time for getting to work is just under the hour at 52 minutes, and 50 minutes respectively. Lynville has an average of 47 minutes journey to work for the workers, whereas in Greytown (where most people walk) it is just under half-an-hour, at 29 minutes.

If we take as a norm the standard which has sometimes been mentioned by planners as desirable - namely that workers should not have to travel more than an hour at the outside in their journey to work - then an estimated four-fifths of the workers in Soweto travel an hour or more. Clearly Johannesburg has the greatest distances involved, and in this sense the worker in the large city is the most penalised in terms of losing hours every day doing nothing other than travelling. Two-fifths of the workers both in Durban and Pretoria travel for an hour or more a day, whereas the figure is about a third of the workers in Daveyton, Kwa Thema and also Lynville. In Greytown only about 14 per cent of the workers spend an hour or more a day travelling to work. Fuller details are provided in Table C.21 in the appendix.

2.13 Time Worker Leaves Home, and Returns:

The time that workers leave in the morning and get back at night is a function both of the length of their working hours, and of their travelling time. As far as the worker is concerned, his working day is really the time that he leaves in the morning until the time that he returns home at night. Tables C.22 and C.23 in appendix 'C' provide details of the time at which workers leave in the morning, and return home at night from work. While in all towns there are some workers who leave as early as before 4 a.m. in the morning, the most frequent time of leaving for work is (except in the small towns of Witbank and Greytown), between 6 and 6.30 a.m. Both in the case of Lynville and Greytown the most frequently mentioned hour of leaving for work was between 7 and 7.30 a.m., and this reflects the great advantage of living in a small town, as far as the time at which one must leave for the journey to work is concerned. The worker is able to spend more time at home and leave later than in the big cities where he has to travel further.

The effect of city life is shown also in the later hour at which the worker returns home. In Table C.23 we see that in

Johannesburg, Durban and Pretoria the most frequently mentioned hour for returning home is 6 to 6.30 p.m. In Daveyton this hour is also frequently mentioned, but slightly more workers mention 5 to 5.30 p.m. as the time of returning home. This earlier time of 5 to 5.30 is mentioned most frequently as the hour of returning home by workers in Lynville and in Greytown.

2.14 Number of Hours Worker is Away From Home at Work:

The most important measure of the length of the working day is the number of hours that the individual is away from home, measured from the time he or she leaves in the morning until he or she returns home at night. Table C.24 provides details. Again we see clearly the advantage the worker in the smaller town has over the worker in the larger town. The worker in Greytown for example on the average has about an hour and a half more time at home with his family than the worker in Johannesburg. The mean length of the working day away from home in Johannesburg is 12 hours and 2 minutes. In Durban the figure is virtually the same at 12 hours and 8 minutes. Pretoria is slightly better off with the figure of 11 hours and 40 minutes, which is about the same as Daveyton with 11 hours and 46 minutes. Kwa Thema and Lynville are more of the same order, where the working day is on the average 11 hours and 9 minutes in Kwa Thema, and 10 hours and 56 minutes in Witbank. In Greytown it is only 10 hours 29 minutes. Examining Table C.24, we note that it is only in the large cities that we find workers who have a very long working day. For example, in Lynville, (Witbank) and Greytown we find no one in the sample who had a working day of 16 hours or more. By contrast in Johannesburg almost one per cent of the sample, in Durban almost twoper cent, and in Pretoria one per cent of the sample had a working day as long, or longer than, 16 hours.

The mean length of working day for the worker in the large cities and the Reef raises serious questions as to whether in planning any city it is desirable or indeed acceptable to have workers who spend as long as 12 hours or more away from home. When conditions reach this state, either extra-rapid transport is called for, or else the planner should seriously consider the question of decentralisation of work areas, so that workers have an opportunity to live closer to their place of work than they do under the present situation. Not only in terms of the monetary cost which long journeys to work impose on the individual, but also in terms of physical and mental wear and tear, and probably consequent bad effects on productivity, the long working day imposes a burden which should at all costs be avoided. The planner has an important role to play in this situation.

2.15 Rural-Urban Background of Families:

The rural-urban background of the main family in a dwelling was studied. Those families which had a rural background (either in a Bantu Homeland or Mission Reserve or another type of rural area), were very much in the minority except in the smaller towns. It is estimated that in Johannesburg three-and-a-half per cent of the families had a rural background. Durban and Pretoria which have Bantu Homelands nearer them than Johannesburg, had a higher proportion. About one-in-ten of the Durban families had a rural background, while the figure in Pretoria was higher at about one-in-five of the families. In Daveyton an estimated six per cent of the families had a rural background, as against nine per cent for Kwa Thema. The small town of Witbank, represented by Lynville, had a figure nearer that of Pretoria at 16 per cent. (Why it is that Pretoria should have a high proportion with a rural background is not known, unless it is that it is only in more recent times that Pretoria has had significant economic development which has drawn workers in from rural areas to a more marked extent than towns such as Durban and Johannesburg which have been developing steadily for a longer period of time. However, this is speculation). Greytown, the small non-industrial town selected for this project, had almost three-tenths of the families having a rural background.

In all cases, rural background was measured by classifying the present place stayed in (which by definition was always urban) and the two previous places stayed in prior to the present one. Families were classed as rural if both of the two previous places lived in, (or only the one previous place where the family had not lived in two previous places), were/was rural in nature. By contrast, an urban background was defined as instances where the families studied had lived in an urban area for up to two places prior to the township they were living in at the time of the survey. An urban background could consist of living in an urban township or an urban squatter's camp, domestic servants quarters in town, or other various types of urban background.

In Johannesburg, the vast majority of the families for whom information was obtained had an urban background. An estimated 84 per cent fell into this category. In Durban and Pretoria two-thirds of the families had urban backgrounds. Daveyton and Kwa Thema had a somewhat higher proportion with an urban background, amounting to three-quarters of the families. This also applies to the township of Lynville in Witbank, and to Greytown. Table C.25 provides details.

Our conclusion from the study of type of background of the families is that in all towns studied we are dealing with a population which can now to a very considerable extent be described as urban. The housing needs and preferences of these people therefore are likely to show a clear stamp of urbanisation. Later chapters in this report show that this is in fact so.

2.16 Length of Urban Residence:

It follows from the above finding that typically the families have had a substantial period of urban residence, if we bear in mind that the average age of the population is young. Taking only the present township and the two previous places lived in, in Johannesburg the typical family had spent an average of 20.9 years living in an urban area. In Durban the figure was 14.4 years, in Pretoria 17.4 years, Daveyton 16.8 years, Kwa Thema 18.4 years, Lynville 16.2 years and Greytown 17.4 years. Remembering that families can only come into existence on the average in the late teens or early twenties of the cohabiting partners, these figures represent a substantial urban experience on the part of the families.

2.17 Concluding Remarks:

In conclusion, the brief analysis of the populations in the areas selected for study shows a large measure of common features between even the small towns at the one end of the scale, and the biggest city at the other. There are a good many common characteristics, which we can now hypothesize apply to all urban Bantu populations in South Africa. Essentially we are dealing with young populations, whose age structure is such that they are likely to grow more rapidly by natural increase in the immediate future than, for example, the White population which is far nearer a stationary pattern. Average household and family size are by White standards in the Republic large, and this too has implications for dwelling designers. Details have been provided of the educational and occupational structures of the population, showing that although there is a proportion of Bantu who have high education, and high level jobs, they are very much the exception rather than the rule. No doubt this position is changing and will change more rapidly in the years ahead. However, at the present time we are still concerned with what is essentially a lowly educated, lowly skilled population, and this will be reflected markedly in their income level, and rent-paying ability. Chapter IV discusses this point in some detail.

The majority of families have an urban background, and it is expected this will be reflected in later chapters by their living habits and housing preferences.

Finally, the analysis of the journey to work shows that the stage has been reached in the cities where either very rapid means of public transport to work, and/or the planned decentralisation of work nodes near to Bantu townships must be seriously contemplated in order to reduce the length of the working day by cutting the great deal of time which a not inconsiderable number of Bantu workers have to spend in travelling to and from work.

CHAPTER III

THE EXISTING HOUSING POSITION AND OVERCROWDING

3.1 Shortage of Family Accommodation:

It is estimated, from our sample survey, that in Johannesburg there were in 1966 77,980 Bantu families living in 60,200 dwellings. If we take as a desirable standard that each family should have a dwelling of its own, this represents a shortfall of 17,780 family dwellings in Soweto, and calls for about 30 per cent extra dwellings[1]. In Durban, we estimate that there were 31,290 families living in 24,320 dwellings. This gives a shortfall of 6,970 dwellings, or an estimate of 29 per cent more dwellings required than were available in 1966. In Pretoria, we estimate there were in 1966 29,480 families living in the townships studied, in 20,130 family dwellings. A shortfall here of 9,350 dwellings represents a requirement of 46 per cent additional houses. Daveyton seems about as badly off as Pretoria. An estimated 18,760 families lived in 13,160 family dwellings, giving a shortfall of 5,600 houses, or a 43 per cent shortfall. Kwa Thema is the best-off of the areas studied, apart from the small town of Greytown. An estimated 9,840 families lived in 7,760 dwellings, giving a shortfall of 2,080 houses. This represents a need for 27 per cent more dwellings. Lynville yielded an estimate of 1,890 families living in an estimated 1,410 dwellings in Lynville. The shortfall here is 480 dwellings, or 34 per cent. Finally, in Greytown, we estimated there were 690 families living in 590 dwellings including wattle-and-daub huts. The shortfall (if for argument's sake we include the wattle-and-daub huts as satisfactory dwellings) is 100 houses, or 17 per cent. In all these estimates the estimated number of families has been related to the estimated number of dwellings yielded by the sample, and not the official count of dwellings. This has been done as the only effective way to estimate shortfall is from the sample, because we must relate the number of families back to the number of dwellings from which they were drawn.

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1) Block, A. (1946): *Estimating Housing Needs:* The Architectural Press, London. Block discusses the point that the number of families can be taken as a measure of the number of houses required in an area, on the basis of the ideal of one family per dwelling.

The above figures are disturbing. They show a great demand for additional houses, especially in the large cities. During the fieldwork, we became aware of anecdotal stories pointing to the shortage of Bantu houses in the towns. These figures show that behind these stories there is a substantial truth. A major challenge is presented to the authorities of the towns concerned by the shortfall in housing.

In commenting on the above findings, it should be pointed out that the families studied included broken families, and amongst these were included unmarried mothers with their children. In many cases the broken families form part of a larger household, so that in fact two or more families shared a dwelling. A broken family can find temporary support and comfort by living with another family. Thus, for example, the unmarried mother lives with her children in the home of her parents. But we have not excluded such families from the calculations, on the grounds that in the normal course of events within a few years such a family is in a position to run its own home. The unmarried mother does not live alone indefinitely, but acquires a mate - and then such a family can well use a separate dwelling. Likewise the family broken by desertion or death very often either reconstitutes itself by a further marriage, or due to the fact that the children are growing up and need more bedrooms, such a family too after a period of time requires a dwelling of its own. Thus we have counted all the families of whatever type, in the above calculations, on the grounds that they do represent a realistic assessment of the housing shortfall in the townships at the present time.

It seems reasonable to assume that the seven areas studied provide some indication of the housing position amongst the Bantu living in towns throughout South Africa. This being so, there are good grounds for believing that there is a serious need for continued extensive housing development in South African towns, to meet the needs of the Bantu family. While very substantial achievements have been made in housing the post-war slum populations which developed in squatter camps around our cities and towns, the housing problem has not yet been completely solved. No doubt it will not be completely possible to avoid a housing shortage as long as we are dealing with an expanding economy and a young Bantu population (young in terms of average age), but housing shortages must be reduced below the level indicated by the research we have undertaken.

Given the housing shortage, and all else being equal, we would expect to find overcrowding in a proportion of the dwellings in the Bantu townships. A detailed study was made of the various types of overcrowding found, and the results are presented below.

3.2 Extent of Overcrowding in Terms of Inadequate Sex-Separation for Sleeping:

One of the criteria which can be used for studying overcrowding is the Union Slums Act, which lays down the minimum standards for the separation of sexes for sleeping purposes[1]. The following standard based on the Act was used for the survey:

> No persons aged 10 years or older, other than husband and wife (or man and woman living together) should sleep in the same bedroom with a member of the opposite sex. Children under the age of 5 may share the same room as their parents, or another couple living together.
>
> For this standard, sex only is to be taken into account. Persons per room, or households sharing the same room, do not affect the issue.

In terms of this standard, three-tenths of the dwellings in Soweto were overcrowded, and almost a quarter of those in Durban. The degree of overcrowding in Pretoria was the same as in Johannesburg, whilst in Daveyton an estimated 17 per cent of the dwellings were overcrowded in terms of inadequate sex-separation for sleeping. About one-fifth of those in Kwa Thema were overcrowded, whereas one-in-six of those at Lynville were overcrowded. Greytown had three-tenths of the dwellings overcrowded.

An analysis of the overcrowding shows that in the very largest proportion of cases only one bedroom in a dwelling was overcrowded.

3.3 Overcrowding in Terms of Sleeping Area:

In terms of the minimum standards of housing accommodation for non-White dwellings, a minimum of 39.33 square feet per person is allowed for sleeping purposes[2]. This is virtually the same as the Union Slums Act, which allows 40 sq. ft. for adults. A bedroom is, for the purposes of this research, regarded as overcrowded if there was less than 39.33 sq. ft. per person.

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1) The Union of South Africa (1934): *Union Slums Act, No. 53 of 1934:* (As amended by Act No. 24 of 1937): Government Printer, Pretoria.

2) National Housing Office (1951): op. cit., p. 3.

In contrast to the minimum standards of accommodation, babies under the age of one year were also counted as one person. This was on the grounds that within a year at the most a baby would be counted as a person, and therefore it is more logical to count the child for overcrowding purposes, whatever the age.

The results show a considerable degree of overcrowding. Except in Lynville, either three-fifths or just under three-fifths of the dwellings in each of the areas studied were overcrowded in terms of this standard. In Lynville just under three-quarters of the dwellings were overcrowded.

As Table C.26 in appendix 'C' shows, a proportion of the dwellings could be described as extremely overcrowded on the grounds that there was less than two-thirds of the minimum of 39.33 sq. ft. per person for sleeping purposes in a bedroom. From between a quarter to up to two-fifths of the dwellings in the various areas studied had one or more bedrooms extremely overcrowded.

These figures are disturbingly high, and show that given the large family and household size at present amongst the urban Bantu population, an important proportion of the dwellings - in fact one could go so far as to say in some instances the majority of the dwellings - are too small for the families, using as criteria the minimum standards of accommodation. However, in studying this point further, it must be realised that in a not insignificant number of cases the family wishes to have the living room purely as a display-piece for the household, and does not use it for sleeping purposes. Instead they prefer to cram everyone into a bedroom. In Johannesburg half of the households did not let anyone sleep in the living room, while in Durban the proportion is 44 per cent, and in Pretoria just over half. In Daveyton 56 per cent, as against 73 per cent in Kwa Thema and 71 per cent in Lynville did not have anyone sleeping in the living room. Finally, in Greytown 41 per cent of the families did not have anyone sleeping in the living room. Despite this, there was no definite relationship (correlation) between a dwelling being overcrowded in terms of either sex separation or sleeping area, and having someone sleeping in the living room or not. Thus we can conclude that while in some instances there is no doubt that overcrowding is either caused or aggravated by the desire of the household to keep the living room purely for living purposes, and as a room where the best furniture is shown, and not to use it for sleeping, this pattern of behaviour is not consistently a factor responsible for overcrowding. All we can say is that in some cases it is responsible for overcrowding, or is an aggravating factor in the position, rather than a consistent cause of overcrowding.

3.4 Dwellings Not Overcrowded in Terms of Either Sex-Separation or Inadequate Sleeping Area:

Combining the two measures of overcrowding - namely the overcrowding in terms of inadequate sex-separation for sleeping, and overcrowding in terms of inadequate space per person in a bedroom, we find that a minority of the dwellings in each town are *not* overcrowded. Except in Lynville where 22 per cent of the dwellings were not overcrowded at all, in all the other towns the proportion fluctuates around one-third not being overcrowded. Except in Lynville which is worse than any of the other areas studied, two-thirds of the households are overcrowded in terms of either inadequate sex-separation and/or inadequate sleeping space in bedrooms. This is a seriously high degree of overcrowding. Part of this is due to the shortage of dwellings, and part to the problem that houses are often too small for the households living in them.

It should be noted that there is not a large degree of correlation between the two measures of overcrowding, and therefore we can conclude that they tend to measure two different and not necessarily linked aspects of overcrowding.

3.5 Percentage of Dwellings With Insufficient Number of Rooms in Terms of the Minimum Standards of Accommodation:

The minimum standards of accommodation for non-Whites lay down the total number of rooms a household should have in terms of the number of persons in that household[1]. The dwellings where there is an insufficient number of rooms can be regarded as overcrowded. In Johannesburg a third of the dwellings had an insufficient number of rooms for the households living in them, whilst in Durban the position was worse at a half of the dwellings. In Pretoria and Daveyton about two-fifths of the dwellings, while in Kwa Thema and Greytown just under one-quarter, and in Lynville just over a quarter of the dwellings, were too small in that they had fewer rooms than the household should have had in terms of the Minimum Standards.

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1) Minimum Standards of Housing Accommodation for non-Europeans (1951): ibid.

3.6 Need for the Construction of Houses of Varied Sizes:

The above figures show that a wider range of dwelling size should be planned for and constructed than is the case at present. In the latter half of the 1960's, construction of new family-type dwellings in townships throughout South Africa has been standardised on the N.E. 51/6 type of house to the virtual exclusion of all other types of houses. This procedure appears not to meet the needs of an important portion of the households. A more flexible type of planning, producing a range of dwellings of different sizes is called for.

If dwellings of different sizes are constructed, then it is up to the local authority administering the houses to see that dwellings and households of various sizes are matched so that one does not have large dwellings occupied by small households and vice versa.

Table C.27 gives details of the number of rooms per house in the various areas studied, counting bedrooms, living rooms and kitchen all as a room. The stereotyping of dwellings at four rooms, of which one is a kitchen, is clearly seen from the table. Bearing in mind that many Bantu households are larger than the average household size of five to six persons (see Table C.11), this stereotyping is inadequate.

From a study of overcrowding, we now turn to a description of other aspects of the existing housing position in the various towns studied.

3.7 Some Details about the Existing Houses:

3.7.1 Types of plans used:

Our survey has shown that a wide variety of houses have been built in the different housing schemes in the seven towns studied. Whereas at the present time the houses built are essentially of the N.E.51/6 type, the older houses show a considerable variation in design. It is clear that earlier on different local authorities experimented with their own types of design. An indication of the variation can be given by stating that a total of almost four dozen different types of plans for mass housing were found in the seven towns studied. These plans have been supplied to the architectural division of the National Building Research Institute, so that there is no necessity for discussing them in detail here. Furthermore, a close inspection of the plans is essentially the task of an architect, and beyond the scope of this study. The total picture presented by these various designs in terms of the number of rooms per house has already been given

in Table C.27, referred to. The number of bedrooms available in existing houses is shown in Table C.28. This also shows where a room has been planned for living/sleeping functions as in plan N.E.51/6 or N.E.51/9. This table should be compared with Table C.29 which shows the distribution of the number of bedrooms *required* by the existing households, in terms of household size and the minimum standards of accommodation. The need for planning to construct a range of houses of different sizes is clearly evident.

3.7.2 Person/Authority for whom the dwelling was built:

It is estimated from the sample that in Johannesburg only about seven per cent of the dwellings were constructed for the occupier concerned. All the other dwellings were township houses built for the authorities controlling the township. In Durban, where the socio-economic level of the Bantu households appears lower than in Johannesburg, only an estimated one per cent of the dwellings in the townships were built for the occupier. In Pretoria the figure of dwellings built for the occupier is estimated at about the same level (one-and-a-half per cent), and in Daveyton one per cent. Kwa Thema, as far as the sample is concerned, appears to have a percentage of houses built for the occupier which approximates that of Johannesburg at seven per cent. This township has a high socio-economic level, as Chapter IV shows, and this is the reason for the higher proportion of houses which have not been built for the township authorities. In Lynville, which is the municipal Bantu township for Witbank, none of the houses were built for the occupier. (It is only in the old township of Witbank, which was not covered by this survey, that there are dwellings constructed for the present or previous occupiers.) In Greytown, where we had a proportion of the dwellings consisting of wattle-and-daub huts, about seven per cent were self-built by the occupier, and apparently virtually none built for the occupier. This reflects the greater amount of poverty in Greytown (see Chapter IV).

Details of home ownership are provided in Chapter IV.

3.7.3 Supply of water to the dwellings:

There were considerable variations between the different areas in regard to the supply of water to the dwelling. The position varied from no water on the plot at all (in which case there was usually a stand pipe in the street to every so many houses), to water being available on the stand but not in the house, or water in the house as well as outside. Within the house, variations ranged from water being available in the kitchen and the bathroom to water being only available for the

shower and the W.C., or in the kitchen, or the shower only. Table C.30 in appendix 'C' provides details of the variations. In this regard the householders in certain towns are clearly much better off than their counterparts in other areas. From the point of view of convenience of a householder, water being laid on in the kitchen and in the bathroom is undoubtedly best, but because of cost factors, previously this ideal has not been achieved in a good proportion of the dwellings.

3.7.4 Supply of electricity to the dwellings:

It is estimated that in Johannesburg one-third of the households had electricity supplied to their dwellings. Considerably less of the population in Durban - only six per cent of the households - had electricity available. In Pretoria, the position is that most of the households either had electricity, or were being connected at the time of the survey. In only 20 per cent of the dwellings was there no electricity and no immediate prospect of electricity. As far as Daveyton is concerned, all the houses either already had electricity at the time of the survey, or were in the process of being connected to a supply. Kwa Thema was in the opposite position, where only one per cent of the dwellings had electricity, and the position in Lynville is very similar where only two per cent of the dwellings were supplied with electricity. Finally, in Greytown, none of the dwellings had electricity available.

The supply of electricity to Bantu households seems to depend on the local authority concerned, and is a matter of policy which varies from one area to another. However, we have no doubt that sooner or later electricity will be commonplace for all Bantu households in the larger towns and cities. It will probably take longer for electricity to be supplied to households in the smaller towns, where fewer people are likely to be able to afford the higher costs of electricity in contrast to other forms of lighting and heating. (See Chapter IV for a discussion of the socio-economic level and rent-paying capacity of the small towns).

3.8 Concluding Remarks:

It is evident from the analysis undertaken in this chapter that both a shortage of housing and extensive overcrowding are serious problems affecting urban Bantu households at the present time. Earnest consideration should be given by the authorities to these twin problems. Not only further housing, but also a more varied range of dwelling sizes are required.

CHAPTER IV

THE RENT-PAYING ABILITY OF THE URBAN BANTU POPULATION

4.1 The Importance of Measuring the Rent-Paying Ability of the Population:

It is futile to plan the most elaborate housing schemes for a population, if that population cannot afford them. If there is no subsidisation of rent, then while a population is unable to afford the cost of housing, that housing will impose an additional burden on the family. The health of the family, particularly the children, will suffer due to the consequent reduction in money available for food. This problem has been realised for a long time, and must always be borne in mind by the dwelling designer. Therefore, it is vitally important to obtain some idea of the rent-paying capacity of the urban Bantu population at the present time.

4.2 Previous Studies of Rent-Paying Ability and Poverty:

The first major study of rent-paying ability in South Africa covering more than one town, was the report entitled '*A Survey of the Rent-Paying Capacity of Urban Natives in South Africa*', published in 1960[1]. This study presents the results of fieldwork carried out in Cape Town, Durban, Port Elizabeth, Vereeniging and Germiston, between the years 1951 and 1954. The technique used for assessing rent-paying ability was the poverty datum line. Batson's adaption of the technique was used[2].

The work of Batson was based on Bowley's[3] improvement in England of the original poverty line prepared by Rowntree for York in 1899[4].

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1) Committee on Socio-Economic Surveys (1960): op. cit.

2) Committee on Socio-Economic Surveys (1960): op. cit., pp. 8-65; also Batson, E. (1941 onwards): *Series of Reports and Studies issued by the Social Survey of Cape Town*: University of Cape Town, Cape Town.

3) Bowley, E. L. & A.R. Burnett-Hurst (1915): *Livelihood and Poverty:* King and Son, London.

4) Rowntree, B.S. (1901): *Poverty: A Study of Town Life:* MacMillan, London.

4.3 A Brief Description of the Poverty Datum Line Technique:

The poverty datum line is constructed to represent the theoretical minimum expenditure necessary for a household to maintain health and decency under Western conditions, given short-run considerations only. While in the last resort any measurement of poverty is in a sense arbitrary (as poverty is always relative to some standard), this measure is the best available, as it has a justifiable and fixed objective point of reference. The poverty datum line consists of the cost of a diet laid down in terms of minimum dietary standards prepared by physiologists, plus the costs of clothing, fuel and lighting, and cleansing materials. The components other than food are assessed on the basis of the study of the budgets of very poor families which have to cut their expenditure as low as possible by purchasing the minimum amount. Batson has described in some detail the construction of the poverty datum line scales[1]. There is no need, therefore, to repeat in detail how these scales are prepared.

4.4 Preparation of Poverty Datum Line Scales for the Present Study:

In assessing the present level of rent-paying ability of the urban Bantu in the Republic, it was desirable to make the measurements comparable with the earlier housing survey carried out under the auspices of the Committee on Socio-Economic Surveys into Bantu Housing. This would allow an estimate of the extent to which urban Bantu rent-paying ability has, or has not, improved in the past 15 years or so. Because of the passage of time since the original poverty datum line was costed in 1951/52, it was no longer considered desirable to merely weight the original scales up in terms of consumer price indices. As the consumer price indices are based on an average family (White family), which does not reflect the patterns of expenditure of the very poor, cumulative errors could be involved. Therefore the poverty datum line was completely re-costed. Details of this re-costing have already been published in a Fact Paper of the Institute for Social Research[2]. Some details from this Fact Paper, including the poverty datum line

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1) Batson, E. (1945): *The Poverty Line in Salisbury:* University of Cape Town, Cape Town; also see Committee on Socio-Economic Survey (1960): op. cit., pp. 8 ff.

2) Watts, H. L. (1967): *The Poverty Datum Line in Three Cities and Four Towns in the Republic of South Africa:* Institute for Social Research, University of Natal, Durban: Fact Paper No. 1.

scales for 1966, are given in Appendix 'B'.

In the report of the Committee on Socio-Economic Surveys, the rent-paying ability of the population was estimated by subtracting from the total income of a household the cost of the primary poverty datum line items (food, clothing, fuel and lighting and cleansing materials, both for individuals and for the household as a whole), and also subtracting the cost of workers' transport to and from work. The latter item was subtracted as a necessary expenditure on the grounds that if workers do not pay for transport (where relevant), they would have no work and therefore no income, so that transport costs are a necessary expenditure even among the very poorest. The net income left represents in theory the amount which a household could pay for rent. This was called the 'available rent margin'.

In the present survey, the available rent margin was established for main households in the dwelling. A 'main household' was the household officially responsible for paying the rent of the dwelling as a whole. As has already been defined in the previous chapter, a household consisted of a person or group of persons sharing a common housekeeping budget. The reason for selecting only the main household for analysis purposes was that it would have been considerably more costly to include all households, as invariably this would have meant further callbacks to the dwelling. The housewife of the main household interviewed did not of course know the income of any additional households in her dwelling, but only knew what rent if any, the additional household(s) paid. Therefore, it would have been necessary to return to get details of incomes of the extra households. With the restricted survey budget, it was decided against this, as it had been assumed that there would not be many cases of more than one household per dwelling. The survey results showed that due to various factors, of which the main one is probably a shortage of housing, a fair proportion of dwellings contained two or more households. It is estimated from the survey results that in Johannesburg we missed about six per cent of the households which were additional to main households. In Durban our procedure missed about 20 per cent of the households, and in Pretoria about 19 per cent. Figures for the other towns were: Daveyton 13 per cent; Kwa Thema six per cent; Lynville nine per cent, and Greytown 15 per cent. If it had been realised beforehand that there would be as many households in addition to the main ones as the survey showed, then very serious consideration would have been given to drawing a smaller sample and then attempting to obtain income information for all households. The implications of omitting additional households in a dwelling are that our results for rent-paying ability probably under-estimate the amount of poverty in the towns. It is known from other sources that additional households in a dwelling tend on average to have

lower incomes than the main household. While additional households also tended to be smaller than the main households, very often their smaller size does not compensate for the lower income, and therefore they are in many instances, poorer. Thus it seems fair to point out that our estimates of poverty given later in this chapter are probably conservative, due to the omission from the picture of the additional households in dwellings.

4.5 Available Rent Margin for Bantu Households:

The results of the calculations necessary for establishing available rent margin for a household are given in Table 4.1 below.

In all the areas studied, an important portion of the households can afford no rent at all. From what has been said above, the estimates for those with negative rent margin are probably under-estimates. At the best position, in Kwa Thema, about three-tenths of the households cannot afford any rent at all, as they have a negative rent margin, whereas at the other end of the scale in Greytown about seven-tenths of the households have a negative rent margin.

Of the three cities studied, Durban with 56.7 per cent of the households having a negative rent margin is worst off. Pretoria is not as badly off with an estimated 46 per cent of the Bantu households being unable to afford any rent at all, however nominal. Johannesburg, which has long been thought to be the area with the highest wage structure, is even better off, with an estimate of just over one-third of the households (35.9 per cent) having a negative rent margin. Of the smaller towns studied, Daveyton (which is a large township serving Benoni) has a figure very similar to Johannesburg (38 per cent of the households have a negative rent margin). The estimate for Kwa Thema suggests that the socio-economic position in that township may be somewhat better than in the other towns sampled from the Witwatersrand. An estimated 29.4 per cent of the cases had a negative rent margin.

Lynville, from Witbank, and Greytown were included in the survey on the hypothesis that the smaller towns might well show a more serious picture in regard to the rent-paying capacity of the Bantu population than the larger towns. It was postulated that wages would be lower than in big towns, but that this would not be true of living costs. Little information has previously been available on the rent-paying capacity of small town populations. What evidence there has been seems to suggest that their problems in meeting rent payment were far worse than in the cities. In the Lynville township an estimated 57.4 per cent of the households had a negative

TABLE 4.1

ESTIMATED PERCENTAGE DISTRIBUTION OF AVAILABLE MONTHLY RENT MARGIN FOR BANTU HOUSEHOLDS[1] IN THREE CITIES AND FOUR TOWNS IN THE REPUBLIC OF SOUTH AFRICA, 1966/67:

Percentages are to the base of the cases for which adequate information was obtained

Available Monthly Rent Margin	Johannesburg (Soweto)	Durban	Pretoria	Daveyton (Benoni)	Kwa Thema (Springs)	Lynville (Witbank)	Greytown
Negative Monthly Rent Margin	35.9	56.7	46.0	38.0	29.4	57.4	69.0
R0.01 to R1.99	2.6	1.4	1.0	4.0	4.0	0.0	3.5
2.00 to 2.99	0.7	0.5	3.1	1.0	0.0	2.1	1.7
3.00 to 3.99	0.7	2.0	2.0	1.0	1.0	0.0	0.0
4.00 to 4.99	1.2	1.4	1.0	1.0	3.0	2.1	0.0
5.00 to 5.99	1.4	1.1	1.0	1.0	2.0	2.1	1.7
6.00 to 6.99	2.4	1.5	3.1	0.0	0.0	4.3	0.0
7.00 to 7.99	1.7	1.0	1.5	1.0	1.0	0.0	0.0
8.00 to 8.99	1.4	2.0	1.5	1.0	4.0	6.4	1.7
9.00 to 9.99	1.2	2.6	1.0	2.0	1.0	0.0	0.0
Subtotal R0.01 to R9.99	13.3	13.5	15.2	12.0	16.0	17.0	8.6
R10.00 to R14.99	5.5	7.0	6.1	7.0	6.1	4.3	3.5
15.00 to 19.99	5.5	3.9	4.6	8.0	7.1	4.3	0.0
Subtotal R10.00 to R19.99	11.0	10.9	10.7	15.0	13.2	8.6	3.5
R20.00 to R24.99	5.8	1.6	5.1	6.0	5.1	4.3	0.0
25.00 to R29.99	3.8	1.0	3.1	3.0	4.0	2.1	1.7
30.00 to R39.99	6.5	3.3	6.1	8.0	10.1	2.1	3.5
Subtotal R20.00 to R39.99	16.1	5.9	14.3	17.0	19.2	8.5	5.2
R40.00 to R49.99	8.7	3.3	4.6	6.0	3.0	2.1	1.7
50.00 to R59.99	2.9	1.8	2.6	4.0	4.0	0.0	1.7
60+	12.1	7.9	6.6	8.0	15.2	6.4	10.3
Subtotal R40.00 to R60+	23.7	13.0	13.8	18.0	22.2	8.5	13.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1) Excluding single-person households, which are eligible for hostel accommodation, and therefore are outside the scope of this study.

rent margin. This is about as bad as the position in Durban. Witbank is a small town with an important amount of industry for its size. Greytown, which was chosen as a non-industrial town in order to give a preliminary indication of the position in the small non-industrial towns of South Africa, had the worst position of the towns studied. An estimated 69 per cent or about seven-tenths of the households had a negative rent margin. Thus in theory they were unable to afford any rent whatsoever.

4.6 The Rent-Paying Capacity of Bantu in Greytown Probably Reflects the Position in Small Towns in South Africa:

It is suggested that there are grounds for reaching a tentative conclusion that Greytown with its low figure of households able to afford rent, reflects the position in small non-industrial towns in South Africa generally. The figure of about seven-tenths of the households having a negative rent margin is of the order anticipated as a result of Irving's study of Grahamstown[1]. Irving estimated that 96.7 per cent of his households were in poverty, However, his survey did not cover the full Bantu population of Grahamstown, but only a section which had been recently rehoused. This rehoused group had been a slum population. Therefore it was considered likely that his sample would show a higher level of poverty than would probably be found in the total Bantu population of Grahamstown. On this basis it was guessed that perhaps seven to eight-tenths of the Bantu in Grahamstown would be in poverty. It must be remembered that Irving's calculations of poverty included the payment of rent. Therefore the proportion of households with a negative rent margin would be slightly lower than this figure as some would be able to afford a proportion of their rent, but not the full amount. Consequently if his figures were any guide to the position in other small non-industrial towns, it could be expected that a town such as Greytown would have somewhere less than eight-tenths of the households being unable to afford any rent at all (that is, having a negative rent margin). At 69 per cent the negative rent margin of Greytown was of the order expected.

Following the above reasoning, we can tentatively conclude that the extent of poverty among Bantu households in small non-industrial towns in South Africa is something of the

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1) Irving, J. (1958): *Economic Rent and Household Income Among the African Population of Grahamstown:* op. cit.

order of about more or less seven-tenths being unable to afford any rent at all, and about three-quarters or so being in poverty.

4.7 Need for the Reintroduction of Rent Subsidisation in South Africa:

There can be no doubt whatsoever, from the analysis presented above, that in terms of welfare and health considerations the strongest grounds exist for the reintroduction of subsidised rents for urban Bantu. A sufficient proportion of urban households cannot afford any rent at all, let alone a subsidised rent, for rent subsidisation to be a realistic step. This is particularly true of smaller towns, where relatively speaking the need is greater than in the cities.

4.8 Has Rent-Paying Ability Improved During the Past Two Decades?

We have shown that an important amount of poverty is still present among the urban Bantu population of the Republic. Has the amount of poverty decreased, and the rent-paying capacity of the population increased over the past one to two decades? This is an important question, as an indication of a trend here will provide some clue as to the future position.

Germiston was studied by the earlier survey undertaken by the Committee on Socio-Economic Surveys. In the early 1950's an estimated 63 per cent of the households in that town were estimated to have a negative rent margin. Johannesburg's poverty at that time is not known. If the level of poverty was similar to Germiston, then it appears that the position has improved as in 1966 about 36 per cent of the Soweto population had a negative rent margin. It is possible that there has been an improvement generally as far as the Witwatersrand as a whole is concerned, with an increased rent-paying capacity of the population. This suggestion is supported by an examination of the findings of the Paynesville Survey (which was the first housing survey carried out by the Council for Scientific and Industrial Research)[1]. This survey was undertaken to provide data for the planning of Kwa Thema. The Payneville Location at

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1) van Beinum, H.J.J. (1953): *Final Report of the Socio-Economic Survey at Payneville Location, Springs, undertaken to collect necessary data for the design of the new Native Township of Kwa Thema:* National Building Research Institute, South African Council for Scientific and Industrial Research, Pretoria. (mimeographed): See Table 33, p. 43 and also p. 44.

Springs still exists today, so that it cannot be said with certainty that most or all of the original population studied in Payneville in 1949 now lives in Kwa Thema. However, it is probably not too crude an assumption to make that the Payneville level of poverty in about 1949, was typical of the area. van Beinum and his colleagues found that 128 households out of a sample of 319, or 40 per cent could afford an economic rental. If we take the average rent in Kwa Thema at the present time at about R5-00, then approximately six-tenths of the households in Kwa Thema can afford an economic rent. This suggests that the position on the East Rand has improved since the 1949 survey. Daveyton, which in 1966 had an estimated 38 per cent of the households with a negative rent margin, was still considerably better off than Payneville in 1949.

Welch's findings that an important proportion of Bantu households on the Reef have improved their dwellings, further supports the contention that Bantu on the Witwatersrand have improved in socio-economic level during the past one to two decades[1)].

As far as Pretoria is concerned, we have no means of knowing what reductions in the amount of poverty have occurred. It seems likely that there too has been some improvement - perhaps not as rapidly as on the Reef, as 46 per cent of the households in 1966 had a negative rent margin.

The conclusion is that at least in the southern Transvaal industrial complex, rising wages have probably reduced the amount of poverty amongst the Bantu.

The position in Durban appears to be somewhat different. In 1953 the field study undertaken in Durban by the Committee on Socio-Economic Surveys, found 56 per cent of the Bantu households in family dwellings could not afford any rent at all[2)]. However, a study undertaken in 1958 by the Department of Economics at the University of Natal, using a poverty datum line specially calculated for Durban, independent of the scales used by the Committee on Socio-Economic Surveys, arrived at the conclusion that 71 per cent of the Bantu households were in poverty[3)]. At first sight this figure looks different from the figures obtained in 1953 and 1966. In actual fact there is very little difference between the figures if we take into account that whereas the

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1) Welch, C. Tod (1963): op. cit.

2) Committee on Socio-Economic Surveys (1966): op. cit., p. 86. Our estimate for 1966 of 56.7 per cent having a negative rent margin is identical, and suggests that rising wages in Durban have been cancelled out by rising costs.

3) Department of Economics, University of Natal (c.1959): *Rent-Paying Capacity and the Cost of Living of Urban African Families in Durban:* Unpublished Manuscript, University of Natal, Durban.

1958 figure for Durban includes the cost of a full economic rent, the other two sets of figures refer only to those households which have a negative rent margin. In the 1953 survey in Durban conducted by the Committee, out of 336 family-type households, only 98 or 29 per cent had an 'adequate margin' for rent. That is to say, 71 per cent were in poverty in the sense that they could not afford a fully economic rent. This is the same figure as the 1958 survey undertaken independently by the Department of Economics. The correspondence between the two estimates made five years apart is striking, when it is realised that the Department of Economics at the University of Natal costed their poverty datum line de novo, and had some variations in the components when compared with the earlier survey. In 1964 the Institute for Social Research at the University of Natal, undertook a field study in Kwa Mashu. Applying the poverty datum line calculated by the Department of Economics, and weighting the values up in terms of consumer price indices, an estimated 79 per cent were below the secondary poverty datum line, and therefore could not afford economic rent[1]. If we bear in mind that the Kwa Mashu population was essentially a slum population re-housed from Cato Manor, then this figure suggested the level of poverty was about the same as that found by the other studies in Durban. Therefore, the conclusion in regard to Durban must be that despite rising wages, rising costs of living appear to have cancelled out any possible benefits which the wage increases could have conferred. The level of poverty appears to have remained the same in Durban over the past one-and-a-half decades. Having said this, it is possible that the *depth* of poverty today in Durban is not as great as it was in the immediate post-war era. One of the weaknesses of the measurement of poverty in terms of rent margins, is that we do not know how far a household is below the poverty datum line - only that the household is below the poverty datum line and cannot afford an economic rent. Therefore, although there is still a considerable amount of poverty in Durban, the position might have improved in that households may not be as severely poor as they were previously. Future studies of poverty should include some analysis of the depth of poverty affecting those households below the poverty datum line. This point is developed further and analysed in this chapter.

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1) Watts, H. L. & N. K. Lamond (1966): *A Study of the Social Circumstances and Characteristics of the Bantu in the Durban Region: Report No. 2: The Social Circumstances of the Bantu:* Institute for Social Research, University of Natal, Durban: (mimeographed). See pp. 3 - 17.

As far as Lynville is concerned, we have no indication of any changes in the level of poverty there. The same is true of Greytown. As we have indicated earlier, the level of poverty found in Greytown was rather of the order suggested by the study made almost a decade ago in Grahamstown. It may well be that as has been postulated for Durban, that while in small towns such as these the number of households in poverty has remained relatively the same, rising wages may have reduced the intensity of the poverty somewhat. Once again it is a matter for regret that we have no statistics in this regard, and therefore further speculation is sterile. For the future, it is important to keep an eye on the position, and assess how the amount and depth of poverty is being combatted in South African towns, especially the small towns where the problem seems most acute.

4.9 Variations in Poverty Between Towns: Results from Variation in Income Levels and Living Costs:

We have shown that the level of poverty varies to an important extent between the various towns studied. The range is considerable, varying from 29 per cent of the households in Kwa Thema having a negative rent margin to 69 per cent of the Greytown sample. The difference is over two-fold. Part of the reason for this variation is variation in the cost of living in different towns. We can show this by calculating for a hypothetical family of six persons what the primary poverty datum line would be in the seven areas studied. From appendix 'B', taking a household consisting of a man, who is a manual labourer, a woman, a boy aged 13 to 15 years, a girl aged 10 to 12 years, and two children aged 7 to 9 years, we obtain a primary poverty datum line of R50-29 for Johannesburg. In Pretoria the figure is slightly lower at R48-37 per month, while in Durban the figure is the highest of the large towns and cities, at R53-72 per month. In Springs and Benoni, the figure is R49-77 in both cases, and this is the lowest figure for the seven areas. Witbank has a primary poverty datum line for the six persons of R51-24 per month. Greytown, where the poverty was the greatest, has the highest of all figure at R58-74 per month. These figures show variations in basic cost of living for a poor family with a minimum diet and minimum clothing and other requirements. As the same items were costed in the different towns, it shows that one of the reasons why Durban is worst off of the cities is that it has the highest cost of living in these terms. Witbank, the worst of the seven areas, has the very highest cost, largely because of food prices. This is a phenomenon which we had suspected as being a feature of small towns, and the figures for Greytown suggest that this hypothesis may be correct. If so, then the amount of poverty in small towns is in part greater than that in the

larger towns and cities, because of higher basic living costs apart from rent and transport. The finding is important enough to warrant further investigation with a sample survey designed to cover small towns only.

Household incomes also vary between the towns, reflecting differences in wage structure (as most of the Bantu are wage earners). Table C.31 provides details of household income in the different towns, while the mean incomes of male heads of households are shown in Table C. 32. The same Table gives mean incomes of the wife of household heads, for the seven areas studied. Finally, Table C.33 gives the source of income of main households in each of the cities and towns studied. Kwa Thema with the least amount of poverty had the highest median household income at R66-70 per month. In other words, half the households had an income higher than this amount. We have previously shown that Johannesburg came next in order of towns as far as size of negative rent margin was concerned, likewise this city comes next after Kwa Thema in order of median household income. The median for Soweto was R58-60 per month. Next as far as negative rent margin size was concerned was Daveyton, and Daveyton came next with a median household income of R56-00. It is clear that as negative rent margin increases, the median household income drops and we are getting an inverse ranking of towns. Next according to negative rent margin came Pretoria, and likewise this city comes next with a median income of R52-60 per month. Then in terms of negative rent margin comes Durban, which likewise follows with a median household income of R49-20 per month. After that is Lynville, both in terms of negative rent margin and household income. The median household income stands at R42-70 per month. Finally, with the highest proportion having a negative rent margin comes Greytown. This small town has the lowest household income, with a median of under half the figure for Kwa Thema. In Greytown the median income is only R32-50 per month, and as a median figure this implies that half of the households had an income of less than this amount.

From the above figures it is evident that more than variations in cost of living, income variations are the key reason why the amount of poverty varies between the towns studied.

The dependency ratio for each of the areas studied was examined. This ratio is the number of dependents per income receivers in each household. Thus for example, a dependency ratio of three means that in a household there are three persons without any income whatsoever, for every person in receipt of an income (whether the income be a salary, or an old age pension, or any other source of income). Both the distribution of the dependency ratios for the households in each town, and also the median incomes were studied. No major differences larger than those that could have been explained by sampling

variations alone were evident. The median dependency ratios were all of the order of about two to almost three dependents per income receiver. There was no definite pattern associated with poverty. Thus, for example, Witbank which we have seen was one of the worst towns in terms of the proportion of persons having a negative rent margin had the lowest dependency ratio of 1.97. Daveyton, which did not have as much poverty as other towns, had the second highest dependency ratio at 2.80. Johannesburg which was second best in terms of the amount of poverty, had a dependency ratio of 2.60 - not very much lower than Durban's figure of 2.92. This median figure for Durban was the highest obtained. Other dependency ratios were medians of 2.41 for Pretoria, 2.20 for Kwa Thema, and 2.70 for Greytown. Therefore, it would seem that income variations are the main reasons for variations in poverty between the towns, and not variations in the number of the dependents. Variations in cost of living are contributing factors. If a 'living wage' is defined as one which enables a household to meet the very bare minimum standards set by the poverty datum line, then households with incomes which fall below the poverty datum line are not in receipt of a 'living wage' or a 'living income'. Towns therefore vary in the extent to which they pay their Bantu workers 'living wages' and workers on the Reef are undoubtedly the best off at the present time, while those in small towns clearly are faced with the worst problems. The challenge presented by these findings is a major one.

It is suggested that a multi-prong attack on poverty in South African towns is needed. For a further discussion of this point see the report by Watts and Lamond[1]).

4.10 Regrouping of Available Rent Margin Categories:

Table 4.2 groups the available rent margin data from Table 4.1 into five categories. We are indebted to Mr. C. Tod Welch of the National Building Research Institute for guidance as to the classes into which the figures should be regrouped. The groupings chosen are those which are likely to be relevant for dwelling designers when thinking of cost levels for new types of plans.

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1) Watts, H.L. & N.K. Lamond (1966): op. cit., pp. 291 ff.

TABLE 4.2

PERCENTAGE DISTRIBUTION OF AVAILABLE MONTHLY RENT MARGIN FOR BANTU HOUSEHOLDS[1] IN THREE CITIES AND FOUR TOWNS IN THE REPUBLIC OF SOUTH AFRICA, REGROUPED INTO FIVE BROAD CLASSES

Percentages are to the base of the cases for which adequate information was obtained

Available Monthly Rent Margin	Johannesburg (Soweto)	Durban	Pretoria	Daveyton (Benoni)	Kwa Thema (Springs)	Lynville (Witbank)	Greytown
Negative Monthly Rent Margin	35.9	56.7	46.0	38.0	29.4	57.4	69.0
R0-01 to R9-99	13.3	13.5	15.2	12.0	16.0	17.0	8.6
R10-00 to R19-99	11.0	10.9	10.7	15.0	13.2	8.6	3.5
R20-00 to R39-99	16.1	5.9	14.3	17.0	19.2	8.5	5.2
R40+	23.7	13.0	13.8	18.0	22.2	8.5	13.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Estimated No. of households in area (excluding single person households)	58660	27670	22990	14840	8080	1530	630

1) Excluding single person households, which are eligible for hostel accommodation, and therefore are outside the scope of this study.

Taking the seven towns together, the figures show that it is worth planning for these five rent-margin groups separately. The classes from groups with sufficient numbers of households in some or all of the towns concerned for special dwelling plans in these rental ranges to be prepared. Therefore, in South Africa as a whole, there will be a demand for houses in each of these rental (cost-level) categories. The most important single group of houses will have to be the lowest cost dwellings for those who in theory cannot afford any rent at all, and therefore would be eligible for sub-economic housing if it was re-introduced. The other rental groups vary in importance and size from one town to another, but tend to account from somewhere between one-quarter and one-eighth of the population, except in particular areas where the percentage might drop lower. As a dwelling designer's problem when planning for housing schemes is to design dwellings for broad populations, and as it is the housing administrator's task to plan proportions of the houses based on different types of plans for construction in his own area, the designer is not concerned with the fluctuations in the percentage of households of rental categories in different areas. It is sufficient to note that the number of households likely to be in each rental category is large enough to warrant the preparation of plans for houses in the under R10 per month, R10 to R19 per month, R20 to R39 per month and R40 per month or higher rental categories. If midpoints of classes are used, houses at about the R5, R15, R30, and over R40 per month rent-level should be planned. If rent subsidisation in future takes care of the negative rent margin group, then it can be grouped with the R5 per month class. (In any case, cheaper houses are probably impossible to design.)

4.11 Measures Revealing the Depth of Poverty:

4.11.1. The relincome technique:

Our analysis thusfar has indicated that poverty is still a problem amongst the Bantu population in urban areas. The results for the two small towns of Witbank and especially Greytown strengthen the hypothesis that the problem is worse in the smaller towns than in the cities. It has been pointed out that a weakness of earlier studies is that the *depth* of poverty was not measured. A more sensitive index of the extent of poverty and of the socio-economic status of the Bantu population than that provided by the 'available rent-margin' technique is required. The calculation of what has been called the 'relincome' of a household provides a measure of the depth of

poverty[1]. Simply put, the relincome of a household is its total gross income from all sources, expressed as a percentage of the secondary poverty datum line for that household. The secondary poverty datum line is made up of the primary poverty datum line (that is, the minimum costs of food, clothing, fuel and lighting and cleansing materials for the household)[2], plus the actual amount paid for rent, and the cost of transport to and from work for working members of the household. Thus a household with a relincome of 100 has an income just equal to the secondary poverty datum line. A relincome of 50 indicates that the household has only half of the minimum income that in theory it should have, while a relincome of 500 means that a household has five times the minimum income that it should have for decent and healthy survival under short-run conditions. The term 'relincome' is a contraction of the phrase 'index of relative income'. In other words, it is an index which represents the income of a household relative to its secondary poverty datum line.

Applying the relincome calculations to the households studied, we obtain Table 4.3 below.

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1) This measure was first put forward in: Watts, H.L. (1959): *An Analysis of Some of the Housing Requirements of the Urban White Population of the Union of South Africa:* National Institute for Personnel Research, Johannesburg. (mimeographed). See p. 16 & pp. 53-56. Also see Watts, H.L. (1962): *Survey of the Housing Requirements of Coloureds .... etc.* op. cit., p. 11 & pp. C1 onwards.

2) See Appendix 'B', and Watts, H.L. (1967): *The Poverty Datum Line in Three Cities and Four Towns in the Republic of South Africa:* op. cit., especially p. 23.

TABLE 4.3

RELINCOME OF THE SAMPLE OF HOUSEHOLDS FROM THE SEVEN TOWNS STUDIED, 1966-1967:

Relincome	Percentage Distribution for Known Cases						
	Johannesburg (Soweto)	Durban	Pretoria	Daveyton (Benoni)	Kwa Thema (Springs)	Lynville (Witbank)	Greytown
0 - 24)	1.4	1.7	0.5	0.0	0.0	0.0	17.2
25 - 49) in	7.9	11.1	8.2	8.0	1.0	12.8	20.7
50 - 74) Poverty	15.6	23.6	24.0	17.0	19.2	36.2	22.5
75 - 99)	16.6	25.7	20.4	21.0	18.2	17.0	13.8
100 - 149	28.2	23.8	27.0	30.0	29.4	25.5	10.3
150 - 199	16.6	6.8	11.7	14.0	14.1	2.1	6.9
200 - 299	9.9	4.1	3.1	5.0	14.1	6.4	5.2
300 - 399	2.4	1.5	4.1	3.0	0.0	0.0	1.7
400+	1.4	1.7	1.0	2.0	4.0	0.0	1.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percent of all cases where inadequate information was provided:	3.3	0.5	1.0	0.0	1.0	4.1	1.7

The above percentages are cumulated in Table 4.4, which shows the total percentage of households in a town which have a relincome of below a certain figure.

TABLE 4.4

RELINCOME OF THE SAMPLE OF HOUSEHOLDS FROM THE SEVEN TOWNS STUDIED

Cumulative percentages for Relincome:

Relincome	Percentage Distribution						
	Johannesburg (Soweto)	Durban	Pretoria	Daveyton (Benoni)	Kwa Thema (Springs)	Lynville (Witbank)	Greytown
Less than 25	1.4	1.7	0.5	0.0	0.0	0.0	17.2
Less than 50	9.3	12.8	8.7	8.0	1.0	12.8	37.9
Less than 75	24.9	36.4	32.7	25.0	20.2	49.0	60.4
Less than 100	41.5	62.1	53.1	46.0	38.4	66.0	74.2
Less than 150	69.7	85.9	80.1	76.0	67.8	91.5	84.5
Less than 200	86.3	92.7	91.8	90.0	81.9	93.6	91.4
Less than 300	96.2	96.8	94.9	95.0	96.0	100.0	96.6
Less than 400	98.6	98.3	99.0	98.0	96.0	0.0	98.3
Less than 400+	100.0	100.0	100.0	100.0	100.0	0.0	100.0

These statistics are graphed in Figure C.8 (Appendix 'C' below.)

With reference to the secondary poverty datum line, (a relincome of 100), Batson has pointed out that it excludes a good many components which the average household must spend money on[1]). Items such as educational costs, chemists and doctors bills, birthday presents and newspapers, replacement of household equipment, and so on, are all costs over and above those measured by the secondary poverty datum line. Batson found in Cape Town that until the income of a household reaches

1) Batson, E. (1944): 'Report No. R.S. 203' in *Series of Reports Issued by the Social Survey of Cape Town:* University of Cape Town, Cape Town. (mimeographed), p. 2. This particular reference has an extract quoted in appendix 'B' of the present study.

about one-and-a-half times its secondary poverty datum line (a relincome of 150), the household in fact is unlikely to be able to spend the amount on the poverty datum line items such as food, clothes, etc. which it should spend to maintain health. This is because the household has to meet additional costs of the type mentioned above, which are excluded by the poverty datum line[1]. Therefore he has called this level of 150 per cent of the secondary poverty datum line the 'minimum effective level'. From many points of view it could be argued that this level is a far more realistic measure of poverty than the very conservative secondary poverty datum line. The latter measurement of poverty has been criticised sometimes for the number of important items of household expenditure which it excludes, and it has been said that it is not a 'human standard of living'[2]. This should be borne in mind when examining Tables 4.3 and 4.4, as well as Figure C. 8 in appendix 'C'.

Examining these tables, it is clear that it is particularly in Greytown as the smallest town studied, that the depth of poverty is the most severe. It is estimated that over one third of the households in that town have an income which is less than half the minimum required for healthy survival under short-term conditions, as defined by the secondary poverty datum line. In Lynville and Durban about one in eight of the households are in this same position, while in Johannesburg it is about one in ten of the households. Pretoria and Daveyton are better off with only about one in twelve of the households being as poor as this, while in Kwa Thema only about one in one-hundred of the households have this depth of poverty. Examining households with a relincome of less than 75 (that is, households which have an income which is less than three-quarters of the minimum they should have), the position is that three-fifths of the households in Greytown are thus affected. About half in Lynville are similarly affected. On the Reef and in the cities the position is not as bad as in the small towns. About one-fifth of the Kwa Thema households have a relincome of under 75, as against one-quarter of those in Daveyton, and a quarter of those in Johannesburg. More or less one-third of those in Pretoria and in Durban have a relincome as low as this.

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1) Batson, E. (1945): *The Poverty Line in Salisbury:* op. cit., p. 14.

2) See Appendix 'B'.

If we think in terms of 'the minimum effective level', then from Table 4.4 we see that the following per cent of households in each town have a relincome of under 150: that is to say, they have an income which falls below the minimum effective level. Lynville is worst in terms of this criteria, with about 92 per cent of the households falling below the minimum effective level. Greytown and Durban are in the same position with about 85 per cent and 86 per cent respectively being below the minimum effective level. Daveyton has 76 per cent, while Johannesburg has 70 per cent, and Pretoria 80 per cent below the 150 relincome level. Best of all is Kwa Thema with 68 per cent or two-thirds below this level. These figures show that in all towns the large majority of households, and in the smaller towns very much the largest majority of the households, have an income which falls below the minimum effective level. However, as we have shown above, the depth of poverty varies markedly from one town to another, most particularly between the small towns and the cities. Again the small towns appear as the places in South Africa where Bantu poverty is the worst as far as the urban population is concerned.

4.11.2. Net daily income per head:

While the relincome technique is a simple one, it is perhaps a technique which the layman sometimes has difficulty in understanding. A technique which is easily understood by all, but has the disadvantage of being rather cruder in its measurement of poverty is the net daily income per head[1]. In order to obtain the net income of a household, the cost of rent and workers' transport is subtracted. Reducing this to a per caput figure, and dividing by 30, gives the daily income for each member of a household. It represents the income on which the members of the household can live after they have paid rent and workers' transport, and the figure must cover all the many and varied requirements which modern living demands. Table 4.5 below gives a cumulative distribution for net daily incomes per head for each town. The cumulative percentages show the proportion of households below a particular level of daily net income.

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1) This has been called 'the net rate per head per day' by Irving, who first used the technique in South Africa. See: Irving, J. (1958): *Economic Rent and Household Income Among the African Population of Grahamstown:* op. cit.

TABLE 4.5

CUMULATED PERCENTAGE DISTRIBUTION FOR NET DAILY INCOME PER HEAD FOR BANTU HOUSEHOLDS, ESTIMATED FROM A SAMPLE, 1966

Net Daily Income Per Head	Cumulated Percentage Distribution						
	Johannesburg (Soweto)	Durban	Pretoria	Daveyton (Benoni)	Kwa Thema (Springs)	Lynville (Witbank)	Greytown
Less than 3 cents	0.7	2.2	0.5	1.0	-	2.1	1.7
6 cents	2.6	3.3	0.5	2.0	-	2.1	8.5
9 cents	5.5	5.9	3.0	4.0	-	2.1	20.4
12 cents	9.1	12.7	12.7	7.0	-	8.6	25.5
15 cents	13.6	22.3	21.4	14.0	5.0	25.6	42.4
18 cents	22.2	30.2	28.0	22.0	16.1	36.2	49.2
21 cents	29.9	41.0	38.7	33.0	19.1	44.7	55.9
24 cents	35.9	50.2	46.9	38.0	27.2	51.1	62.7
27 cents	41.9	56.0	55.1	42.0	31.2	61.8	67.8
30 cents	47.4	62.5	59.7	47.0	41.3	72.4	67.8
35 cents	53.4	71.9	67.4	56.0	50.4	80.9	74.6
40 cents	61.1	75.8	74.5	70.0	59.5	85.2	78.0
45 cents	69.5	79.2	81.6	75.0	66.6	87.3	83.1
50 cents	74.8	84.9	84.2	80.0	72.7	89.4	84.8
50 cents or more	100.0	100.0	100.0	100.0	100.0	100.0	100.0

It will be seen that a small percentage of households are very poor indeed. Thus for instance, in Greytown an estimated eight-and-a-half per cent of the households had less than six cents per head to live on each day, after payment of rent and workers' transport. The average citizen knows very well what his own living costs are, and therefore can visualise

vividly how very very little can be purchased with less than six cents a day. This measure therefore perhaps is the one which provides the most graphic indication of poverty, whereas the others used are more abstract, but at the same time of course, more sensitive. Returning to the table, in the other towns the percentage of households with less than six cents daily per head is much smaller than in Greytown. The figure is roundabout two per cent for Lynville and Daveyton, about two-and-a-half per cent for Johannesburg, and 3.3 per cent for Durban. In Pretoria about half a per cent of the households have as little daily net income as this, while in Kwa Thema it appears that none of the households are so poor. Going higher up the scale, to the under 21 cents daily level, it does not need much effort of imagination to visualise the problems of trying to live on less than 21 cents per day for each individual, when the competing demands of food, clothing, cleansing, lighting and heating, as well as the other requirements such as medical expenses, educational costs for children, replacement of household articles that wear out or get broken, etc. etc., are all taken into account. In Greytown, over half of the households had less than 21 cents per head daily on which to live after paying rent and transport costs. In Lynville the figure was over two-fifths, which is about the same level as that for Durban. In Pretoria it was about under two-fifths of the population. In Daveyton about one-third of the households, in Johannesburg just under three-tenths, and in Kwa Thema about one-fifth of the households had an income of this level.

For the sake of comparison, it can be stated that estimating from the average size household in Durban, the daily average poverty datum line requirement would be 31 cents per head. The figure will vary slightly from one town to another, but this will give some estimate of the minimum daily income each person should have for surviving in a healthy and decent condition under short-run conditions only. Taking this approximate level as a criterion, then Table 4.5 provides an indication of the variation in the depth of poverty between the different towns. The figures stress the great contribution which rent subsidisation would make to alleviating the poverty problems of many of the households concerned. At the same time, thinking of the costs of Bantu education for Bantu parents, and how these costs compare with the net daily income per head, there is no doubt that the payment of rent would be less of a problem for the households if Bantu education was completely free, including all books and stationery for the pupils. Given the interlocking system that operates within a household budget, some of the problems of rent payment at the present time, must be the result of households with children who are battling to send their children to school and pay for the costs of the education. Free education would seem as important as rent subsidisation - and from the long-term point of view perhaps more important, as education is one of the essential requirements if poverty is

to be wiped out in future generations of urban Bantu dwellers by providing the rising generations with sufficient education to enable them to earn a living wage.

4.12 Actual Amount Paid by the Household for Rent or Mortgage and Rates:

Because of the stereotyped nature of the housing plans used, and because most of the housing schemes are fairly recent in origin and date from roughly the same date when building costs were at a certain level, there tends to be a stereotyping in the rent paid in the different towns. In Durban, Pretoria, Kwa Thema and Lynville the most frequently mentioned rent paid was R6 to R7 odd per month. (This figure excludes electricity where it is supplied to the house). In Johannesburg, Daveyton, and Greytown, the most frequently mentioned rent is slightly lower at R4 to R5 odd monthly. It is interesting to note that the amount paid for mortgage and rates by those owning or purchasing their own home tends very largely to be at the same level as rent. While there are of course a proportion who pay much higher than the figures mentioned, they are a very small minority who can afford expensive homes.

The extent of home ownership in the various areas studied is, with some exceptions, low. From the sample it is estimated that in Johannesburg about 17 per cent of the Bantu households were buying or had already bought a house. In Durban the figure is much the same at about 20 per cent. In both Daveyton and also Lynville, none of our sample cases were home owners. In Kwa Thema, if the sample is a good guide, just under half of the households are purchasing a house, while in Pretoria the figure is about two-thirds[1]. In Greytown, apart from individuals with wattle-and-daub huts erected on land, no one owns a home. That is to say, in the new township at the time of the survey no one was purchasing a house.

It has been contended more than once that a household should not pay more than one-fifth of its income in rent. It has been suggested that this is a satisfactory level for the cost of accommodation. In our study we found that the average percentage of household income spent on accommodation was ten per cent in Johannesburg, 14 per cent in Durban, 12 per cent in Pretoria, 11 per cent in Daveyton, 10 per cent in Kwa Thema, 19 per cent in Lynville, and 13 per cent in Greytown. In all these cases the averages are below 20 per cent. Indeed an examination

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1) This is mainly the effect of Mamelodi, where householders often commented they thought there was a policy to encourage extensive home-ownership.

of Table C.34 in appendix 'C' shows that only a small proportion of cases, except in the poorer small towns of Witbank and Greytown, spend 20 per cent or more of their income on accommodation. If these figures were all we had to go by, we would assume that there was no problem in regard to the payment of rent amongst urban Bantu. However, our previous analysis of the rent-paying capacity has shown a considerable amount of poverty, and points to the fallacy of using a percentage of income without reference to whether or not the income itself is of an adequate level. These figures reveal the fallacy of this standard of housing costs when taken by itself[1].

4.13 Deposit Paid for Renting a House:

It should be mentioned that in a proportion of the households (amounting to less than one-tenth), it was found on enquiry that the householder had been asked to pay a 'deposit' before moving into a house that they were to rent. This occurred only in certain of the towns studied. As officially no deposit is required of someone renting a house, and as care was taken to ensure that the subjects concerned were not in fact purchasing the house, this finding suggests that there is in some of the towns a certain amount of bribery involved in the allocation of dwellings to householders. This finding supports rumours which we had come up against, and represents a hidden cost of housing for what is fortunately a small proportion of the householders. In nearly all cases the 'deposit' asked for was somewhere in the vicinity of R10 or less. While studies of bribery made in other areas have indicated that bribery does sometimes arise in situations where a bureaucratic structure is rather inflexible to the needs of the individual, so that bribery in fact serves a function by making the system of red tape rather more flexible and able to de facto meet some of the needs of the individual, flexibility in housing allocation should not be a cost for the householder.

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1) The same point has been made for example in a previous study on Coloured housing. See: Watts, H.L. (1962): *Survey of the Housing Requirements of Coloureds in Towns of the Western Cape Province:* op. cit. p. 24.

4.14 Concluding Remarks:

The analysis of the rent-paying ability of the urban Bantu households has shown that whereas immediately after the war the greatest need seemed to be for one type of low-cost housing design, rent-paying capacity is now distributed in such a way that it is desirable to plan new types of houses in five broad rental categories. While there is some evidence that the amount of poverty, and possibly also the depth of poverty has decreased generally (although in certain areas this might not be so) during the past one to two decades, there is still a sufficient amount of poverty to warrant rent subsidisation. Sub-economic housing is particularly necessary in the smaller towns. Finally, the extent of poverty suggested in small towns by our preliminary findings is great enough for it to be highly desirable to draw a further sample of small towns to check the rent-paying capacity of the population. While it is suggested that Greytown is not atypical, the hypothesis should be checked by a more careful study. Such a second follow-up study to this housing survey is strongly recommended.

CHAPTER V

LIVING HABITS RELEVANT FOR DWELLING DESIGN

The way in which people use their homes is of interest to the dwelling designer. If an architect knows what types of functions various rooms in a house are normally made to serve, then he has some idea of what types of design features, including room size, would be appropriate to meet the living patterns of the people concerned. This chapter presents the results of an analysis of the ways in which the urban Bantu households studied used their existing dwellings.

5.1 A Pattern of Urban Living and Urban Preferences Amongst the Bantu is Evident Regardless of the Size or Type of Town Concerned:

One of the major decisions which had to be made in analysing housing habits and also housing preferences, was whether or not it would be possible to combine the results for the seven areas studied, and talk of a common Bantu pattern for town life and for urban housing preferences. The alternative to this would have been to analyse each of the seven areas separately, and go no further than talk of the characteristic pattern for Johannesburg, Durban, etc., as the case may be. Because of the need of the dwelling designer to prepare a few master plans, which should if possible be applicable to a wide range of Bantu households, a careful study was made of the problem. After discussions with an architect from the National Building Research Institute, certain of the living habits and housing preferences covered by the survey were selected as being of major importance for dwelling design. Tabulations of these items were prepared for each town or township studied. An analysis revealed that in all cases the variation between towns was not larger than could be explained by chance variation from a common basic pattern applicable to all the areas. There was no evidence whatsoever that the living patterns and housing preferences of certain areas of the country such as for instance, the Reef, differed significantly from other areas, such as for instance, Durban. Likewise, there was no clear-cut evidence that the larger towns had a different pattern from the smaller ones. It was concluded that it is possible and meaningful to talk of a common pattern of living, and of preferences in regard to housing, which can be thought of as applying to urban Bantu households in South Africa at the present time.

Deviations away from this common pattern are unimportant, and therefore it is possible for the architect to think in terms of a set of plans which could be applied to urban Bantu households generally.

What we are saying does not imply that all people in all towns live the same way, and want the same things. While it is clear that a range of plans is required to meet variations in living patterns, and housing preferences, these variations occur within all the towns, so that a set of different types of housing plans which take into account and meet these variations in living patterns and needs, can be applied to the different towns in common. It is possible to talk of urban Bantu life styles and to generalise. This is what will be done in the remainder of this report.

5.2 Room or Area Where the Household Normally Eats:

In the sample as a whole, grouping all towns together, the kitchen was the most popular choice for a room where the family normally ate. An estimated two-fifths of the households ate in the kitchen. In about one-in-four of the households both the kitchen and also the living room were used for eating purposes. It is interesting to note that in about one-in-five of the cases the household normally ate outside when the weather was fine, and ate in the kitchen during inclement weather. Only a small minority - about one-in-twelve - ate regularly in the living room, and even less (three per cent) had a dining room and used it normally for eating.

Thus there is no doubt of the overwhelming importance of the kitchen for eating purposes. It is interesting to note at this stage in the development of the urban Bantu population, the pattern concerned is not markedly associated with differences in rent-paying ability. No doubt in the future one will find increasingly those who are better off tend to move from the kitchen to the living/dining room for dining purposes, but the overwhelming pattern at the moment is that the kichen by itself, or in conjunction with other areas as indicated, is where the family normally eats.

5.3 Place Where the Family Normally Gathers:

The kitchen is the most popular single choice for place where the family or household normally gathers. In over one-third of the households, this was the first choice. Sharing about the same popularity is normally gathering in the living room, and gathering in the kitchen as well as the living room - in each case about one-in-five of the households exhibited the

pattern concerned. The only other pattern worth noting, which accounts for about one-in-six of the households, is gathering outside when the weather is fine. It was frequently observed that on fine days families tended to gather outside in the sun - this is a characteristic often noted by even a casual observer driving through an urban Bantu township.

Examining the pattern *at night* the largest single proportion of households (a third) gathered in the living room at night in summer. In winter, the kitchen was an overwhelming choice for sitting in at night, by an estimated more than four-fifths of the households. During summer at night other areas were also used for sitting and talking. A fifth normally used either the living room, or outside for this purpose, while a further sixth of the households normally sat outside. One-in-eight said they normally used the kitchen.

The importance of the kitchen as a focal point for the family is emphasised. From these figures it appears that over half of the households can be expected to use the kitchen partly or all the time for gathering, and most use it for this purpose at night in winter. The importance of a kitchen large enough for these purposes is clear. At the same time, the provision of a living room is clearly important.

Once again these patterns of behaviour did not bear any consistent link with rent-paying ability - i.e. with socio-economic status.

5.4 Place Where Close Friends are Normally Entertained:

Close friends are entertained in the room or area where the family normally gathers - that is to say, in most cases in the kitchen, or if the weather is suitable, possibly outside. Some use the living room, but a seasonal variation occurs, as revealed by section 5.3 above.

5.5 Place Where the Family Normally Entertains Guests:

Guests, as outsiders, are individuals who normally receive preferential treatment. Most families like to entertain them in the room which sets off the family's possessions to the best advantage. This is reflected by the fact that the most popular single choice of a room for entertaining guests was the living room. It is estimated that in about 45 per cent of the cases, or just under half, the living room was the choice. The only other room of any importance,

which accounts for almost two-fifths of the cases, is the kitchen.

These patterns do not seem to be linked with socio-economic status or rent-paying ability.

We conclude that in an important proportion of the cases the living room emerges as the equivalent of the 'front parlour' in the Victorian era - it is a room furnished with the best pieces of furniture, and on display for the benefit of strangers and guests. This pattern is essentially the same as has been found amongst working class Whites in South Africa, and also amongst Coloureds[1]. The same remark applies equally to the use of the kitchen made by the Bantu households, which is similar to that found amongst working class Whites, and amongst the Coloured population in the Western Cape.

5.6 Rooms Used for Sleeping Purposes:

In about three-fifths of the households only the bedrooms are used for sleeping purposes. In about one out of five of the cases the bedrooms and the living room were used for sleeping in. The only other pattern of any importance is the use of the bedrooms and the kitchen for sleeping purposes. In about one-in-ten of the households this pattern is followed.

It is clear that pressure of space within the dwellings induces a noteworthy proportion of the households to sleep in either the living room or the kitchen as well as in the bedrooms.

5.7 Room Where Guests Usually Sleep:

In the majority of the cases (about three-fifths of the households), guests staying the night sleep in the living room. In under one-in-four of the cases, guests were accommodated by squeezing them into a bedroom.

Socio-economic status is not clearly linked with these patterns.

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1) Watts, H.L. (1960): 'Living Patterns and Housing Preferences: Some Neglected Aspects of Sociological Research into Housing Needs': *Journal of the National Institute for Personnel Research:* 8, 71-82. see p. 78. Also see Watts, H.L. (1962): *Survey of the Housing Requirements of Coloureds in Towns of the Western Cape Province:* op. cit. pp. 35-36.

5.8 Room Where Homework is Normally Done:

Taking only those households where there were school-going children, the most usual choice of a room for homework purposes was the living room. In two-fifths of the households this occurred. The second most frequent choice was a tie between the kitchen alone, or the kitchen *and* the living room. In each case just under one-in-four of the households exhibited this pattern. Bedrooms were used, but only eight per cent of the households mentioned them as a usual venue for homework.

Rent-paying ability was not correlated with variations in choice of a room for homework.

5.9 Room Where Members of the Household Bath:

Half of the households studied normally bathed in a bedroom. A quarter had a bathroom which they used. The remainder excluding less than two per cent who bathed in the kitchen, bathed elsewhere - very often washing outside, or else in an outside shower cubicle. Contrary to expectations, the kitchen was not often used for bathing - possibly because it is an important living room in the dwelling.

5.10 Functions Served by the Kitchen:

We swing our focus of attention from rooms where different types of activities are undertaken to looking at the combination of functions which particular rooms within a household serve.

The importance of the kitchen for purposes other than the preparation of meals is heavily underlined by the fact that only about two per cent of the households use the kitchen for cooking purposes only. The kitchen usually serves a rich variety of functions.

The major combination of functions served by the kitchen is cooking, eating, family gathering, meeting friends, homework, and sitting at night in winter, (15 per cent of the households). This is followed by cooking, eating, family gathering, meeting friends, and sitting during both daytime and at night, in 12 per cent of the households; and cooking, eating, family gathering, and sitting at night in winter in 11 per cent of the households. Eight per cent of the households in each of the following instances used the kitchen - for cooking, eating, and sitting at night during winter; for cooking, eating, sleeping, family gathering and sitting at night during winter; for

cooking, eating, meeting friends, entertaining guests, sleeping in, and sitting in during the daytime and in winter at night; and for cooking, eating, and doing homework. Other permutations of uses accounted for less than one in twelve of the households.

From the above it is evident that the kitchen is a multi-purpose room within the house. Indeed, it serves a wider range of functions for more households than any other room. From this point of view it can be regarded as the most important room in the dwelling, and this has important implications for the designer.

5.11 Functions Served by the Living Room:

While the range of permutations and functions served by the living room is extensive, only a few broad groupings of usage emerge - for the rest wide variation occurs. About one-in-eight of the households used the living room for eating and sleeping in, for family gathering and for meeting friends, for entertaining guests, and for guests to sleep in. A similar proportion of the households used it for the same functions, excluding eating, and casual family gathering, but including homework. In addition, yet another one-in-eight of the households used it for functions similar to those first mentioned, excluding the family sleeping in the room. About one-tenth of the households used the living room for family gathering and entertaining friends, and guests, and for guests to sleep in. Almost one-tenth had the room used for the same purposes plus homework as well.

Other permutations by themselves were relatively unimportant, but show that in very few cases was the room used only for entertaining guests (one per cent), or to entertain guests and friends (two per cent). At some time or another it is used to serve additional functions of the kind mentioned above, but in different combinations.

5.12 Functions Served by Bedrooms:

Both the main bedroom and the additional bedrooms in a house were used mainly for sleeping purposes, and to a lesser extent for bathing in as well. The only other function which bedrooms sometimes served which should be noted was that in about one-tenth of the households an additional bedroom was used as a storeroom and for guests to sleep in. (This of course applied only to those small households which did not need all the bedrooms in the dwelling).

From this it emerges that bedrooms serve, with few exceptions, purely as sleeping rooms.

5.13 Functions Served by the Bathroom:

Three-quarters of the households lived in dwellings in which no bathroom space within the dwelling had been provided. In nearly all cases with a bathroom, the room was used for bathing only. In a small proportion of the cases (less than one per cent), the bathroom was used for sleeping purposes, or for storing as well.

5.14 Functions Served by Areas in the Garden Around the House:

The most frequently mentioned use to which outside areas around the house were put was for sitting outside at night during summer, and during the daytime generally. Two out of every five households mentioned that this was a function served by the areas around the house. In one-in-four of the households the outside areas were used for family gatherings and meeting friends, and for sitting out during the summer. It is notable that one out of three of the households did not use their outside areas for social purposes.

Differences in rent-paying ability were not associated to any important extent with these patterns. It is clear that the majority of the Bantu households like using the area around the house for sitting and chatting, and meeting friends if the weather is fine.

5.15 The Use of Electricity:

It has already been shown in Chapter III that the supply of electricity to Bantu townships varies from one town to another. If we examine the number of electrical appliances possessed by households, then interestingly enough there are only two main groups concerned - those who have no electricity and therefore do not possess any electrical appliances, and those who have eight or more electrical appliances. All of those with this number of electrical appliances are in the R40 per month or more available rent margin category. Amongst the others who possess some electrical appliances, but not many, the most frequent number of appliances possessed is two.

It can be safely concluded that it is only in the most expensive type of house designed for renting (i.e. in the R40+

monthly rental class) that a wide range of electrical outlets should be planned. In other houses where electricity is to be provided, one plug in the kitchen and one in the lounge should suffice.

There is little doubt that in the years ahead more and more electrical appliances will be owned by Bantu householders. The position is not static, and needs to be reviewed regularly with a view to keeping dwelling design in step with social and economic trends.

5.16 Ownership and Garaging of a Motor Vehicle:

In the sample for all areas as a whole, 15 per cent of the households owned a motor vehicle of some sort. The proportion varies from area to area. In Johannesburg an estimated one-in-eight of the households own a motor vehicle. The same proportion in Durban also own a motor vehicle. In Pretoria the sample estimates a slightly higher proportion of motor vehicle ownership, at about one-in-six of the households. The usual pattern is that the car stands in the open in the garden, without any type of shelter. In Johannesburg and also in Pretoria some of the owners have a lock-up type garage, but this is not yet the standard pattern, and is very rare in Durban.

In Daveyton an estimated eight per cent of the households owned cars, and in all cases the car had to stand in the open. In Kwa Thema, which we have shown has the least poverty of the areas studied, it was interesting to find that three-tenths of the households owned a motor vehicle of some sort. In a quarter of those cases owning a vehicle, there was a garage for the car, while in the remainder of the cases the cars had to stand in the open.

In both Lynville and Greytown the sample estimates one-in-five of the households owned a motor vehicle, which in nearly all cases had to stand in the open. The higher incidence of motor vehicle ownership in these two smaller towns in contrast to the cities is probably more apparent than real - the difference is not significant, and sampling errors could explain the difference.

By White standards motor vehicle ownership amongst the urban Bantu is not large, but it will be seen that it is not an insignificant figure. Particularly when we look at Kwa Thema as the area with the best socio-economic status, the likelihood is that in the near future as income levels rise, motor vehicle - especially car - ownership will increase significantly amongst the Bantu. Most owners at the present time have the problem that there is no suitable garage for their vehicle.

The picture for the areas with higher socio-economic levels suggests that there will be a demand for more and more garages in the future as income levels improve.

5.17 Assessment of the Use Made of the Garden:

Amongst Whites, individuals vary considerably in the extent to which they like gardening, and look after their garden and develop it. The same is true of our urban Bantu households. In the seven towns studied six per cent of the front gardens were rated as being completely neglected, and 27 per cent as being in a poor condition. Thirty per cent of the front gardens were rated as being in good condition, and 36 per cent as being of 'average' standard. Thus the general tendency is for the front gardens to be average to good in condition, with about one-in-four of the gardens being poor, but very few being neglected. Much the same pattern was found when assessment was made of the back gardens. The main difference was that slightly more of the back gardens were average rather than good, but about the same proportion were either in a poor condition or completely neglected. Interestingly enough, when available rent margin is looked at, it seems that the very poor kept their gardens neater and paid greater attention to them than those who had a slightly higher level of rent-paying ability. There was a tendency for the gardens in an above average condition to be either more amongst the very poor or amongst the better-off households. This suggests that the very poor may find it important psychologically to pay attention to their garden, and outwardly perhaps appear less poor than they in fact are.

Very few of the houses (less than one per cent) contained both ash-heaps, rubbish, junk, and broken cars. This amount of rubbish and junk collected is the worst possible situation one can find, and again as far as rent-paying ability is concerned, it was found neither in the gardens of the best off, or the poorest households, but rather in the gardens of those slightly above the poorest level. Ash-heaps occurred in about one-in-ten of the gardens, and this is a reflection of the coal and wood fires used. About the same proportion had some rubbish and junk but no ash. The majority of gardens had no rubbish or junk.

Before studying the gardens more closely, it must be borne in mind that our results are very tentative, as a very serious drought had affected some of the areas shortly before we visited them. Secondly, it was not possible to visit all areas during the same months, and therefore seasonal variations come in. Many of the gardens were seen during the 'fallow' winter months.

Looking more closely at the way in which householders use their gardens and develop them, we found that two-thirds of the gardens had either no hedge at all, or only a few isolated

clumps of hedge bushes. Over one-in-eight of the households had neatly clipped hedges, while about half this number again had a straggly hedge. There was some tendency for a well-cared hedge to be a feature of households with the highest rent-paying ability. Conversely, badly neglected hedges were more the characteristic of the poorer households.

As far as flowers are concerned, only about one-in-five of the households had no flower beds at all in front of the house. On the whole these flower beds were either well cared for, or satisfactorily cared for. About one-in-six of the gardens had flower beds in front that were completely neglected and full of weeds - and in this instance analysis shows that the great majority of such gardens were amongst the poorest households. This indicates that the general assessment of gardens referred to above can mask the presence of neglected flower beds - a characteristic of some of the very poor households.

Less of the households had flowers at the back than in the front of the garden. An estimated 55 per cent of the households had no flower beds whatsoever at the back of the house, while most of those who did have some flower beds had far fewer beds than in the front garden. In this regard too an important difference between the front flower beds and the back was noticed - nearly all of the flower beds in the back garden were full of weeds and neglected. This was again found more amongst the poorer households.

So it seems that the extent to which flower beds are cared for depends on the economic level of the household to quite a considerable extent. This is probably the result of the fact that flower beds in contrast to other forms of gardening are not something which make a return to the household in terms of food.

Over half of the households did not have any vegetable gardens in front of the house, and the vast majority of those gardens with vegetable beds in front had beds which needed weeding badly. This feature again was associated with poverty. As far as vegetables in the back garden were concerned, four-fifths of the householders had some form of vegetable garden, and it is notable that a minority of the vegetable gardens at the back were full of weeds - therefore they were generally cared for. Best cared for vegetable gardens tended to be found mainly amongst the poorest group. We suggest that this is because vegetables make an addition to the food requirements of a poor family, and therefore repaid directly effort and money spent on the garden. However, it was observed equally that the most neglected vegetable gardens at the back also tended to be found amongst the poorest homes, so that we cannot conclude that invariably the poorer people lavish attention on vegetable gardens in their back yard. Nonetheless, we must remember that the serious drought referred to may have affected the gardens of the poor most of all, for obvious reasons.

It is characteristic of the gardens that well over nine-tenths of them had fruit trees. The type of tree varied with climatic region - in the Transvaal most homes had peach trees. The general rule was for either three or four fruit trees, or twice as many or more. It is estimated that over a quarter of the households had seven or more fruit trees in their gardens. No clear association between the number of fruit trees and rent-paying capacity emerged.

Ornamental trees were rarer than fruit trees - it is estimated that under three-fifths of the households had one or more ornamental trees. Two extremes were found - if the garden had an ornamental tree there was either one and one only, or there were eight or more ornamental trees and shrubs. In other words, either the individual gardener had only one ornamental tree or shrub, or none at all, or else he was very keen on them, and had eight or more. It is estimated that over one third of the households had eight or more ornamental trees or shrubs in their gardens. As it was typically in townships where the local authorities were very generous in providing ornamental trees and shrubs that these were found, the socio-economic status of an individual is not linked with this aspect of gardening.

A vine cultivated as a pergola was not an infrequent feature of gardens inland. (That is, excluding Durban where vines do not grow well). In the total sample, somewhere around about one-in-three of the gardens studied had a vine growing in the form of a pergola. It appeared to be mainly the poorest households that did not have this feature, but this is not to say that none of the poor households cultivated a vine.

About half of the households had a fowl-run in their back garden. It was notable that none of the very poorest households sampled failed to have some form of fowl-run in the back garden. Perhaps amongst the very poor having a few odd fowls is a way of supplementing protein in the diet. It is also likely that the poorer households are less urbanised, and therefore influenced to a greater extent by the rural Bantu pattern where great emphasis is placed on having some livestock, or failing that, poultry.

Over two-thirds of the gardens examined had paths definitely demarcated. Only about seven per cent had smeared an area around the house with dung to harden the ground (as a cheap substitute for cement). This was usually both in front and at the back of the house. While 56 per cent of the households had not managed to cement or pave an outdoor living area outside their garden, about one-in-six of the households had managed to do this in front, and a quarter of them had done this both at the front and the back of their house.

The majority of households neatly swept an area around the house - only one-in-four of the households did not do this. Generally both the front and the back areas around the house

were swept, but where only one area was swept it tended to be the back area where the family sat in the sun outside the kitchen door.

Just over half of the gardens had some form of lawn. In nearly all cases this was in front of the house, but six per cent of the gardens visited had some form of lawn both in front and at the back of the house.

In summary, there can be no doubt most urban Bantu households use and develop their plots as gardens. As Welch (1963) has shown, often extensive care is lavished on the garden. The type and extent of gardening varies, with the poor more likely to go in for vegetables and poultry. The garden is also frequently an extension of the indoor living area into the outdoors, and is much used for family gathering, weather permitting. We can safely conclude in an overwhelming number of cases the urban Bantu use their gardens, and that the space allotted for gardens is not wasted.

5.18 Functions Served by Additions Built on to a Dwelling:

In total, a negligible proportion of the dwellings had built on an additional room or rooms. The overwhelming number of cases where additions had been made used the extra room or rooms as bedrooms. This emphasises the importance Bantu householders place on relieving the overcrowding in dwellings, revealed in Chapter III.

5.19 Concluding Remarks:

The living habits described in this chapter provide a guide for the architect in reappraising existing plans for Bantu housing, and for preparing new designs. In the main the patterns are not associated with rent-paying ability, suggesting that as yet differences in life styles according to socio-economic class are only just beginning to appear amongst the urban Bantu. The patterns are essentially urban working class patterns, and compare closely with those found amongst working class Whites and Coloureds. (See Watts, (1960, 1962)). They show the diffusion of urban working class patterns amongst the Bantu. Therefore it is safe to assume that as the socio-economic level of the urban Bantu improves and consequently as social class differentiation increases, life styles approximating to urban middle class values will increasingly appear. Clear signs of this were observed during our fieldwork, but the proportions involved as yet are not large enough to be clearly reflected in our tabulations. Nonetheless, the tempo of social differentiation will increase, and it is suggested that it is not too early for designers to start planning

middle-class type dwellings in the highest rental class.

The designer, in considering dwellings for the working class masses, must appreciate the many and important functions served by the kitchen. It can be regarded as the most important room in the house as far as daily living is concerned. Likewise the living room is used for many purposes, but not infrequently is reserved mainly for guests. In nearly all - if not all - dwellings it is also the room which serves as the showpiece for the family.

Bedrooms are by and large used only for sleeping purposes. The thought here - when one remembers the overcrowding Chapter III revealed in so many homes - is whether it might not be a good idea to build in two-level bunks for sleeping, giving more floor space, and thereby eliminate bedrooms so crammed with beds that movement is very restricted. This will not solve problems of insufficient volume for sleeping, but will make rooms easier to use.

Finally, gardens appear an important part of the pattern of life of urban Bantu households. Especially where local authorities encouraged and assisted gardening, well developed gardens were a pleasant feature of the townships. More encouragement of this type would be worthwhile.

CHAPTER VI

HOUSING ATTITUDES, PREFERENCES AND NEEDS

6.1 Introduction:

Not only does a dwelling designer need to have some idea of the living habits of the people for whom he is to plan, but it is also important for him to have some idea of their housing preferences and needs, and attitudes to existing types of dwelling design. Then, where the designer is faced with alternative design features which are possible within a given cost range, he can attempt to meet the preferences and desires of the people who are to live in the new dwellings.

Our details of housing preferences and attitudes to existing dwellings are based on interviews with the housewives in the areas sampled. The housewife was defined as the wife of the male head of that household in the dwelling which was officially responsible for paying the rent. Where there was no male head of this household, then the female head was taken as the housewife for interviewing. As with living habits, it was found possible to group the seven towns together and to analyse the total sample as a whole. Thus our findings refer to what can be described as urban Bantu housing preferences and attitudes generally, regardless of whether one is planning for a small town or a city population.

6.2 Attitudes to Existing Dwellings Occupied:

During the course of the interview, each housewife was questioned as to what she thought about the dwelling in which she and her household were living. This question was asked midway during the interview, once the woman was talking freely. Only one third of the housewives reacted positively towards the dwelling, indicating that they definitely liked it. One third were rather neutral, indicating that they did not mind the house particularly, while the remaining third expressed definite dislike of the dwelling. The poor tended to be somewhat less critical of their home than those who had a rent margin allowing them to afford houses of R40 per month or more. This is understandable.

Only two reasons emerged for liking the house. The most frequently mentioned one, was that the dwelling was all the shelter that they could get, and one had to take what was available. This is rather a negative attitude, but at least

a realistic one. The other main reason why people liked the house they lived in was that they had improved the house to meet their needs better than previously.

By far and away the major reason mentioned for disliking the house was that it was overcrowded and too small with too few rooms. In view of our finding previously that an important number of the dwellings were overcrowded, this reason is a justifiable one. A total of one third of the housewives mentioned this criticism. The only other major criticism mentioned, which was mentioned by a quarter of the housewives was that the house was not properly finished. This was either a general statement, or specific references to walls, or doors, or ceilings, or floors were made as examples of the finish which was regarded as being inadequate. A wide range of other reasons were mentioned on occasions, and we classified a total of almost 20 dislikes, but the frequency with which these other reasons were mentioned was so low that we can ignore them.

In passing, it is interesting to note that one of the reasons mentioned for disliking the house - albeit a very infrequent one - was that semi-detached or row houses were dangerous to live in insofar as they multiplied the dangers of witchcraft; or that medicines which were used by one's next-door neighbour (e.g. either to prevent witchcraft or 'strengthen' the family), could easily travel under the ceiling across the dividing wall and penetrate one's own house to the danger and detriment of the health of one's family. This fear is one which we believe to be far more widely held than the survey results suggest. It is the type of reason which Bantu householders would be ashamed to mention to outsiders. Evidence accumulated from other studies in Durban suggest that this attitude is in fact by no means an infrequent one. It must be remembered that traditionally Bantu homesteads in the rural areas deliberately were situated some distance away from the nearest neighbours, so as to decrease the dangers of bewitching and of being affected by the medicines used by one's neighbours. Within the town situation one's neighbours are very close, and this is particularly true with row houses or semi-detached houses[1] - and it is in the latter case where this fear was occasionally expressed.

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1) Taking the towns and townships studied as a whole, an estimated 87 per cent of the dwellings were detached houses, and 12 per cent semi-detached. Row houses were rare, accounting for about one per cent of the cases. Other types of dwellings such as jumbo houses (in Johannesburg), shacks, and double stories, accounted for a very small proportion of the dwellings - in all cases well under one per cent.

Another way at getting at the attitudes of housewives towards their existing dwellings is to ask them what alterations they would love to see made to their dwelling, if their wish could be granted. The normal reaction is that the housewife would mention aspects of the dwelling which constitute a problem or an irritation for her and her family. By far the most frequently mentioned alteration the wife would like to have as a first choice was to add additional rooms to the house. An estimated 53 per cent of the housewives mentioned this as a wish. Another important wish also expressed was the desire for more space - the housewife would like to see the present rooms in the house enlarged. A total of about one-quarter of the housewives mentioned this aspect. More popular than enlarging the present rooms, but not as important as obtaining additional rooms, was the desire to have the internal and external walls of the house plastered[1]. Two-fifths of the housewives mentioned this as something which they would like to see done. Another feature which attracted the attention of one-quarter of the housewives was the desirability of having ceilings in the house. Far less frequently mentioned wishes which we can take note of, was the desire for a storeroom; or for a garage. A range of other wishes were mentioned, but none of them occurred frequently enough for us to have to take them into account.

Looking at these wishes, it is clear that the main desire is for more space within the house. As we have pointed out, in view of existing overcrowding, this is a realistic wish, and should be taken into account by the dwelling designers insofar as cost factors will allow. Certainly in the more expensive range of dwellings which could be planned for those with available rent margin levels above the very lowest, this is a desire which can be met to some extent. Apart from the wish for a storeroom or a garage, the other aspects mentioned all relate to finish - as will be shown further in this chapter, there is no doubt that housewives prefer ceilings and plastered walls. Unfortunately at this stage of the development of the urban Bantu population, cost factors not infrequently prevent the general provision of such finishes in schemes. However, where possible, these preferences should be catered for in the more expensive rental categories.

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1) Most of the dwellings in the existing townships are built of bricks and not plastered externally. Only about two per cent had brick which had been plastered externally. Eighty-two per cent of the dwellings in the towns and townships covered by this survey had brick externally without any plastering. Six per cent were built of concrete blocks, and about 10 per cent of concrete slabs.

6.3 Situation of the House on the Plot:

Most of the housewives thought that the house should be situated so that the larger garden is at the back of the house. An estimated 55 per cent of the housewives prefer this. One-third liked the idea of the house being situated in the middle of the plot so that the back and front gardens were about equal in size. A minority, amounting to about one-in-ten of the housewives considered that a house should be so situated that the larger garden is in front of the house.

These preferences were independent of the education of the informant, so that it appears it is not necessary to take the socio-economic level of the household into account when planning the location of a dwelling on a plot.

6.4 Wish for a Larger Plot than the One Provided:

Three-fifths of the housewives expressed a desire to have a plot larger than the one with which the dwelling was provided. However, from our study of the gardens, there is no evidence to suggest that larger plots would be more extensively used than the existing plots. The garden which was *intensively* used either for flowers, or for vegetable growing, was not the average pattern.

The main reason given by housewives for wishing for a larger plot was to have more play-space for the children, and to be able to provide a flower garden and lawn. It was observed that very many of the Bantu children play in the street, and it would seem that the housewives would hope to keep them off the street to a greater extent if there were larger gardens for them to play in. Two-fifths of the housewives expressed this reason for wishing for a larger plot.

Next in frequency mentioned as a reason for desiring a larger plot was to have a flower garden. About one-in-eight of the housewives mentioned this. The only other reason mentioned frequently enough to require our attention is that the housewife wished for a larger plot in order to have a vegetable garden and a flower garden. Again one-in-eight of the housewives mentioned this as the reason.

The preference for a larger plot is also independent of the education of the informant, and seems to be a wish spread generally among all strata of urban Bantu society.

6.5 Direction House Must Face:

The vast preponderance of housewives felt that the house should face the street, regardless of the geographical direction. About three-quarters of the housewives expressed this wish. Only one-in-five felt that a house should be so positioned as to face the warm winter sun. Yet again this preference is independent of education and therefore apparently independent of socio-economic status of the housewife.

6.6 Attitude Towards a Communal Garden:

Bearing in mind the demand for land in urban areas, and the fact that pressure on land is going to increase steadily in the years to come, we enquired about the attitudes of housewives towards a communal garden. It was indicated to them that it might be possible to group several houses around a garden which is shared in common. An overwhelming proportion of housewives did not like the idea - nine-tenths were against communal gardens.

There was no clear evidence of any link between education or rent-paying ability and the attitudes expressed.

6.7 The Problem of Condensation:

Half of the housewives mentioned that condensation was a problem in their dwellings. Presumably this is mainly or entirely in the kitchen. This response was not in any way related to the blocking of airvents with rags or paper. However, in one-third of the cases mentioning condensation as a problem, no air ventilators in the walls were visible in the house, and therefore it seems that a partial solution to this problem would be to ensure that all dwelling designs in future make provision for adequate ventilation of rooms even when the windows are closed on a cold winter's day.

6.8 Number of Bedrooms Preferred:

Housewives were questioned as to the number of bedrooms which they would prefer in a house, given a choice. This question was phrased in the form of asking a housewife how many bedrooms she felt would be required by her family. Almost half of the housewives (47 per cent) felt that three bedrooms were necessary, while a third mentioned two bedrooms. One-in-six of the housewives asked for four bedrooms. A negligible proportion of the housewives mentioned either one bedroom or five or more bedrooms as being required by their families. If

their wishes are anything to go by, then, it would appear necessary to plan only for two, three and four bedroomed dwellings - with three bedroomed dwellings being in the majority.

These preferences of housewives can be compared with the actual position pertaining at the time of the survey. Three-fifths of the houses had two bedrooms and a living room which was also intended by the planner to be used for sleeping purposes. Examples of this were the N.E.51/6 and N.E.51/9 houses. However, the fact that the living room was also supposed to be used as a bedroom in theory did not impress the housewives, who preferred to have an additional separate bedroom, and then a living room for living purposes only. In one-fifth of the houses, there was only one bedroom, whilst in one-tenth of the houses two bedrooms were available. These three types of bedroom facilities together accounted for all but five or six per cent of the dwellings, indicating how very stereotyped the existing plans are in regard to the number of bedrooms.

The number of bedrooms required by households in terms of the minimum standards is shown in Table C.29, appendix 'C'.

The number of bedrooms preferred by a housewife shows a relationship with the rent-paying ability. The general tendency is for the number of bedrooms desired to increase with rent-paying ability. In this sense the poorest are realistic. However, as it can be expected that increasingly in the years ahead the family sizes of those with a high socio-economic status will tend to become smaller than those with a low socio-economic status, the poor are likely to need as many bedrooms at least as the better off, if overcrowding is to be eliminated from our urban Bantu townships. This is the old dilemma facing the dwelling designer which is typical of urban areas throughout the world - while the poor need more than just one or two bedrooms, they cannot afford to pay for them, whereas the relatively well-off want lots of rooms and can pay for them, but in many instances their smaller families do not really need so many rooms. This dilemma can only be solved by subsidising rentals for the poorer groups, so that houses sufficient to accommodate them without overcrowding can be planned.

6.9 Attitudes to Ceilings:

Ceilings were almost overwhelmingly desired by the housewives. Ninety-four per cent of the housewives were in favour of ceilings, regarding them as necessary.

The main reasons given for wanting ceilings were either that ceilings provided thermal insulation (one-in-eight of the housewives mentioned this); that the thermal insulation, dust-proofing and appearance of a ceiling is important (also one-in-eight of the households); thermal insulation and dust-proofing

were desirable and the ceiling provided this (also one-in-eight of the households); or again one-in-eight of the households considered that ceilings provided thermal insulation and a good appearance. The only other attitudes worth commenting on were that one-in-ten of the housewives mentioned the appearance of a ceiling only as a reason for wanting one, and just under one-in-ten of the housewives mentioned the dust-proofing qualities and appearance of a ceiling as being the reason for wanting a ceiling.

6.10 Preference for Internal Doors Within a Dwelling:

The preference for internal doors within a dwelling was very marked - 99.8 per cent of the housewives interviewed thought they were necessary.

The overwhelming reason given for wanting internal doors in a house was that doors provide privacy when one is undertaking activities such as bathing, or dressing, or for that matter, resting or sleeping. Three-quarters of the housewives mentioned this as a reason. One-in-eight mentioned that doors keep a house warm in winter, while about the same proportion mentioned either that doors allow rooms to be locked up against the deprivation of thieves and thugs, or on the other hand that doors look neat and complete the appearance of a dwelling. (These proportions add up to more than unity, because the housewife could and sometimes did give more than one reason for her answer). Other less frequently mentioned reasons for wanting doors was that they allowed one to lock up rooms so that children could not get in and mess around; that doors were desirable from the point of view of reducing sound from travellling from one room to another; or that they were cheaper for the householder than curtains which have to be replaced periodically and therefore are a cost on the household budget; or that curtains can catch fire when one moves past them at night with a candle in the hands.

Although we allowed for a response that certain rooms might not require doors, not one of the housewives mentioned this - they felt all rooms needed doors.

6.11 Preference for Floor Finishes:

The single most frequently mentioned preference for floor finishes on the part of housewives, accounting for one-in-four of the housewives, was to have all rooms tiled. In roughly one-tenth of the cases each mention was made of having all rooms cemented; or having all floors cemented except the lounge which should be finished with wood block; or having all floors cemented and covered with lino. For the rest the preferences were widely scattered with not enough housewives mentioning any

one preference to make it important enough to plan specifically for.

Those preferring cement floors in one form or another (either purely cement or cement with lino, or cement except in the lounge where it should be tiled), were all in the lower socio-economic levels. For example, 98 per cent of those wishing for cement floors throughout the house had a negative rent margin, while 99 per cent of those who wanted cement floors in the house except for a lounge with wood block, also had a negative rent margin. Those who mentioned lino on cement tended to have positive rent margins, and 35 per cent of them had a rent margin of under R10 per month, and a further 46 per cent had a rent margin between R10 and R19 per month. Although the housewives from families where R40 or more monthly could be paid for rent were rare, looking at their preferences they tended mainly either to wish for all floors tiled (a third of the housewives whose rent margin was R40 or more per month mention this), or to have the kitchen and bathroom tiled, with the rest of the rooms floored with woodblocks, (20 per cent of these housewives). Other preferences covered a scatter of different flooring material combinations for different rooms.

In contrast with the other preferences which we have looked at previously, which did not show any clear link with rent-paying ability, floor preferences are undoubtedly linked with ability to pay rent. The housewives appear to be realistic in their tastes, in that the more expensive floor finishes are mentioned mainly by those housewives who would be in a position to afford them. This accordingly can be borne in mind by the architects when designing new dwellings.

6.12 Attitude to Size of Existing Rooms in a Dwelling:

6.12.1 Attitude towards size of kitchen:

In the overall sample just over half of the housewives said that they were satisfied with their present size of kitchen, and the remainder wished to have a larger kitchen. Looking at available rent-margin, there is a definite link between socio-economic status and attitude. For instance, whereas almost two-thirds of those who were satisfied with their kitchen as it was now had a negative rent-margin, only one of the housewives interviewed who wished to have a larger kitchen was as poor as this. The proportion wishing to have a larger kitchen tends to increase fairly steadily with increasing rent margin, while the converse is true in regard to being satisfied with the present kitchen. So it is that the dwelling designer can assume that those who are able to afford rather more expensive dwellings in terms of rent-paying ability would generally appreciate larger kitchens.

6.12.2 Attitude towards size of living room:

Just over half of the housewives were satisfied with the present size of their living room. The general tendency is that the proportion of those satisfied with the existing living room size decreased as available rent-margin increased. An estimated 37 per cent wished to have a larger living room, and none of those expressing this preference had a negative rent-margin. Only three per cent - a negligible proportion - felt that they could do with a smaller living room, and all of these had a negative rent margin.

Desire for a larger living room, or satisfaction with the present size living room thus is linked with available rent-margin, and the general tendency is that as rent-paying ability increases, there is a likelihood to wish for a larger living room than the present. This again is a clear enough relationship for the dwelling designer to take into account.

6.12.3 Attitude to size of bedrooms:

Over half of the housewives were satisfied with the present size of the bedrooms. Again this attitude is clearly linked with rent-paying ability. For instance, nearly all of those with a negative rent margin who expressed a definite attitude towards size of bedrooms were satisfied with their bedroom size, while at the other end of the scale, only about one-quarter of those who could afford R40 per month or more for a dwelling were satisfied with their bedroom size. The converse position applies in regard to desire for a larger bedroom. None of those with a negative rent-margin expressed a wish for a bedroom or bedrooms larger than those they had at the moment, whereas two-thirds of those who could afford a rent of R40 per month or more wanted larger bedrooms. The proportion wanting larger bedrooms increased with rent-paying ability.

The attitudes towards bedrooms parallels the attitudes towards kitchen size, and size of living room. The dwelling designer can assume that the general tendency is for the desire for larger bedrooms to increase as rent-paying ability improves. It is interesting to note that the pattern is as clear as it is, and satisfyingly consistent (in general) over the population.

6.13 Attitude Towards Provision of a Storeroom:

All except four per cent of the housewives were of the definite opinion that a storeroom should be provided for a dwelling. Just under half thought that the storeroom should be sited inside the dwelling, while the remainder felt that it would be more suitable if the storeroom was located outside

the dwelling. Those wishing for the storeroom inside the dwelling were mainly the very poor with a negative rent-margin.

6.14 Attitude Towards the Provision of a Garage:

About one-in-four of the housewives felt that a dwelling should not be provided with a garage. The reasons mentioned were either that it was an unnecessary expense and the family could not afford a car, or that they would rather have an extra bedroom than a garage. (This last point was not made by more than a tiny fraction of the housewives). Apart from a further two per cent of the housewives who thought that while a garage should not be provided when the house was built, that space should be left for it in case it was needed later, the remaining majority amounting to almost three-quarters of the housewives felt that a garage was necessary and desirable. The main reason given for this attitude was that until such time as a family managed to purchase a car, a garage would be most useful as a storeroom. One-in-six of all housewives interviewed gave this as an attitude. One-tenth of the housewives mentioned simply that they hoped to buy a car and therefore would need a garage; while one-in-seven of the housewives said that a garage was necessary to protect a car from the weather and to keep it safely. Other reasons mentioned were not important.

There was a slight tendency for attitudes towards a garage to be linked with rent-paying ability, but this was not marked. The tendency was for those with a low rent-paying ability to be less likely to say that they wanted a garage. However, the general impression is that not only the majority of housewives wanted a garage for one reason or another, but that this preference covered all rent-paying groups. Those who were too poor to afford a car nonetheless appreciated a garage as a storeroom, and as something which they could offer to their friends with cars when they were visited.

There thus appears a clear demand on the part of urban Bantu households for garages, (and from other studies we may add a desire for a motor vehicle). This may be taken as a firm indicator of future developments, and we can assume that as economic status rises amongst the urban Bantu, so will vehicle ownership. This means that in the dwelling designs prepared for the rental levels above the lowest, some thought should be given to garage facilities - either in the form of providing such facilities when a house is initially built, or by siting the house on the plot in such a way that subsequently a garage can be built when required.

6.15 Preference for Siting of Water Closet:

Two-fifths of the housewives felt that a water closet should be located in the house. A third liked the idea of it being attached to the house, but outside, while the remainder amounting to about a quarter felt that a W.C. should be provided outside the house, in a structure separate from the dwelling. This particular set of preferences appears to be largely independent of rent-paying ability.

6.16 Type of Washing Facilities Preferred:

The majority of the housewives, amounting to over half, chose a bath, when given the choice of a washbasin and shower on the one hand, or a bath only on the other.

It is mainly the very poorest with a negative rent-margin who chose a washbasin and shower in preference to a bath. Eighty-six per cent of the housewives choosing this facility had a negative rent margin. This means that the other preference, for a bath, was the overwhelming preference of housewives from households that could in theory pay some rent, but there was no definite tendency for the preference to be linked with *increasing* rent-paying ability.

6.17 Wall Finishes Preferred:

It is striking that not one of the housewives interviewed mentioned either bagged or white-washed untreated internal walls as a preference for wall finish inside the dwelling. Regardless of rent-paying ability, plastering was the almost universal preference. Only occasionally did variations such as wall papering or mud plastered walls creep in. The present N.E.51/6 or N.E.51/9 type dwellings which have been erected in the townships do not have plastered walls, but either bagged walls or white-washed unplastered walls. It is only the older dwellings in older townships which tend to be plastered, or of course dwellings which have been erected by owners.

Despite the wide acquaintance which the urban Bantu housewives have with bagged walls and white-washed unplastered walls, they do not like this type of wall finish. (Ninety-four per cent of the housewives were emphatic they would not like bagged walls, and 99 per cent were against white-washed unplastered walls). Therefore the extent to which plastered walls can be provided, and their preference in this regard met, will depend on the cost level of the house being planned. Wherever costs allow, the dwelling designer should plan to have plastered walls internally.

6.18 Concluding Remarks:

The housing preferences analysed in this chapter emerge distinctly. Thus they provide a basis for the review of existing plans for urban Bantu houses, and also for the preparation of new dwelling designs.

Many of the preferences are spread throughout all rent-paying ability levels in the urban Bantu population. In such cases the extent to which they can be catered for will be determined by the cost level at which houses are being designed. Other preferences show a definite link with socio-economic level, and the designer can link variations in preference to the type of cost level for which he is designing, using the details presented in this chapter.

CHAPTER VII

IMPROVEMENTS AND ALTERATIONS MADE TO EXISTING DWELLINGS IN BANTU TOWNSHIPS

It has already been pointed out in Chapter I that one of the main reasons underlying the sponsoring of this present research was the evidence of alterations and improvements made to dwellings by Bantu householders in our urban townships. This evidence suggested very strongly to architects that the time had come to reappraise the housing situation among urban Bantu, and to see whether the dwelling designs which had been prepared after the last war to solve the problem of urban slums were still appropriate, or whether changes should be made[1]. In his paper Welch presented photographs giving visual evidence of the types of alterations made to dwellings. In this chapter we provide some systematic facts and figures about the types of alterations made in the seven areas studied by the research. From this an attempt is made to deduce features of dwelling design which can be said objectively on the basis of concrete evidence to be popular with urban Bantu householders. We have already presented evidence of Bantu housewives' preferences. It will be interesting to see whether these preferences are further substantiated by alterations and improvements which have been made by those who could afford to spend money on them.

7.1 Addition of Ceilings:

It will be remembered the previous chapter showed nearly all housewives prefer ceilings. However, the addition of a ceiling to a room is quite a complicated task where there are no beams in existence to nail the ceiling to, and it is also a fairly expensive alteration. Therefore, it is not surprising that four-fifths of the homes visited had not added any ceilings. Nonetheless, the importance of ceilings for householders is underlined by the fact we estimate that in one-fifth of the dwellings ceilings had been added. The most common pattern when ceilings were added was to put them into all rooms in the house. In an estimated 15 per cent of the houses this has happened, and in only five per cent of the dwellings, only one or two rooms were given ceilings. There was no general tendency to choose any

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1) Welch, C. Tod (1963): 'Urban Bantu Townships': op. cit.

one room, when ceilings were added to only one or two rooms in a house.

Thus the general tendency is either the family left the house as it was, or put in ceilings throughout.

7.2 Plastering of Walls by Occupier:

The great importance attached by Bantu householders to plastered walls is shown by the estimate that in only two-fifths of the houses had no internal walls been plastered by the occupier as an improvement. As with ceilings, the most usual pattern, (accounting for over 42 per cent of the cases), was to plaster all rooms. Only two other patterns accounted for more than one per cent of the cases - in two per cent of the cases the living room and the kitchen were plastered, while in about one-and-a-half per cent of the cases only the living room was plastered.

Houses with originally plastered walls were rare, and it was estimated that only one-in-twelve of the households had a dwelling where the internal walls were originally plastered. The preference for plastered walls came out clearly during the interviews, and is strongly supported by the evidence of alterations and improvements.

7.3 The Addition of Picture Rails to Rooms in the House:

In only one of the houses visited had picture rails originally been installed when the house was built. Picture rails are moderately popular, and in an estimated one third of the houses picture rails have been added. The most usual pattern, accounting for one-in-five of the dwellings, was for picture rails to be fitted to the living room only. The only other pattern accounting for more than about two per cent of the dwellings was, surprising enough, to have picture rails in the kitchen - four-and-a-half per cent of the households had this rather unexpected alteration, indicating that at least for some of them the hanging of pictures in the kitchen is a definite wish. We have shown the kitchen is de facto a main living room for very many households, and this probably explains the addition of picture rails to the kitchen.

7.4 The Fitting of Pelmets Above Windows to Cover Curtain Rails:

In our sample only one house had been fitted with pelmets at the time it was built. In two-thirds of the dwellings nothing had been done, but one-in-three of the householders had been keen enough on pelmets to fit them. In this instance, the most usual pattern, accounting for one-in-six of all dwellings, was to fit pelmets to every room in the house. The only other combination of any note was in seven per cent of the cases where pelmets were fitted only in the living room. All the other combinations of various rooms fitted with pelmets were fairly negligible.

7.5 Improving the Floor Finishes in the Dwelling:

Summarising the position in regard to the original floor finishes in the dwellings, and taking the three cities, the three townships and the small non-industrial town all together, it is estimated that in 46 per cent of the dwellings all the floors had originally been cemented. In 29 per cent of the cases they had been all of earth, except for a cement floor in the kitchen. In a further 22 per cent of the dwellings all floors in the house had been of earth. The remaining small percentage of cases had other kinds of original floor finishes.

Floor finishes are clearly one of the most important aspects of dwelling finish from the point of view of the householder, if alteration and improvements are anything to go by. In only seven per cent of the dwellings no alterations or improvement to the dwellings floors had been made by the occupier. This is a striking figure. Over half (56 per cent) had altered the floor finish in all rooms, even if only by the fitting of a lino 'square' in each room. In 14 per cent of the cases the living room and all the bedrooms had been selected for improvements. Other combinations of rooms were not frequent, each taken singly.

7.5.1 Alterations to the living room floor:

An analysis of the changes made to the floors, room by room, was made for the sample as a whole. In the living rooms, a wide range of alterations had been made to the floors. The most frequent alteration was the fitting of a piece of lino. In 45 per cent, or not far short of half of the dwellings, lino had been fitted to the living room. It goes without saying that none of the dwellings had originally been fitted with lino. The lino was put down either on earthern floors, or the occupiers had first cemented the living room floor and then put a lino down on top of it,

or the lino was laid on an originally cemented floor.

Where the occupier had put down tiles or wood blocks, we found no cases of lino being put on top of this material in the living room.

In about three-tenths of the houses, the original flooring material in the living room had been earth, and this had been cemented by the occupiers. Almost four per cent of all householders had not only cemented the living room, but then fitted either tiles or wood blocks.

From an analysis of available rent-margin, it appears with few exceptions that it is the poorest who have not done something (however modest), to try and improve their floors, unless they were already satisfied with the material they had. The preferences show that none of the housewives were satisfied with earthern floors, but some of the very poor still had earthern floors or earthern floors with lino on top of them when we visited the homes.

7.5.2 Improvement to floors in the kitchen:

In only one-in-eight of the houses visited were no improvements made to the kitchen floor. If we subtract from this figure those who originally had tiles, on the grounds that this is a suitable substance for a kitchen floor which is not likely to be improved on, then the proportion who did not improve their kitchen floor at all was only one-in-ten. An estimated half added lino, again pointing to the peculiar popularity of lino amongst the urban Bantu. Those who cemented their kitchen, whether they put lino on subsequently or not (and most who did cement their kitchen floor put lino on afterwards), amounted to an estimated one-fifth of the households.

It is noteworthy that 15 per cent of those who previously had cement floors proceeded to tile their kitchen floor, indicating the importance of this material. There was some tendency for this latter pattern to be rather more frequent amongst those with a higher socio-economic status - i.e. amongst those able to afford more expensive homes, but few of the poorer households also tiled their kitchens.

7.5.3 Improvement to floors in the bedrooms:

Examining first of all the main bedroom in the house, an estimated one-in-six of the households did not alter the original flooring material. (We should note that the proportion who had tiles in their main bedroom and therefore would not be expected to change it, was negligible, and can be ignored.)

Half added lino, while 36 per cent cemented their floor, as originally the main bedroom had had only an earthern floor. As is to be expected, some of the more expensive finishes such as tiles or wood blocks, which were rare, were largely limited to those of a superior socio-economic status.

It is noteworthy that many of the poorest somehow or other arranged to have their main bedroom floor cemented rather than put up with earth.

In regard to the other bedrooms in a house, again about one-in-six of the houses visited had not had the floors in one or more of the bedrooms other than the main bedroom improved. A piece of lino in one of these additional bedrooms was not as common as in the main bedroom, for only one-third of the households had added lino to one or more minor additional bedrooms. In about one-quarter of the cases the floor had been cemented after originally being earth. Very few - three per cent - had started with earth floors, and still had earth floors without even a lino on it when the minor bedrooms were inspected during the survey.

7.5.4 Summary of changes made in flooring material:

The above sections give a picture of each room separately. It is necessary to get some idea of how the changes had been made in combination within individual dwellings. Summarising the position, in only about 12 per cent of the dwellings visited, had absolutely no changes been made in the flooring material of any of the houses visited. This is a striking figure, and illustrates the importance of flooring material to the householder. Earthern floors had been cemented, and in many instances lino had been put down. Indeed, the most popular single pattern, accounting for 25 per cent of all of the households was to put linoleum down in some but not all of the rooms of a house. This was followed by 19 per cent who put lino down in every room in their house, including the kitchen. Few - just under one per cent - put linoleum down in some rooms except in the living room which they had covered with wood blocks, whilst two per cent had put linoleum down in most of the rooms, but had also had tiles put in the living room. In toto, including minor combinations, we find that almost three-fifths of the households had put down linoleum in either some or all of the rooms in the house.

Apart from linoleum, we should note that in 17 per cent of the cases both the living room floor and the bedrooms were cemented. Five per cent put down tiles in the kitchen and lino elsewhere throughout the house, while a further seven per cent had put down tiles in several rooms in the house, covering the rest of the floors with lino.

Bearing in mind that many of the changes are relatively costly for a household with low rent-paying ability, and that material such as linoleum has to be replaced frequently, architects should go into the question of whether it might not be more economic to have some of the dwellings professionally fitted with linoleum before the house is rented, and then add the cost to the rent. This is likely to be cheaper for the householder in the long run, in that the linoleum will of course be bought in large quantities and therefore at a reduced price, and if it is properly fitted on a good base is likely to last considerably longer than if it is put down by an amateur on an imperfect base. It is clear from these findings of what people have actually done to their houses, that neither earthern nor cement floors are liked by the majority of householders. From chats with individuals, it would seem that both the thermal insulation qualities and appearance of a floor is important. Bearing in mind that linoleum probably does not have very much better thermal qualities than cement, appearance is the factor whose importance must not be under-estimated by the designers.

7.6 Alterations and Improvements to a House Made by the Occupier Shortly After Moving In:

It is revealing to examine what changes people make to their house immediately or soon after moving in, as this gives an indication of their immediate priorities. A tabulation was made of these details, and it was found with some surprise that in only 18 per cent of the houses was nothing done by the occupiers when they moved in, or soon afterwards.

Percentage-wise, the changes and additions made by occupiers were, first of all in terms of the permutations found, in 16 per cent of the dwellings the earthern floors were cemented, as well as a gap all round the walls between the top of the wall and the roof filled in. (This gap appeared to be more than just a ventilation gap, as it extended right around the house. It was the width of the rafters, which rested on top of the walls, rather than being built into them. This gap was filled in by occupiers on the grounds that in winter the house was extremely cold and draughty with such an extensive space between the roof and the walls.)

Just under 16 per cent of the cases added steps to the front door. From observation this had to be done where the houses had been built on sloping ground, so that the front door was too high above ground level for easy access to the dwelling. In one particular township where more recent development had moved up from the flat ground to the slopes of hillsides, the number of steps required to enable the householder to get in and out of the front door was more than just one or two steps. In this township some of the houses on the slopes had certain rooms where the floor level was below door level, and the occupiers had to fill

the floors in with earth up to door level. This together with the need for front steps, suggests that the routine plans had been applied in some areas without any thought or adaption to the terrain.

In 14 per cent of the houses, the earthern floors were cemented, but no other improvements were made on occupying the house - some may have been made subsequently, but do not concern us in this section.

In 11 per cent of the houses a gap between the wall and the roof (as previously described) was filled in; while in 10 per cent of the cases earthern floors cemented, the gap between the wall and the roof filled, and steps were added to the front door.

Other permutations of types of alterations and additions made to the house on occupying it are far less frequent, and need not be commented on. Summarising the position and extracting details from the various combinations of alterations, in a total of 52 per cent of the cases in one or more rooms, earthern floors were cemented. In 37 per cent of the houses gaps between wall and roof were closed, while in 31 per cent of the cases steps were added to the front door - (in most cases this was only one or two steps, but from observation it is clear these steps were necessary).

It would seem a fair interpretation of the above figures that in some instances cost of houses to local authorities have been kept down by the authorities concerned not putting steps to the front door where the front door is above ground level, and by not concreting earthern floors. Adding these features becomes a cost on the occupier. Finally, it is also evident that the basic plans are not always used with thought for the nature of the terrain being built on - in a few extreme cases ground level in rooms was below door level when the occupier took possession.

7.7 Number of Severe Cracks in the Walls:

As we have been considering the structure of the house and the way in which it was completed, it is a suitable point at this stage to comment on the number of severe cracks which our interviewers observed in one or more of the rooms of the dwellings visited. It will be seen from the interviewer's manual in appendix 'A', that in relation to question 27 in the interview schedule 'severe cracks' were defined as those cracks which extended over at least half of the length of a wall, and that the width of the crack was at least one-sixteenth of an inch. Small hairline cracks were not classed as severe. From the survey it is estimated that 61 per cent of the dwellings did not have any cracks as defined. Seven per cent have

five or more severe cracks. In 10 per cent there was one severe crack and in 11 per cent two severe cracks evident in the dwelling. In seven per cent there were three cracks, and in four per cent four cracks. Thus typically either the houses had no cracks, or one to two severe cracks.

While three-fifths of the houses have no severe cracks, it is nonetheless important for the designers to note that in two out of every five dwellings visited there was one or more serious crack(s). We are not competent to conclude whether this problem relates to a particular type of design, or particular types of attempts to cut costs, or particular soil types. The problem did vary from town to town. In Johannesburg only one-quarter of the dwellings had one or more severe cracks, whereas in Durban 52 per cent had some cracks. In Pretoria 56 per cent, in Daveyton 61 per cent, and in Kwa Thema by contrast 36 per cent of the dwellings had one or more severe cracks. In Lynville 33 per cent, and in Greytown 41 per cent of the dwellings had one or more severe cracks.

7.8 Hanging of Curtains in Internal Doorways:

One of the features of the dwellings we visited was that frequently we found curtains hung in doorways where the house had not been fitted with internal doors. In one-third of the cases a curtain had been hung in one or more doorways. There was quite a spread of various permutations of rooms chosen for hanging a curtain, and this of course in part varied with the dwelling designs. In seven per cent of the cases only one bedroom had a curtain in the doorway, while in another seven per cent all bedrooms had been fitted with a curtain in their doorway. In six per cent of the houses all rooms in the house had had a curtain fitted to the doorway leading out of the room. Other variations are not important enough to comment on.

7.9 Fitting of Internal Doors:

Excluding houses built to a special plan chosen by the owner, in only 14 per cent of the houses visited had internal doors been fitted to all rooms when the house was built. In three out of four of the dwellings built with doorways without doors, one or more of the doorways had been fitted with a door by the occupier. This underlines the importance of the desire for privacy and the value attached to doors in a dwelling. Our study of preferences in Chapter VI showed this also.

In an estimated 35 per cent of those dwellings which had been built without internal doors, doors had been fitted to every room by the occupier, while in 10 per cent all bedrooms only had a door added, and in another 10 per cent only one

bedroom (normally the main bedroom) had had a door fitted. For the rest there was a scattering of various combinations of rooms fitted with doors, no one combination occurring frequently.

The main point that emerges from this analysis is the importance of internal doors for the urban Bantu householder. In particular, housewives felt very strongly about the lack of doors to bedrooms. Examining all the various combinations involved in adding internal doors to a house, in a total of three-fifths of those houses built without internal doors, a door had been added by the occupier to one or all of the bedrooms.

7.10 Altering Position of Doorway in a Room:

In some of the dwellings we inspected the position of the doorway had been altered. This was rare, and it was estimated that in only seven-and-a-half per cent of the cases were such alterations made. There was a wide scatter with no clear picture of any one room being greatly favoured for changing the doorway. The only two combinations which accounted for more than a handful of cases were either changing the doorway in one bedroom, or in the living room.

7.11 Installation by the Occupier of a Stove:

From the survey it is estimated that in only six per cent of all the dwellings in the seven areas studied were stoves supplied by the authorities. (Generally only in houses built years ago were stoves supplied by the authorities). Roughly half of those living in a dwelling where a stove had been supplied had subsequently chosen to put in a different stove. This was invariably done on the grounds that the stove they put in was superior to the one originally supplied. The average deposit put down for a stove was just under R20, but an estimated one-in-eight paid R25 or more as down payment for a stove.

7.12 Installation of Electricity in the Dwelling at the Request of the Occupier:

From the survey results it is estimated that in two per cent of the dwellings electricity had been provided at the request of the occupier at some time subsequent to the erection of the structure. It must be remembered that the installation of electricity depends on it being available in the area, and we have already shown in this report that the availability of electricity varied very widely from one township to another. Therefore the true extent of the demand by urban Bantu householders for electricity cannot be assessed from this figure.

7.13 Improvements to the Exterior of the Dwelling:

In an estimated seven per cent of the dwellings in the areas studied, the external walls had been plastered by the occupier. In 11 per cent of the cases the walls had been painted, whether or not they had first been plastered. Different windows were fitted into the dwellings on rare occasions - we estimate that only three per cent of the dwellings in the areas analysed had different windows fitted.

Seven per cent of the householders are estimated to have fitted a different front door to that originally provided by the authorities who built the house.

A far more frequent improvement than those mentioned above, was painting the front door a different colour or painting it in a different style from that general to the housing scheme. Eighteen per cent of the houses in the areas we visited are estimated to have done this.

Work in the garden is important and was not infrequent. This had previously been shown by Welch, who gives many photographic examples of improvements[1]. In one-third of the gardens a cement terrace in one form or another had been constructed in front of the house. In 18 per cent of the cases a front verandah had been added on to the house, but in only two per cent of the cases was the verandah extended the full length of the front of the house.

Steps to the front door had been built in three-tenths of the cases, while half this number - 14 per cent - had added gutters to their dwelling, either all round the house, or in the front only. (It must be borne in mind that the typical plans being used at the moment for township houses do not make provision for gutters). Downpipes from gutters were fitted in an estimated 12 per cent of the cases.

Other improvements made in the garden have already been discussed in Chapter VI, from the point of view of the patterns of living of the urban Bantu householders, and the way in which they used their gardens. For details see Chapter VI.

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1) Welch, C. Tod (1963): 'Urban Bantu Townships': op. cit.

7.14 Concluding Remarks:

In conclusion, the details of alterations and improvements substantially support the housing preferences of housewives. Within a dwelling, there is no doubt of the importance for Bantu households of internal doors, plastered walls, and floor finishes other than earth or cement alone. Ceilings are also important, but less cases of this type of alteration were found, no doubt largely due to the difficulty and cost involved in fitting ceilings to houses designed without them, and which consequently have no convenient beams at normal ceiling height to which a ceiling could be fixed.

The external appearance of a dwelling is important, as the list of alterations and improvements made, shows.

All in all, the results of this chapter lend further support to the suggestion that existing dwelling plans be reappraised, and a variety of better finishes be planned for dwellings above the very lowest cost level.

CHAPTER VIII

ATTITUDES AND PREFERENCES IN REGARD TO CERTAIN ASPECTS OF TOWNSHIP LAYOUT AND DESIGN

While the main emphasis of this present research project was housing, the sponsors also requested that some limited information on attitudes of the urban Bantu to certain features of township layout and design should be collected. The architects and planners are not only concerned with the individual dwellings, but also how they fit together into a totality to form a community and a township.

The items which were chosen for investigation were selected after careful discussion with the architect concerned with this study. They were ones considered important for the township designer. The results fall into two parts - certain general questions, limited in number, which were asked of all housewives in the three cities, three townships, and one small non-industrial town covered by the survey; and secondly additional material obtained from the Daveyton and Kwa Thema samples. As indicated previously,in the report, and also in appendix 'A', these two townships were selected at the wish of the sponsor. Daveyton is regarded as a model urban Bantu township, and is the township which overseas visitors frequently are shown. It has a planned community centre, and attention has been given to layout. Kwa Thema was the first urban Bantu township planned in South Africa on the basis of neighbourhood units and town planning concepts, under the auspices of the National Building Research Institute. It was planned on the basis of research undertaken by that Institute. Thus, these two particular townships are of special interest to the dwelling designer, and the housewives selected in these two areas were given an additional questionnaire, as shown in appendix 'A'.

8.1 Attitudes of Housewives from the Total Sample in Regard to Certain Aspects of Township Design and Layout:

The following are the results of questions asked of all of the housewives interviewed in the seven areas selected for this study.

8.1.1 Attitude to houses in the street being painted the same colour:

Town planners are very concerned with the visual impact which an urban area makes upon its inhabitants, and upon the visitor. They are concerned with questions of aesthetics, form and colour, variation and the avoidance of monotony. To what extent are these issues important issues in the minds of our urban Bantu population at the present time? In an attempt to find this out, some questions were put to the Bantu housewives. It must be admitted that in very many cases some difficulty was encountered in obtaining satisfactory responses, largely on the grounds that the housewives had never thought about the issues raised. It appeared to us that in many instances problems and issues which the town planner sees had not struck the individual housewife as something to think about. The attitude often seems to be that one has to accept what is given to one, and therefore one does not question it in detail. This meant that alternative possibilities were not always thought about, and therefore ready answers to some of our questions were not easily forthcoming. However, the survey team did their best to discuss the issues with the housewives and record accurately the attitudes which eventually emerged.

Housewives were asked whether they thought it would matter if all the houses in a street were painted exactly the same colour - that is in terms of colour appear monotonously the same without individual variation. Almost half of the housewives said that it would matter, while 35 per cent felt that it would not matter, and a further 16 per cent did not mind (which is virtually the same thing as saying that it did not matter). There was no clear relationship between this attitude and the education of the informant.

It appears therefore that colour variation in the street does matter to an important proportion of urban Bantu housewives, and that it would be worthwhile planning deliberately to obtain colour variation within a street as far as dwelling facades were concerned.

8.1.2 Attitude to the fact that most streets in the township have houses which look alike:

A related question concerned the uniformity of dwelling designs in a street. The majority (57 per cent) of the housewives were emphatic that they disliked the fact that most streets in the township have houses which all look alike. Two main reasons were given for this attitude - first and foremost that different house styles in a street would be more attractive, as in White suburbs, and secondly that the existing similarity of houses and streets is monotonous. Only one-third said they liked the existing uniformity, often saying it was 'beautiful'.

The remainder either could not decide, or did not mind. Socio-economic status was not linked with variations in attitude. Thus again there is evidence to suggest that it is worth planning for visual variation within a township.

8.1.3 Attitude towards vicinity in which the housewife resided:

Housewives were asked whether, if they were given a free choice, they would still prefer to live in the area where they were at the time of the survey. It appears that the vast majority were satisfied with the area they were living in, in relation to other possible areas for residence. Four-fifths said that they would still prefer to live where they were, while nearly all of the remainder said that they would not - only about one per cent said that they could not make up their minds.

The major single reason given for preferring to stay where they were, was that the housewife and her family had grown accustomed to the place, and that to a lesser extent it was quiet, away from noisy central areas. One-quarter mentioned the first reason, and one-in-six the latter reason. Eleven per cent liked the area they were in because it was near means of transport, and the schools.

Reasons for not liking the area were rather varied. They ranged from factors such as not liking the neighbours, or stating that where they lived was too far from transport and/or school, to on the other hand, being too near a bus rank, which meant that the area was frequented by 'tsotsis' (thugs).

8.1.4 Should a township be planned so that different social groups lived together?

In Western cities it is taken for granted that 'birds of a feather flock together' - suburbs tend to differ in their socio-economic composition, and different classes live in different parts of the city. The planners wondered to what extent this attitude was beginning to emerge amongst the urban Bantu, and so we asked the housewife whether she thought townships should be planned so that people belonging to the same occupational group should live in the same vicinity. The same question was asked in regard to people of the same educational standards living together, and also in regard to similar income groups living in one area. It was most interesting to note that in two-fifths of the cases housewives were most emphatic that townships should be planned so that people of the same occupational group could live together - this means by implication of course, that people of other occupational groups should live elsewhere. It was particularly surprising to find that the strongest protagonists of this point of

view were the very poorest with a negative rent-margin. From this it would appear that perhaps they are self-conscious of their poverty and do not like having neighbours who they feel are socially better than they are and would look down upon them. Those with high socio-economic status, whom we had expected to endorse the idea of socio-spatial differentiation within townships, by and large did not support the idea - two-thirds of the housewives within this category with the highest rent-paying ability said a definite 'no' to the question.

The responses to the question as to whether people of different educational groups or different income groups should live in different parts of the township so that like lived with like, secured the same type of response as the occupational question. Percentages giving different answers, and the breakdown by rent-paying ability were very similar to that for the occupational breakdown. That is to say, an important minority amounting to about two-fifths of the urban Bantu housewives favour the idea of social classes as defined by occupation, education and income, having their own areas within a township. Contrary to expectations the strongest protagonists of this view are the poorest.

8.1.5 Attitudes to ethnic grouping within a township:

Ethnic grouping is a pattern of present township planning and layout. The housewives were asked about their attitudes in regard to this. They were specifically asked whether they thought it was necessary to divide a township into ethnic groups.

An estimated total of only 18 per cent of the housewives were in favour of ethnic grouping. Reasons given by those in favour of it were varied. The only reason (which was rather a general one), given with any frequency, was that 'people of the same ethnic group have many things in common'. Two-thirds of those in favour of ethnic separation gave this as a reason.

A clear majority, amounting to an estimated 76 per cent of the housewives, were definite that ethnic grouping in a township was not necessary. The major reason mentioned was that faction fights and misunderstandings are encouraged by division, whereas living together helps to develop understanding and appreciation of the other person's ways and points of view. It is very interesting to find this attitude mentioned so frequently, as there is no doubt that without some knowledge and contact with different groups, it is not possible for understanding to develop, and the housewives tend to regard faction fights and other less serious misunderstandings as in part being due to ignorance and lack of knowledge of the other person's way of life. Two other reasons mentioned frequently enough to need mentioning were the

idea that ethnic grouping encourages divisions and divisions weaken a people (12 per cent of the housewives mentioned this), and that the Bantu have previously always tried to live harmoniously together so that they could see no necessity for separating people of different ethnic backgrounds. Eleven per cent of the housewives from the total sample mentioned this.

The above results are sufficiently clear-cut, and the percentage differences between those for and those against sufficiently large, for us to have no hesitation whatsoever in concluding that the average urban Bantu housewife does not regard ethnic grouping in townships as either necessary, or desirable (as their reasons for their attitudes show).

8.2 Attitudes to Various Features of Township Facilities, Layout and Design, Based on Responses from Housewives in Daveyton and Kwa Thema:

We now turn to an investigation of the responses of the housewives interviewed in Daveyton and Kwa Thema. An additional short questionnaire was administered to this group of informants. For details of the questions asked, see appendix 'A'.

8.2.1 Attitudes towards the township's community centre:

Both in Daveyton and in Kwa Thema the housewives were asked about their attitude towards the community centre in the township concerned. In Daveyton, 86 per cent of the housewives stated that they liked the centre, while slightly more - 90 per cent - of those in Kwa Thema expressed the same attitude. There was some moderate relation between attitude and the relincome of the household. (Relincome was used as a measure of the relative economic status of the household). The tendency was for those with a high relincome to be rather more critical of the community centre than those who were poorer.

As most of the housewives in each of the two areas were satisfied with the community centre, it is worth concentrating on the reasons given by those who did not like the centre. It is encouraging that there was not any marked concentration on one or two features criticised. If this had been the case it would have pointed to a definite problem. On the contrary, there was a spread of items mentioned, suggesting it was more a case of individual dissatisfactions than definite problems which should be tackled. Therefore we may take the position as satisfactory.

Three main reasons were mentioned by housewives for liking the community centre in either Daveyton or Kwa Thema. If we combine both areas, the first one mentioned most frequently was that the community centre had a beautiful layout with beautiful buildings. Second in frequency was the response that the centre was convenient and helpful to the housewife. The third main reason was that it provided entertainment. In Daveyton the clinic, creche, and library were singled out specially for satisfactory comment.

8.2.2 Suggestions as to ways in which a community centre could be improved:

During the course of the interview, the community centre in either Daveyton or Kwa Thema was discussed with the housewives in the area concerned. They were asked whether they had any ideas as to how the existing centre could be improved. In Daveyton and in Kwa Thema in each case 30 per cent of the informants could make no suggestions at all, saying that the centre was satisfactory. There was a spread of suggestions made in regard to both areas, with one or two more frequently mentioned suggestions. None of the suggestions were mentioned by very many of the housewives. In Daveyton, the only suggestions which were made by more than five per cent of the housewives were that the hall should be extended; that a separate bioscope hall should be available separate from the social centre; and that more centres should be built decentralised into parts of the township remote from the present centre. In Kwa Thema the provision of a swimming bath was the main suggestion made. Other suggestions were not mentioned very frequently.

8.2.3 Extent to which the community centre is accessible from the different parts of the township:

In Daveyton 73 per cent of the housewives felt that the community centre was easily accessible from where they lived, but in Kwa Thema rather fewer of the housewives felt this. Fifty-seven per cent of those in Kwa Thema thought their centre was easily accessible. In both townships relincome was not associated with the attitude. This is understandable, as at the present time there is no clear tendency in either township for certain areas to be associated with particular socio-economic groups, and therefore people of different income levels are scattered throughout the townships.

The fact that a quarter of the housewives in Daveyton, and that about two-fifths of those in Kwa Thema felt that their centre was somewhat inaccessible lends strength to the suggestion

that decentralised centres be considered.

8.2.4 Degree of satisfaction with the shops in the township shopping centre:

An estimated 40 per cent of the housewives in Daveyton, and 28 per cent of those in Kwa Thema, were quite emphatic that the shops in their shopping centre were *not* satisfactory. There was only a very moderate association between this attitude and relincome, with a slight tendency for the better-off housewives to be rather more critical. The two main reasons given by those who were satisfied with the shopping centres were that the shops there had most things that they needed, and that the shops were nearby and convenient. On the other hand, the main criticisms levelled against the shops in the shopping centres were that either the articles were too expensive, (the shopping centre was described by more than one housewife as a 'black market'!), or secondly that the shops were too far from the house. Another reason mentioned sometimes was that the township shops did not carry adequate stocks.

8.2.5 Place where the household normally buys its household requirements[1]:

In Daveyton an estimated 55 per cent of the households normally purchase their household requirements from a nearby shop. Twenty-four per cent said they normally bought from the township shopping area, while only one per cent said that they bought near their place of work. Seventeen per cent said they bought their household requirements in the White town (Benoni itself). Corresponding percentages for Kwa Thema are 64 per cent buying from a nearby shop, and only two per cent from the township shopping area. Thirty-one per cent said they bought from the White town (Springs), while two per cent said they bought from near their place of work. Thus we find that there are some differences in shopping habits between Kwa Thema and Daveyton, the main difference being that in Daveyton a quarter say they normally buy from the township shopping area, which is clearly very much less popular in Kwa Thema. The

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1) Readers interested in a more detailed study of this topic should refer to the Durban study by Legwate, B.M. (1965): *Buying Behaviour Among Africans in Durban:* Boni's Advertising Consultants and Contractors, Durban. (mimeographed).

difference is almost certainly due to the nature of the two townships and the shops in the central area of each township. Kwa Thema seems to have more dispersed shops, so that the nearby shop is the logical place for the housewife to buy.

Socio-economic status does not seem to be clearly linked with these shopping patterns.

The reasons given for the choice of place where the household normally makes its purchases were, when the nearby shop was a choice, either that it was convenient so that the children could be sent, or that being nearby there were no transport costs involved. Those who bought from the township shopping area said that they bought there because it was nearby and convenient. Those buying near their place of work mentioned that it was easy to buy groceries near work and bring them home, or that the husband or wife worked at a store in the White area, and therefore found it easier to buy at the place of work. Those who specifically went to buy in the White town gave as their main reason that prices were cheaper at the market and at the bazaars in the White area. A second and less important reason mentioned by fewer housewives was that the shops in the White town were better stocked and had a wider range of choices.

Being specifically questioned as to whether the township shopping centre was 'convenient' to their own home, 54 per cent of those in Daveyton and 49 per cent in Kwa Thema - that is about the same percentage - agreed that it was convenient. These are different from the percentages regarding the community centre as accessible. This suggests a different set of criteria are applied by housewives to assess shopping accessibility in contrast to the accessibility of other types of facilities provided by a centre.

8.2.6 Were there any shops convenient to the dwelling?

For some of the further-flung areas in Daveyton and Kwa Thema the community centre with its shops was rather remote, and therefore in such cases it would be important to have a nearby corner shop. We also asked the housewife whether there was any shop at all which was convenient to her dwelling. Thirty-six per cent of the Daveyton housewives and 46 per cent of those in Kwa Thema said that there was a shop or shops convenient to the dwelling. A further 54 per cent in Daveyton and 49 per cent in Kwa Thema said that the main township shopping centre was convenient, so that they did not worry about corner shops. This means that only 10 per cent of the housewives in Daveyton and five per cent in Kwa Thema felt that there was no shop convenient to them. This suggests that by and large there is no serious problem of accessibility to shops in either of the two townships.

8.2.7 Should each ethnic group have its own shopping centre within a township:

Should each ethnic group have its own shopping centre? Or, should the various groups share one common centre? This is an interesting problem for the town planner, and the question was put to the housewives. There were no major differences of opinion between the housewives in the two townships, and therefore we can group them together. Eighteen per cent of the housewives were in favour of separate ethnic shopping centres, and of these almost three-quarters gave as a reason that if there was only one community centre serving all parts of a township, there would be some houses that would be too far from the centre. Thus their plea was really for decentralised shopping centres rather than ethnic centres as such. Other reasons for wanting separate ethnic townships were mentioned infrequently.

From this it follows that a clear majority of housewives thought that there should be one community centre for a township, and that this should serve all ethnic groups. The reasons given for this attitude varied, without any major clusterings of opinions. Picking out the more frequently mentioned reasons, which in all cases accounted for only one-in-eight or less of the housewives respectively, firstly it was said that if there were to be separate centres, one could no longer go to the shop of one's choice, but would have to go to one within one's own ethnic group (here the wily housewife is trying to make sure that her range of shops to choose from is not going to be limited); or that divisions into separate ethnic shopping centres would create petty quarrels, and it would be nicer for people to mix together; or that the Bantu must be regarded as one nation and not as different tribal groups; or that sharing is a good thing and to be encouraged.

8.2.8 Internal bus service in the township:

In Daveyton only eight per cent of the housewives thought that there was no internal bus service serving the township. Out of the remaining vast majority who knew of the bus service and therefore presumably had made some use of it, 55 per cent were satisfied. In Kwa Thema a high proportion of housewives contended that there was not an internal bus service - 21 per cent. Of the four-fifths of the housewives who knew and therefore reported on the internal bus service, 77 per cent were satisfied.

So it is that in both townships most of the housewives regard the bus service as an internal one within the township, and the majority are satisfied. The main reasons for satisfaction were that the buses were always regular and more or less on time, and secondly that there were sufficient buses that ran frequently. On the other hand the minority who were dissatis-

fied with the bus service contended that there were not enough buses and that the buses ran infrequently. This was the overwhelming criticism, and the only other criticism mentioned often enough to report on was that only the main bus routes were served, and that there was no true internal bus service covering all parts of the township.

8.2.9 Means by which the housewife gets to the shopping centre in her township:

As there were no important differences in the means by which the housewives in Daveyton and Kwa Thema got to their township shopping centres, we can group their replies together. Almost three-quarters of the housewives said that they walked, and one-in-five took a bus. Thus 'Shanks's Mare' is the most frequent form of transport.

8.2.10 Fear of going out at night:

It is all very well to provide community facilities and cultural activities in a community centre, but when so many of the housewives as well as their husbands are gainfully employed, the night is virtually the only time when such activities can be supported. If therefore people are afraid to go out at night, this renders rather pointless organising any cultural activity in the community centre. With this in mind we asked the housewives whether they were afraid to go out at night. Eighty-two per cent of those in Daveyton, and 88 per cent of those in Kwa Thema said that they were afraid to go out in the township after dark. There was one and only one reason mentioned - that it was dangerous to go out at night. This fear was expressed in various forms - e.g. that the informant was scared of 'tsotsis'; or that without a car one just could not venture out at night; or that it was not safe; or that it was 'rough' or that 'one might get into trouble'. Another way of expressing the same fear was that there were insufficient lights in the streets, and that the dark corners were consequently dangerous.

This means that less than one-in-five of the housewives felt that they gould go out at night. Only two main reasons were given for not being afraid - either that there were hardly any tsotsis in the area where they lived, or that the family had their own transport and therefore could move about safely. In addition, it should be noted that some of the housewives mentioned that they were not afraid of going out after dark because they were reasonably near places of safety, and so could swiftly walk there without being exposed for any length of time to possible attacks by rough elements.

8.2.11 Use which the family makes of the community centre facilities at night:

In view of the findings above, it is not surprising that in Daveyton only eight per cent of the housewives said that they, or members of their family, made use of the community centre facilities at night. The percentage in Kwa Thema was almost the same at six per cent. There was some tendency for more of the white collar group, (particularly the professional and commercial groups) than the manual workers to report use of the community centre facilities at night. This is almost certainly due in large part to the fact that more of these higher occupational groups would own a car.

8.2.12 Use of the creche:

In Daveyton only nine per cent of the housewives said that they made use of the creche in the township. Five per cent of the Kwa Thema housewives said this. The main reasons given for not using the creche were that either the children were too old or too young, or that the housewife was not working and therefore there was no need for her to use the creche. Reasons given for not using the creche which implied some criticism of the creche, were infrequent. This suggests that there is no real dissatisfaction with the creche which would cause housewives to keep their children away.

In Kwa Thema some of the housewives (one-in-eight) mentioned that they could not use the creche because it was too far away from home, but this was not a problem apparently in Daveyton. Only 14 per cent of the housewives thought that they would use a creche for their children if it was conveniently placed in relation to their home in Daveyton, and 19 per cent felt this way in Kwa Thema.

8.2.13 Attitude to the township beerhall:

Twenty-one per cent of the housewives in Daveyton, and 30 per cent in Kwa Thema did not like the beerhall. The main reason given was not very explicit - that the housewife did not care about the beerhall and therefore did not like it. The main reason which emerged from those housewives who were more specific about their dislike of the beerhall was that the men spent all their money there; or secondly (rather in a temperance vein) 'that beer drags a nation down', and that they disapproved of the beerhall as a place of drinking.

The reasons for liking the beerhall in each township were varied, without any really major ones standing out. Reasons ranged from the liquor tasting 'nice' and the beer being 'clean', and cheap, to 'the beerhall discourages the drinking of unhealthy concoctions', or 'that the service is good', and 'if one has no time it is convenient to pop into the beerhall for a quick one'. None of the reasons seemed to be of any particular importance for the town planner.

8.3 Concluding Comments:

The general impression gained from the responses analysed in this chapter is that the average Bantu housewife is not very critical of present township layout. Many of the topics of concern to the town planner had not previously been considered by the respondents. Nonetheless, the results give grounds for believing that experimentation with township layout, and the introduction of variations in form and perspective, would be appreciated.

As townships grow larger, decentralised shopping areas must be planned - the time is ripe for such developments now.

There is less support at present for socially differentiated 'class' areas within townships than had been anticipated. However, we believe there is a growing class-consciousness amongst the urban Bantu, and that improvements in their socio-economic level will see the increasing desire for 'like to live with like' - i.e. for the development of socio-ecological areas within Bantu townships, as is found in White suburbs. It is suggested a township be designed on class lines, and subsequent reactions of inhabitants noted.

Lastly, the development in urban townships of cultural life centred on the community centres is severely handicapped by the fear (apparently a realistic fear) which township dwellers have of going out at night. Until such time as Bantu townships are adequately policed at night, there seems no hope of seeing *extensive* use made at night of community centres. This means community centres are investments which are not likely to be fully exploited under present conditions. Despite this, we are of the opinion such centres should be increasingly planned, built, and staffed adequately by local authorities.

CHAPTER IX

MAJOR FINDINGS AND RECOMMENDATIONS

This chapter presents the major findings of the study, together with recommendations. For detailed findings, and less important recommendations, the reader should consult the individual chapters.

9.1 Population Structure and Growth:

In all of the areas studied the age-sex composition showed that we are dealing with a young population which can be expected to grow rapidly. The type of population structure conforms to a progresssve population, implying a high concentration in the young and middle-aged groups, and a positive natural increase.

In this regard it should be noted that we can expect our urban Bantu populations to grow both as a result of natural increase, and also as a result of net in-migration into urban areas. Given a growing South African economy, the marked urbanisation of the Bantu can be expected to continue. The trend is that whereas in 1960 about one-third of the total Bantu population in the Republic lived in urban areas, by the turn of the century about a half are likely to be in urban areas[1].

Recent detailed research has provided an estimate of the future likely growth of the Bantu population in Durban. It was estimated that in 1966 the Bantu population of Metropolitan Durban amounted to about 350,000 persons. By the year 1990 this number of Bantu is likely to have grown to about 729,000 persons of all ages[2]. This estimate was compiled after an exhaustive

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1) Watts, H.L. (to be published shortly): 'The Role of Migration in the Development of South African Towns, with Special Reference to King William's Town and East London': op. cit., Diagram 1.

2) Watts, H.L., R.J. Davies and G.H. Waters (1967): *The Spatial Distribution of the Present and Future Residential Population of Metropolitan Durban:* Institute for Social Research, University of Natal, Durban. (mimeographed). See p. 92.

analysis of statistical data, together with a series of detailed interviews with officials of the Department of Bantu Administration and Development, the Department of Community Development, the Durban Corporation and other local authorities forming part of Greater Durban, as well as industrialists, estate agents and developers, and business men in the region. By the year 2,000 Metropolitan Durban is likely to have some 800,000 Bantu, with a total population of over two-and-a-half million persons of all races.

It was not possible in this housing survey to make similar detailed projections for Johannesburg or Pretoria, as each city would have represented a research project on its own. However, an examination of the trend for Metropolitan Johannesburg shows that the Bantu population has been growing steadily, but at a somewhat declining rate. If the trend is extrapolated, we estimate that whereas at the census in 1960 Metropolitan Johannesburg had 650,000 Bantu, by the year A.D. 2,000 there would be about one-and-a-half million. Pretoria has been growing far more rapidly than Johannesburg, at least as far as its Bantu population is concerned. The plotting of figures from various censuses shows an extremely rapid rate of growth, which if continued could easily produce one million or more Bantu by the year 2,000. In 1960 the figure was only about 200,000 Bantu living in Metropolitan Pretoria.

Whether or not growth of the order of magnitude suggested above will be sustained up to the year 2,000, is in a sense not crucial for our purposes. What is important is that these figures show that we can expect housing experts to have to face the problem of accommodating larger and larger urban populations of Bantu. This pattern of urbanisation is common to all developing countries throughout the world, and therefore all available evidence leads one to expect that planners must prepare for such a situation. Clearly populations of such magnitude cannot all be housed indefinitely in a type of dwelling design that involves more and more horizontal spread across ever larger and larger areas of veld. Just to take one example, the estimates for Metropolitan Johannesburg three decades hence imply that if housing was to be provided on the same basis as at the moment, over double the acreage required for housing at the present time would have to be set aside. Thinking of something double the size of Soweto within 30 years gives an idea of the size of the problem. Not only the distance over which services would have to be provided would be increased, but the journey to work would be greatly lengthened. There is no doubt therefore that alternative housing solutions such as 'High Rise' development must be seriously considered for the cities.

9.2 The Need for Higher Density Forms of Housing for Urban Bantu:

The estimates in the preceeding section show without any doubt that the time has been reached when provision of at least a certain amount of higher density housing for urban Bantu in the large cities must be seriously considered. In urban development throughout the world this typically means 'high rise' development.

The present study can give no indication as to the ease or otherwise with which urban Bantu would adjust to 'high rise' forms of housing. During the pilot survey, questions relating to the development of flats were put to housewives. However, the responses obtained made us decide to remove these questions from the main fieldwork interviews. The reason was that either the housewife had had no experience of flats whatsoever, and therefore would not conceive of the type of design she was being questioned about, or on the other hand she had had experience of White flats when working as a domestic servant. This type of flat development is far more expensive than the average Bantu household in the immediate future can afford, and therefore if the housewife framed her responses in terms of this type of design and finish her replies would be completely misleading. Essentially the problem was that there was no way of communicating adequately to the housewives an impression of the type of high rise development which would be likely in urban Bantu townships during the next decade - and therefore it was not possible to obtain responses to something which they could not visualise accurately. Any replies we received would have been invalid, and hence the questions were dropped, as no solution to the problem could be found.

On the other hand, we can see that increasing urban growth is leading to the need for a proportion of dwellings to be of the high rise type. The journey to work would become increasingly burdensome and urban sprawl even more of a problem if low density development was to continue indefinitely. On the other hand, we have no doubt that initially at least there will be problems of adaption by urban Bantu households to high rise development. Even though not every Bantu householder makes good use of a garden, they nonetheless generally prize a piece of land which they can use, and the loss of a garden of their own is likely to cause frustration. Secondly, and probably far more serious, the grouping of families in close proximity in a multi-storey building is likely to produce a much higher incidence of accusations of witchcraft and sorcery. People will not only be afraid of being bewitched, but will be afraid of being harmed by medicines which other families are using to protect and strengthen themselves against both physical and spiritual dangers. Other problems too are likely to be encountered. However, the increasing pressure on land is likely to be such that, as amongst Whites, high rise development will be an inescapable necessity, and some of the households eventually

will have to live in such accommodation.

To ease the problems of adjustment to flat life we suggest that each block of flats should have a trained caretaker who can supervise the families, and help them adjust to a new pattern of urban living. If there is no caretaker, maladjustments and problems encountered by the new form of corporate living in a confined space are likely to be far worse than they need otherwise be.

In designing high rise development, attention should be given to catering as far as possible for the needs and preferences which have emerged from the study. In particular, if individual families are to lose their gardens, some serious attempt must be made to provide an outdoor living area where they can sit - we have shown how important a feature of the way of life of the urban Bantu the outdoor living area is.

9.3 Overcrowding and a Shortage of Dwellings:

There is a serious housing shortage in the areas studied, particularly in the cities. Johannesburg in 1966 required an estimated 30 per cent more dwellings if each family was to have its own house. Durban required 29 per cent, and Pretoria was worst, requiring 46 per cent more dwellings. (This is quite apart from the future needs for extra houses to meet the problems posed by the urban population growth referred to in section 9.1 above). There is a need for the extensive provision of more housing. This shortage is one, but not necessarily the most important, of the factors involved in a serious amount of overcrowding in the existing dwellings. Taking all types of overcrowding combined, a minority of the dwellings in each of the areas studied were NOT overcrowded. Except in Lynville (Witbank) where 78 per cent of the dwellings were overcrowded, about two-thirds of the dwellings in each area were overcrowded. There is no doubt that some of the houses are too small for the households which have to inhabit them. There is a need for a wider range of dwelling sizes to be planned and constructed, and then for the administrators of housing schemes to match households with dwellings of appropriate size when allocating houses.

9.4 Rent-Paying Ability and the Need for Rent Subsidisation:

Rent-paying ability appears to have improved to an extent in the Southern Transvaal urban complex during the past one-and-a-half decades, but in Durban it is as bad as ever. A study of Lynville, the main township in the small industrial town of Witbank, and a study of Greytown as a small non-industrial town, suggests that rent-paying ability is markedly lower in the small towns,

particularly the non-industrial ones, than in the cities. The overall level of rent-paying ability is low, and many households have a negative rent-margin - i.e. in theory cannot afford any rent at all.

It is estimated that in Johannesburg 42 per cent of the Bantu households fell below the secondary poverty datum line - i.e. had an income insufficient to meet the theoretical minimum costs of food, clothing, cleansing, fuel and lighting, plus the cost of workers' transport and the present economic rental for their dwelling. In Durban the figure was estimated at 62 per cent, and in Pretoria 53 per cent of the households. Estimates for the proportion of households below the secondary poverty datum line in the other areas are: Daveyton 46 per cent, Kwa Thema 38 per cent, Lynville 66 per cent, and the small non-industrial town of Greytown, 74 per cent. A serious problem exists.

The re-introduction of rent subsidisation is strongly recommended to help alleviate the problem of urban poverty. We recommend that all households which cannot afford an economic rental should pay a sub-economic rental.

9.5 Suggested Method for Selecting Households Eligible for a Sub-Economic Rental:

If rent subsidisation is re-introduced, then the question arises as to how it should be applied.

A typical method for determining whether or not a household is eligible for a sub-economic rental is to use the total household income. We would stress that this method is far too crude, as it does not take into account the size of the household or its composition - and both these factors have an important bearing on the cost of living of that household, and therefore on the extent to which it can afford rent.

Ideally the *available rent margin* should be calculated for each household from tables such as those published in appendix 'B'. This may be too cumbersome a method administratively. If so, we would suggest that a per caput income would be far better a measure to use than total household income, regardless of the size of a household. The total monthly income of a household could be taken and divided by the number of people in the household. Households with a per caput income below a certain figure would then be eligible for rent subsidisation. We suggest that the level set be the average (mean) secondary

poverty datum line level[1)] for the Bantu households, on a per caput basis. For the areas studied the means in 1966/67 were:

Johannesburg	R9.20 per head monthly
Durban	9.63 per head monthly
Pretoria	8.44 per head monthly
Daveyton (Benoni)	8.94 per head monthly
Kwa Thema (Springs)	8.90 per head monthly
Lynville (Witbank)	8.36 per head monthly
Greytown	8.65 per head monthly
All areas combined	9.09 per head monthly

So for instance, all households in Johannesburg with a per caput income of less than R9.20 would, on this basis, be eligible for subsidised rent. Likewise in Durban the level would be R9.60 per month (in round figures), and so on. This system would select households which in terms of the secondary poverty datum line were unable to afford economic rentals at the present level.

If the above system was adopted, advice could be given by the Institute for Social Research as to what per caput income level to adopt for areas not covered by the survey. (As a guide, towns would be grouped in terms of approximating to the nature of one of the areas studied. While this is not precise, it is far less crude than taking the same total income level throughout the country). From time to time the levels set would have to be adjusted in terms of consumer price indices, to allow for the effects of inflation.

The weakness of using the proportion of income which a household spends on rent as a suitable measure of rent-paying ability has been adequately demonstrated by this study. It is clear that more sensitive techniques are required along the lines indicated.

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1) The secondary poverty datum line is recommended for use as it reflects not only minimum costs for food, clothing, cleansing, fuel and lighting, but also the cost of workers' transport and rent at the present cost levels. An income equal to or more than the secondary poverty datum line implies that under theoretical conditions with perfect budgeting a household could just afford the economic rent.

9.6 The Depth of Poverty:

Although the rent-paying ability of the areas studied does not appear to have improved as much as had been hoped, (in Durban it has not improved at all), the *depth* of poverty has probably decreased during the past one to two decades. However, we cannot be certain about this, as regrettably the earlier studies of poverty gave no indication of the depth of poverty but merely whether or not a family could afford an economic rent.

It is recommended that in future socio-economic studies should always include some measure of the depth of poverty. A technique such as for example the calculation of relincome should be used.

The incomes of the majority of households in all the areas studied fall below the minimum effective level - i.e. below the point at which households start spending on food, clothing, etc., the minimum amounts which they should in terms of the poverty datum line[1]. From 68 per cent of the households in Kwa Thema to 85 per cent in Greytown fell below this level. This emphasises the generally very low economic level at the present time of most of the Bantu. Energetic efforts are required to tackle the problem and solve it, just as the Poor White problem was tackled and solved years ago. From this point of view free education would seem as important as the re-introduction of rent subsidisation. In fact, in the long run, free education may be more important as many households at the present time cannot afford the education of their children - and yet this education is needed to help wipe out poverty in the future.

The depth of poverty varies considerably from one area to another. There is a need to have regular surveys to see how the position is altering, and to keep 'an eye' on the extent to which South Africa is being successful in combating urban poverty amongst the Bantu.

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1) Because even poor households must spend money on items excluded from the poverty datum line (e.g. on medicine, children's education, replacement of out-worn household equipment, etc. etc.), households with an income equal to or below the secondary poverty datum line cannot spend on food, clothing, and other items the minimum which they should in terms of the poverty datum line.

We suspect that because many of the households have a major gap between their legal income and what is required for healthy survival, this gap must in many instances be closed by illegal earnings. This is a way of solving poverty which South Africa generally, and likewise the individual communities, cannot afford. Therefore we seriously recommend that a major effort be devoted to solving the problems of poverty amongst urban Bantu. The solution of these problems will not be quick, and will have to be based on multi-pronged approaches. Suggestions for the type of efforts needed have been published[1]. The problems demand policy decisions - we seriously recommend that such policy decisions be carefully considered and made in the light of the best available evidence.

9.7 Need for Further Research to Test the Hypothesis that there is Serious Poverty and Very Low Rent-Paying Ability Amongst Bantu Households in Small Towns:

Part of the variation in the amount and depth of poverty between the different towns studied is due to variation in the cost of living. It seems that in the small towns studied the cost of basic essentials apart from the transport and rent may be higher than in the cities. This, taken with the main factor of lower wage structures in the small towns, explains the higher incidence of poverty and the greater depths of poverty in the two small towns studied. Our hypothesis was that poverty in small towns is worse than in cities. The results for Witbank, and particularly for Greytown (a non-industrial small town) support the hypothesis. We believe that the position in Greytown, where for example an estimated seven-tenths of the Bantu households have a negative rent margin, and two-fifths have less than half the minimum income required by the secondary poverty datum line, reflects the position in small non-industrial towns in South Africa generally. The amount of poverty is of the order suggested previously by Irving's study of Grahamstown[2].

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1) See for instance, Watts and Lamond (1966): op. cit.

2) Irving, J. (1958): op. cit.

It could well be that in small towns in South Africa about three-quarters of the Bantu households are in poverty, and that some are very poor. If so, the major reason would appear to be not so much variation in cost of living as unrealistically low wage scales in the smaller towns.

This tentative conclusion points to the possible existence of a serious position in small South African towns. Therefore, we urge that a follow-up study of a sample of say six other small towns in the Republic be undertaken, with the specific purpose of determining the level of rent-paying ability and the depth of poverty in these towns. We must be sure that the serious position revealed in Greytown is not unique.

9.8 New Plans Are Required for Dwellings in Various Rental Categories:

It is clear from an analysis of rent-paying ability that it would be appropriate to prepare new dwelling plans in several rental categories, and not merely at the lowest cost level as previously. While it seems that in the immediate future many of the urban Bantu households would be eligible only for the lowest cost dwellings, there are sufficient numbers who could afford and who would appreciate more expensive dwellings for it to be worthwhile to prepare a range of plans for houses at various cost levels. Plans covering dwellings in the under R10 per month rental group, R10 - R19 per month, R20 - R39 per month, and R40 or more per month rental groups should be prepared. If mid-points were chosen, dwellings at about the R5, R15, R30 and over R40 per month level could be planned.

An analysis of the living habits and housing preferences of the sample leads to the conclusion that one can talk of a pattern of living and preferences generally applicable to urban Bantu households. Therefore it is not necessary to think in terms of separate plans for different towns. This is indeed fortunate, as it greatly simplifies the task of the dwelling designer. Plans for the urban Bantu generally can be prepared. The living styles and preferences which emerged are essentially urban working class preferences, along the lines previously established for working class Whites and Coloureds. (Watts, 1960, 1962). There is some evidence also of emerging urban middle class tastes and values. It must be emphasised that the position is not static - there is a need to review regularly the changes in living patterns and housing preferences as the urban Bantu develop socially and economically. There is a need to keep dwelling plans in step with social and economic trends. Increasingly social differentiation in living styles and housing preferences will take place amongst the urban population. Therefore we recommend that at regular intervals a reappraisal survey such as the present one be conducted. The intervals at which such surveys would be appropriate will de-

pend on the rate of development and change within the Republic.

9.9 Living Habits and Housing Preferences:

Details of living habits and housing preferences are given in the body of the report. In some instances (which are specified) there are differences between the styles and preferences of the poorer as against the better-off households. However, in the main, there is not much difference at this stage according to socio-economic class. As has been pointed out, at the present time the tastes are very largely those of a working class urban group.

The kitchen is the most important room in the house in that it serves more functions than any other in the dwelling. It therefore requires the close attention of the designer.

The living room is very seldom used only for guests and friends, and is used for other purposes too. Essentially the designer should see this room as an important showpiece for the family, and a place where a variety of social activities can, on occasion, take place.

While essentially working class living patterns and preferences were found, we recommend that designers should think of planning for middle class tastes in the higher cost level of houses. We believe that these tastes are already emerging, and that there will be an increasing demand for dwellings of this type in the future.

The main reason why Bantu housewives disliked the present dwelling they occupied was that it was too small and overcrowded. Their wishes showed clear desire for more rooms and space. As far as cost levels allow the designer should take this into account. As rent-paying ability increased, there was a clear tendency for housewives to want larger rooms throughout the house. Likewise, the economically better-off families preferred more bedrooms - whether they necessarily needed as many as the poor with their larger families.

The main features of dwelling finish which are of great importance to the housewives were wall finishes, floor finishes, internal doors, and ceilings. A storeroom was also something which was valued widely - it probably is of particular importance to people living in small dwellings. Housewives did not like earthern floors, or cement floors without some other material on top. Ceilings were preferred, as well as plastered walls. The need for privacy and security prompted most to want internal doors. As far as possible these preferences should be met, as well as other minor preferences indicated in the text. Where cost levels allow, the designer should take housing preferences into account.

9.10 Township Layout and Design:

Our questions about township design and layout showed that many of the points which are of interest to the town planner had not been considered to any extent previously by the housewives. Nonetheless the responses suggest that it would be important for the town planner to experiment with variations in form and perspective within a township.

There is evidence as to the importance of planning decentralised shopping centres within a township, particularly in the larger ones.

There was less support for the concept of class areas within townships than we had expected. However, we feel that it would be worthwhile to design a township with housing allocated on class lines (economic lines) - so that one might, so to speak, get different class 'suburbs' within the township. We recommend that this be done as a pilot study, and then after the township had been inhabited for some time, the reactions and responses of the inhabitants should be studied. We believe that increasingly with the development of the economic levels and standard of living of the urban Bantu, such a spatial differentiation along class lines within a township will be valued. However, a pilot study on the basis indicated should be undertaken to test the hypothesis.

Not much use appears to be made at night of the community centres in Daveyton and Kwa Thema. It seems that this is likely to be the case in our urban Bantu townships until such time as there is adequate policing of the townships at night. From other studies we know that there is an important need for the development and stimulation of cultural and social activities amongst the urban Bantu. Given a largely working class population, night-time is the main time when such activities could be developed - but they will not be developed until people feel safe to go to a community centre at night.

9.11 The Journey to Work:

An analysis of the journey to work shows that in the cities some workers have to travel for an hour or longer to get to work. For instance, in Johannesburg the mean length of time taken by the journey to work is one hour 26 minutes. In Durban and Pretoria the average is one hour. An estimated 83 per cent of workers living in family dwellings in Johannesburg have to travel for an hour or longer to work. In Durban the figure was estimated at 43 per cent, and in Pretoria 41 per cent. As a result of this pattern, the workday is being lengthened, and probably in an increasing proportion of cases it is longer than desirable. Therefore we recommend that consideration be given to the problem. The

TECHNICAL APPENDICES

Pages A(ii) - (iii) of this Appendix provide copies of the two main designs for low-cost dwellings, plans No. N.E.51/6 and N.E.51/9. As at this stage the report is confidential, for the use of technical experts only, there was no point in including plans which are completely familiar to the experts. Therefore these two pages have been omitted from this volume.

APPENDIX A

DESIGN OF THE PROJECT - SAMPLE, AND FIELDWORK DETAILS

As is indicated in the text, the essential aim of the project was to provide information for architects and planners. Such data would guide in the re-design of dwellings for Bantu housing, and indicating the types of needs and rent-paying ability which urban Bantu at the present time have.

It was decided after some considerable discussion with the sponsors to have the survey cover the three largest urban (city) Bantu populations. These were the cities of Johannesburg, Durban and Pretoria. In addition, because of the great importance of the Reef complex as a centre for urban development in the Republic, two smaller towns on the Reef were to be selected. As it was also hoped to get some of the attitudes of the Bantu towards certain aspects of community and township planning, Daveyton (serving Benoni) and Kwa Thema (serving Springs) were selected. These townships are important from the point of view of their community planning. Daveyton is generally accepted to be a model Bantu township in terms of its community centre and planning, whilst Kwa Thema was the first Bantu township planned along town planning lines. In addition to these towns, it was decided to select one small industrial town and one small non-industrial town. The aim here was to obtain some indication of the extent to which the housing needs and problems of smaller towns (both industrial and non-industrial) were either similar to, or differed from, the pattern and needs of the cities. At this stage it was not intended to undertake a detailed representative study of smaller towns, but merely to obtain, so to speak, a 'straw in the wind' to indicate whether further research along these lines was required or not. Witbank was selected as the small industrial town. It was particularly of interest to the National Building Research Institute as it was the town where most of the developmental work on Bantu housing was undertaken by the Institute. To cut research costs only Lynville (the new township resulting from research) was studied, and the 'old location' was not surveyed. Finally, for the small non-industrial town, Greytown in Natal was selected. It was chosen on the grounds that it was close to Durban where some of the fieldwork would be done, and therefore would not greatly increase the research costs. It was also chosen as it did not have a large Indian population which might produce an atypical pattern.

So it is that three cities and three smaller townships, and a small town were deliberately selected for the study. It was felt that they would give an indication, adequate for planning purposes, of the present and emerging housing needs of urban Bantu in South Africa. In addition, it was hoped that it would be

possible on the basis of the results to decide whether further research into the problems of smaller towns was required.

Samples were drawn from each of the areas selected. The sample design was such as to ensure a representative picture of the Bantu populations in each of the areas. The survey design varied according to the particular needs and problems encountered by the fieldworkers in each town. Details are as follows:-

Johannesburg, the largest of the cities, houses its township population in Soweto. (The name is an abbreviation for South-Western Native Townships.) The area in fact comprises a group of townships covering a large area. The city of Johannesburg was planning to undertake a housing survey of its own. After consultation it was found their proposed study and this one were so close in aim that close co-operation was feasible. Consequently the fieldwork in Soweto was undertaken in very close collaboration with the Non-European Affairs Department of the City of Johannesburg. Nearly all of the interviews were undertaken by the staff of the Municipality. A member of the I.S.R. research team worked with the municipal interviewers, to ensure continuity in research technique between this and the interviews in other towns. The sample design was prepared by Miss Joan Verster and her team from the Research Section of the Non-European Affairs Department of Johannesburg. Miss Verster reported as follows:

> 'The 22 townships in Soweto were stratified according to economic and ethnic groups, and 6 townships were randomly selected. Four hundred households were to be selected from the 18,560 households in the 6 townships. However, since previous surveys have shown that the response rate would be in the region of 88%, provision for a sample loss of 12% was made. The final number of sample units was therefore 453, which represented 2.44% of the total dwelling units in the 6 townships selected, or 0.71% (1/140) of the total dwellings in Soweto, i.e. 63,868 as at June, 1966.
>
> 'The 453 sampling units were proportionally distributed among the 6 townships selected on the basis of the number of dwelling units in each township. The overall sampling position was 1/140. An up-to-date land use map of Soweto detailing residential blocks and the number of dwelling units per block was used as a sampling frame. Using the sampling frame, a complete list of all blocks was made, together with a list of dwelling units within each block. The choice of a particular block was determined by a procedure which made the probability that a particular block would be selected proportionate to its size.

'In all sampled blocks it was decided that the ultimate clusters should contain an average of about two households. Sub-sampling within a selected block was then accomplished again by the technique of probability proportionate to size. No substitutions were allowed. In Moroko a number of households were sampled which were apparently empty stands. However, it was subsequently discovered that the house numbers in these particular units had been altered. The error was rectified and the original households sampled were interviewed.'

It might be asked why a target figure of about 400 households was aimed at. It was realised early on in the work for the survey that the ultimate sample design would have to be limited by cost factors. Weighing up the opposing factors of sample precision versus cost, it was decided that an overall sample of about 1100 cases would optimise the sample precision for the amount of money available. Johannesburg was the largest community and therefore 400 cases were selected as the desirable minimum from this town. In the case of the smaller cities of Pretoria and Durban half of this sample size was selected - namely 200 cases. In Daveyton (Benoni) and Kwa Thema (Springs) half again were drawn. It was felt that 100 cases from each of these two towns was the minimum which would provide acceptable information - particularly bearing in mind that these towns would also be used to give some indication of Bantu attitudes to township planning. Finally, as Greytown and Lynville (Witbank) were to be used to provide only a tentative indication of the extent to which smaller towns might have similar or different problems from larger towns, the sample size was cut to roughly half again. Sixty cases were selected from Greytown, and 50 from Lynville. The procedure in all these towns except Johannesburg was that up-to-date maps were obtained, and a simple random sample of plots in the built-up area of each township was drawn, using a table of random numbers. In towns where there were more than one township, the same fraction of plots from each township was aimed at. In some cases, certain of the plots were found to be non-residential in character (containing shops, a school, or a church, and such like). Some of the houses on residential plots were not occupied. Where it appeared necessary, additional plots were drawn at random to bring the sample of occupied residential plots up to approximately the target figure aimed at.

The following interview schedule was applied to the cases selected, and in Daveyton and Kwa Thema the additional questionnaire was also used.

CONFIDENTIAL:

Schedule Number

Schedule is

Complete
Incomplete
Non-response

INSTITUTE FOR SOCIAL RESEARCH

UNIVERSITY OF NATAL,
DURBAN

BANTU HOUSING SURVEY

MAIN FIELDWORK 1966

ADDRESS OF CASE: .....

.....

RECORD OF VISITS TO ADDRESS

Date	Time	Result of Visit	Fieldworker
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

REASON FOR FINAL NON-RESPONSE (IF ANY): .....

.....

.....

.....

OFFICE USE ONLY

SCHEDULE CHECKED BY: .....

DATE: .....

SECTION 'A'

BASIC DETAILS CONCERNING THE DWELLING, AND THE HOUSEHOLD'S LIVING PATTERNS

1. Type of Dwelling

Detached House	Semi-Detached House	Row House	'Jumbo' House

2. Dwelling was built for

Township Authorities	Occupier	Other	D.K.

If "other", specify: .....

3. Dwelling walls are:

Face Brick	Plastered Brick	Concrete Blocks	Concrete Slabs

4. Dwelling has electricity:

Being Connected by Authorities	Yes, Originally Connected	Yes, Connected later at occupier's wish	No

5. Dwelling has water:

In Kitchen & bathroom	Inside in shower & W.C. only	Laid on stand	No water on plot

6. Is the house:

Rented	Owned	Being Bought

7. When you entered the house did you pay a deposit?

R.....	None

NOT TO BE FILLED IN BY INTERVIEWER:

8. If dwelling was built for township authorities, what type of plan was used?

NE.51/9	NE.51/6	OTHER

If other, specify: .....

.....

9. Do township authorities allow alterations to houses in the area concerned?

Yes rented house	Yes owned house	No

10. Township is:

Municipal	B.A.D.

SECTION 'B'

HOUSEWIFE'S HOUSING PREFERENCES

11. How many bedrooms do you require for your size of family?

1	2	3	4

12. Where is the water closet preferred?

In house	Attached outside	Separately outside

13. Preference is for

Wash basin and shower	Bath

14. If money was no object, what stove would you choose?

Bottled Gas	Wood/coal	Paraffin	Electric

15. What stove(s) are used at present?

Coal/Wood	
Pressure (primus)	
Paraffin wick burning	
Bottled gas	
Electric	
No stove	

16. The stove is:

Their own	Township Authority's

17. Was the stove supplied with the house or did you have to buy one?

Stove supplied	Had to buy one	No Stove

18. If own stove was it bought on hire purchase?

Yes	No	N.A.

19. If yes what deposit was paid on it?

R.....	N.A.

BASIC USE OF ROOM (within the house)	Room No.	FLOORING MATERIAL												
		Preferred				Present					Original			
		Cement	Lino	Wood Blocks	Tiles	Cement	Earth	Lino	Wood Blocks	Tiles	Cement	Earth	Tiles	
Kitchen														
Livingroom														
Bedroom														
Bedroom														
Bedroom														
Bedroom														
Bathroom/W.C.														
Pantry														
Other														
Other														

21. How did you have to complete the house when you entered it?

Filled up floors	Cemented floors	Filled up gap between wall and roof	Added steps to the front door	N.A.

WALLS

22. Would you be satisfied with internal bagged walls?

Yes	No	D.K.

23. Would you be happy with internal white-washed unplastered walls?

Yes	No	D.K.

24. Are there any severe cracks in the walls?

Yes	No

25. If yes how many?

	N.A.

BASIC USE OF ROOM	Room No.	Material Used				WALLING FINISHES																	
						Preferred						Present						Attitude to Present Finish			Original		
		Brick	Concrete Block	Concrete Slab	Other	Not treated	Painted	Bagged	Plastered	Tiled	Wall paper	Not treated	Painted	Bagged	Plastered	Tiled	Wall paper	Satisfied	Dissatisfied	Don't mind	Not treated	Painted	Bagged	Plastered	White-washed
Kitchen																								
Livingroom																								
Bedroom																								
Bedroom																								
Bedroom																								
Bedroom																								
Bathroom/W.C.																								
Pantry																								
Other																								
Other																								

27. If your house was painted outside, would it matter if the next door houses were the same colour?

Yes	No	D.M.	D.K.

28. Do you consider ceilings necessary or not?

Yes	No	D.K.

29. If yes why? (Do not quote possible answers to her)

Thermul Insulation	Dust Proofing	Appearance	Other	N.A.

If other specify .....

30. Does condensation in this house ever bother you?

Yes	No

31. If yes observe whether or not the air vents are stuffed with paper or rags.

Yes	No	N.A.	No air vents

32. Did the house originally have ceilings?

Yes	No	D.K.

33. If yes, in what rooms?

All	Some	N.A.

If some specify .....

.....

34. Have ceilings been added since?

Yes	No	N.A.

35. If yes, where?

All rooms	Kitchen	Living room	Bedroom	Bedroom	Bedroom	Bath room	Other	N

If 'other', specify .....

.....

36. If ceilings have been added, what type have they put in?

Soft Board	Hard Board	Other	N.A.

37. Do you feel that a storeroom is necessary or not?

YES inside	YES outside	NO	D.K.

38. Where do you store the following:

	Pantry	Bathroom used as store room	Garage or outbuilding	Shanty outside	Special cupboard or big box inside	Locked box outside	Kitchen	Bedroom	Lounge	Outside Night/ Day	Other	None
Groceries												
Bath												
Bucket												
Bicycle												
Tools												
Suitcases												
Firewood & Coal												
Prams and toys												

If other specify .....

.....

Internal Doors

39. Were internal doors originally included in the house?

Yes	No	D.K.

40. Do you think a house should have internal doors or not?

Yes	No	D.K.

Reasons for your answer: .....

.....

.....

41. Details of original and existing internal doors and preferences

Room No.	Rooms	Original doors	Present doors	Preferred doors
	Kitchen			
	Living room			
	Bedroom			
	Bedroom			
	Bedroom			
	Bedroom			
	Bathroom/W.C.			
	Pantry			
	Other			
	Other			

Siting of House

42. In what direction must a house face?

Street	Warm Winter Sun	Don't mind	D.K.

43. Where should the house be situated on a plot?

Larger garden in front	Larger garden at back	In middle	Don't mind

Garden

44. Do you wish for a bigger plot than the present or not?

Yes	No	D.K.

45. If yes for what purposes (Don't quote possible answers)

Garage	Veg. Garden	Flower Garden	Play ground	Fowl Run	Other

If other specify .....

.....

46. Do you like the idea of a communal garden

Yes	No	D.M.	D.K.

Car and Garage

47. Do you think a garage is necessary for a house or is it an unnecessary additional expense?

Yes	No	D.K.

Reasons for your answer .....

.....

48. Do you or your husband own a car, van, or motor cycle?

Yes	No

49. If 'yes' how is it garaged?

Own lock up garage	Own Port-type garage	Other	N.A.

50. If not garaged what are the reasons for your car not being garaged?

Not allowed to build	Lack of space to build	Lack of money	Other	N.A.

51. If car is not garaged, where do you keep it?

Own yard	Neighbour's yard	Street	Other

If other specify .....

.....

Ownership of Appliances

52. Electrical appliances owned by household:

Electric stove	
Hot Plate(s)	
Mains table radio	
Mains radiogram	
Electric iron	
Electric refrigerator	
Electric heater	
Toaster	
Battery radio	
Kettle	
Other	(specify)

.....

.....

53. If no electricity, what lighting is used?

Gas	Paraffin	Candles	N.A.

54. In what room is the radio? (Give room No. from Quest. 16.)

	N.A.

Attitude to existing dwelling

55. How do you like your existing house?

Like it	Don't mind it	Dislike it	D.K.

56. What do you <u>like</u> about the house?

.....

.....

.....

.....

57. What do you <u>dislike</u> about it?

.....

.....

.....

58. If it was possible for you to improve the house, what alterations would you make? (in order of preference):

Firstly: .....

Secondly: .....

Thirdly: .....

Fourthly: .....

Fifthly: .....

SECTION 'C'

ATTITUDE TO TOWNSHIP

59. Given a choice would you still prefer to live within this vicinity?

Yes	No	D.K.

60. Give reasons for your answer .....

.....

.....

61. Do you think that a township should be planned so that the following should live in the same vicinity?

a) People belonging to the same occupational groups?

Yes	No	D.K.	D.M.

b) People having the same educational standards?

Yes	No	D.K.	D.M.

c) People belonging to similar income groups?

Yes	No	D.K.	D.M.

d) Reasons for your answers:

(a) .....

.....

(b) .....

.....

(c) .....

.....

62. Do you think it is necessary to divide the township into ethnic groupings?

Yes	No	D.K.	D.M.

63. Reasons for your answer .....

64. Most streets in this township have houses which all look alike. Do you like or dislike this?

Like	Dislike	D.K.

65. Reasons for your answer .....

.....

SECTION 'D'

EXTENT OF URBANISATION

66. How long have you and your family lived in this township?

No. of years	Year moved to township 19 ...

67. Before coming to live in this township were you and your family ever lodgers?

Yes	No

68. Where were you and your family living before coming to settle in this township? Name only last 2 places settled in. (Give in chronological order.)

Associations	Place	1st.	Name of place	No. of years	2nd.	Name of place	No. of years
	Township						
	Rural Reserve						
	European Farm						
	Mission Reserve						
	Own Property						
	Squatter's Camp						
	Domestic Quarters						
	Town						

If other specify .....

.....

69. Give reasons for moving into this township? .....

.....

.....

70. What is your religion? .....

SECTION 'E'

HOUSEHOLD COMPOSITION AND INCOME

Q.71

COMPOSITION OF BASIC FAMIIY OF THE HOUSEHOLD HEAD

No. of Meals Provided per week by employers of working adults		
Degree of Dependence on head of household	Fully Independent	
	Transport to work	
	Clothing	
	Food	
	Fully Dependent	
Address of work (suburb)		
Occupation		
Highest Educational Standard passed*		
Marital Status		
Sex		
Age		
Relation to Head		HEAD
No. of rooms slept in (from question 20)		

*Ring cases where further education is currently being pursued.

Q.72. RELATIVES (including servants) living in the dwelling with the Head (whether part of HOUSEHOLD or an Independent household)

Person pays Head for lodging only		
Person pays Head for board and lodging		
No. of meals provided per week by outside employers of working adults		
Degree of dependence on Head of household	Fully independent (lodging only)	
	Transport to work	
	Clothing	
	Food	
	Fully dependent	
Address of work (suburb)		
Occupation		
Highest educational standard passed*		
Marital Status		
Sex		
Age		
Relation to Head		
No. of rooms slept in (from question 7)		

Q.73. NON-RELATIVES (including servants) living in the dwelling with the Head (whether part of household or an independent household)

Note: *Circle cases where education in progress.
Bracket together members of a basic family.

74. Ethnic group of Husband: .....

Ethnic group of Wife: .....

75. INCOME of Head of Household and Wife, from all sources:

	INCOME OF PAST WEEK (if paid weekly)	INCOME OF LAST MONTH (if paid monthly)
(a) SALARIES:		
Salary of Head -		
Salary of Wife -		
(b) OWN BUSINESS:		
Income from Head's own business (net profit)		
Income from Wife's own business (net profit) (include dressmaking, basket work, etc.)		
(c) CHILDREN:		
Income received from working children -		
1.		
2.		
3.		
4.		
5.		
(d) BOARDERS/LODGERS:		
Income received from paying boarders, lodgers & sub-tenants:		
1.		
2.		
3.		
4.		
5.		

	INCOME OF PAST WEEK (if paid weekly)	INCOME OF LAST MONTH (if paid monthly)
(e) INCOME FROM GRANTS: Maintenance grants		
Disability grant		
O.A. Pension		
Blind grant		
Other		
(f) TRANSPORT ALLOWANCE:		
(g) OTHER SOURCES:		
GRAND TOTAL:		

CERTAIN EXPENSES:

76. EXPENSES OF HOUSEHOLD HEAD AND WIFE ON ACCOMMODATION:

	Weekly	Monthly
Rent of dwelling		
Payment on own house		
Rates etc., on own house		

77. EXPENSES OF HOUSEHOLD HEAD AND WIFE ON PAYMENT OF THE TRANSPORT OF WORKERS TO AND FROM WORK:

	Cycle	Motor cycle, etc.	Own car	Friend's car	Bus	Train	Taxi	Walk	Weekly costs	Monthly costs	Bus/Train fare instead of car/taxi	Time leaves home	Time returns home	Time taken by journey to work (one way)
Head														
Wife														
Son or daughter														
Son or daughter														
Other														

GRAND TOTAL R .....

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HOUSEHOLD'S PRIMARY P.D.L. (Weekly basis) R _____

RENT AND TRANSPORT " " R _____

HOUSEHOLD'S SECONDARY P.D.L. " " R _____

HOUSEHOLD INCOME _____

Household income is:

≥R5 above S.P.D.L.	≤R5 above S.P.D.L.	Equals S.P.D.L.	≤R5 Below S.P.D.L.	≥R5 Below S.P.D.L.

HOUSEHOLD'S RELINCOME ON A WEEKLY BASIS = S.P.D.L. (_____) / Income ( ) x 100 = _____

SECTION 'F'

ALTERATIONS TO HOUSE, AND CONDITION OF GARDEN

FILL IN FROM OBSERVATION
Unless otherwise indicated

Q.78. Observe or ask about the following, filling in rooms in same order, and with same numbers as for Question 20.

Group	Item	Kitchen	Living room	Bedroom	Bedroom	Bedroom	Bedroom	Bathroom	Other	Outside area	Outside area
Alterations and Improvements to Rooms	Other specify										
	Ceiling										
	Electricity added										
	Different stove										
	Altered position of doorway										
	Internal door										
	Curtains in doorway										
	Different flooring										
	Pelmets										
	Picture rails										
	Special paint effects										
	Fancy plastering										
	Walls plastered										
Functions room serves	In Winter sitting at night										
	In Summer sitting at night										
	Sit in day time										
	Guests sleep										
	Homework done										
	Have guests										
	Meet friends										
	Family gathers										
	Toilet										
	Bath										
	Sleep										
	Eat										
	Cook										
Attitude size	Wants smaller										
	Wants larger										
	Satisfied										
Size in Feet and inches											
Room No.											
ROOM		Kitchen	Living room	Bedroom	Bedroom	Bedroom	Bedroom	Bathroom	Other	Outside area	Outside area

80. Are one or more of the rooms later additions to the dwelling?

Yes	No

81. If so, what are the numbers of the rooms (listed in Question 20)?

	N.A.

EXTERIOR OF HOUSE

Indicate by a cross, those alterations which have been made:

82.	WALLS OF HOUSE:	Plastered originally unplastered walls	
		Plastered fancy design	
		Painted	
		Painted patterns	
83.	WINDOWS:	Different windows	
84.	FRONT DOOR:	Put in different door	
		Painted door differently	
85.	FRONT OF HOUSE:	Cement Terrace	
		Roofed stoep a) part house	
		b) whole of front of house	
		Steps to front door	
		Gutters	
		Down Pipes	

86. Outdoor living areas:

	In front	At back
Paved/cemented area		
Dung smeared area		
Lawn		
Swept areas		

87. Paths definitely demarcated (e.g. by chains, bricks, stones, etc.)

Yes	No

CONDITION OF GARDEN

88. Hedge

Neatly clipped	straggly	Badly neglected	Few clumps	No hedge

89. Flower beds in front

well cared for	cared for	Somewhat neglected	Full of weeds	None

90. Flower beds at back

well cared for	cared for	Somewhat neglected	Full of weeds	None

91. Vegetables in front

well cared for	cared for	Somewhat neglected	Full of weeds	None

92. Vegetables at back

well cared for	cared for	Somewhat neglected	Full of weeds	None

93. Trees

Tree	No. of Trees	Name of Tree
Fruit		
Ornamental		

94. Is a vine cultivated to make a pergola?

Yes	No	N.A.

General Assessment of Garden:

95. Front:

Good	Average	Poor	Completely neglected

96. Back:

Good	Average	Poor	Completely neglected

97. Indicate if the garden has the following:

Ash heaps	Rubbish/junk	Old broken cars

98. Observe if there is a fowl-run in the back-yard

Yes	No

GENERAL COMMENTS OF FIELDWORKER (If any)

.....

.....

.....

.....

.....

Schedule No. [ ]

(Fill in the number for the case which appears on the housing schedule.)

INSTITUTE FOR SOCIAL RESEARCH

UNIVERSITY OF NATAL

DURBAN

BANTU HOUSING SURVEY

SUPPLEMENTARY STUDY, IN DAVEYTON AND KWA THEMA, OF THE HOUSEWIFE'S ATTITUDES TOWARDS THE TOWNSHIP COMMUNITY CENTRE

Pilot Study:

June, 1966.

ADDRESS: .....

.....

N.B.: Please staple this schedule to the Housing Survey Schedule for the same informant.

COMMUNITY CENTRE IN GENERAL:

94. What do you think of the township's community centre?

.....

.....

.....

95. How do you think it could be improved?

.....

.....

.....

96. Is the community centre easily accessible from where you live?

Yes	No

97. Why? .....

.....

.....

SHOPPING CENTRE:

98. In terms of everyday shopping, how satisfactory do you find the shops in the township's shopping centre?

Satisfactory	Unsatisfactory	D.K.

99. Why? .....

.....

.....

100. Where do you usually buy your normal household requirements?

Nearby shop	Township shopping area	Near place of work	In the White town

101. Is the township's shopping centre convenient to you?

Yes	No

102. Are there any shops at all convenient to you?

Yes	No

103. What types of goods do you find you cannot buy in the township, and so must buy elsewhere?

1. .....
2. .....
3. .....
4. .....
5. .....

104. Do you think each ethnic group should have their own shopping centre, or can they share one?

Own centre	Share one	D.K.

TRANSPORT:

105. Is there an internal bus service in the township?

Yes	No

106. Are you satisfied with it?

Yes	No	D.K.	N.A.

107. Reasons: .....
.....
.....

108. How do you get to the shopping centre?

Walk	Bus	Own car	Friend's car	Taxi	Other

GOING OUT AT NIGHT:

109. Are you afraid to go out in the township at night?

Yes	No

110. Reasons: .....
.....
.....

111. Do you, or any of your family, use the community centre's facilities at night?

Yes	No

CRECHE:

112. Do you use a creche for your children?

Yes	No	N.A.

113. If not, why not?

No children	Children too old	Children too young	Not working	Creche too far
Creche badly run	Children left with relative/friend/ neighbour			

114. Would you use a creche for your children, if it was conveniently placed?

Yes	No	N.A.

LIBRARY:

115. Is there a library in the township?

Yes	No	D.K.

116. Do you or your husband use it?

Yes	No

117. Do your children use it?

Yes	No

BEERHALL:

118. What do you think of the beerhall in your township?

.....

.....

.....

119. Is there a public lounge where people can drink in comfort in pleasant surroundings?

Yes	No	D.K.

120. Do you, or your husband use it?

Yes	No	N.A.

121. If not, should there be such a lounge?

Yes	No	D.K.	N.A.

122. Should it be open to both sexes?

Yes	No	D.K.	N.A.

123. Where would you prefer to meet with your friends and drink?

Own home	friend's home	public lounge	beerhall	D.K.

124. Why? .....
.....
.....

GENERAL COMMENTS BY INTERVIEWER (IF ANY): .....
.....
.....

A fieldworker's 'Instruction Manual' was prepared as a companion to the interview schedule. It is given below:

INSTITUTE FOR SOCIAL RESEARCH

UNIVERSITY OF NATAL

BANTU HOUSING SURVEY

F I E L D W O R K E R'S M A N U A L

I. INTRODUCTION:

1. The address of the housewife you are to interview will be given to you by the fieldwork supervisor. You are not allowed to substitute another address for this one, but must visit the particular house until either you have obtained a successful interview, or the housewife has refused to co-operate. If your first visit is unsuccessful, then enquire either from other members of the household, or from neighbours when you are likely to find the housewife at home. Thus your second and any later re-visits can be planned, in order to increase the likelihood of finding the housewife at home.

2. The interview is to be conducted with the housewife at a particular address - that is, with the wife of the head of the household, or if there is more than one household, then with the wife of the head of the main household living at the address. Where the head of the household is a woman, then she is to be taken as the housewife. Where there is no housewife, then no interview must be conducted. A grown daughter keeping house for a widower, however, would be classed as a housewife.

3. When you find the housewife at home, explain the general purpose of the survey as simply as you can, mentioning the following:-

(a) you are working for the University in Durban which is studying houses.

(b) it is people responsible for planning houses (architects and designers) who want to know about houses in the township. You have nothing to do with the municipality or the government. The architects are eager to find out from people who live in the houses whether
   i) they are satisfied with them;
   ii) if not, what type of house they would prefer;
   iii) whether they can financially afford a better type of house;

iv) how they are using their house at present (e.g. where they eat, where they sleep and so on), so that the architect knows for what use each room must be planned.

(c) Stress that whatever information is given, is strictly confidential.

(d) Emphasise that the names of the people interviewed are not required, as the survey is meant to show what most people need in the house - not what a particular person says or feels.

(e) Stress that this survey will not affect the houses they are living in. It will only relate to new houses to be planned and built. It will be several years before the work is finished.

4. Do not attempt to interview the housewife without previously having studied the interview schedule carefully. You must be completely familiar with the questions to be asked. This will allow the interview to be as natural and conversational as possible, minimising stiffness and formality in the interview situation.

5. Your attitude must be scientific - you must be interested in what the people feel and think, and not in whether you agree or disagree with them. When you ask what you feel or think, you must tactfully say that your own views are not important, but their experience and thoughts are of value.

6. While the interview schedule is in English, you are expected to interview the housewife in her own home language wherever possible. This means that you will have to translate the schedule during the course of the interview. If you are familiar with the questions, you should not experience much difficulty. Please be very careful to keep the original meaning of the questions. If the meaning changes in the course of translation, you will be asking a question other than that which you are supposed to ask. In particular, never 'colour' your questions in an attempt to obtain the answer which you think a housewife should give. Remember always that your personal feelings, ideas, likes or dislikes must as far as possible not influence the interview. Try to maintain an objective professional approach to the interview.

7. Avoid an imposing attitude or appearance. The interview is to be a friendly conversation, not an interrogation. Dress moderately without ostentation. Be courteous and pleasant, and try to create an atmosphere from the start where the respondent can relax and talk freely.

8. If the respondent is becoming worried during the course of the interview, try to find out why she is worried, and put her mind at rest. In particular, watching her eyes will help you to judge whether she is relaxed or tense and suspicious.

9. Once the interview is finished, inspect the schedule before leaving the house. Correct any mistakes, and fill in any gaps which you find. If you fail to do this, then it may mean that subsequently you have to re-visit the household to complete the schedule properly.

10. Please note: If you are in any doubt about a problem, or a particular question in the interview, be sure to consult the fieldwork supervisor. Do not take a chance or make a guess as to what you think the right procedure would be. A wrong decision on your part could affect the outcome of the whole survey.

II. FILLING IN THE INTERVIEW SCHEDULE:

Fill in the interview schedule in ink or ball point. Do not use pencil.

2. Many of the questions provide possible answers, so that all you have to do to indicate the right answer is to put a cross in the appropriate space. It is possible at times that two answers are applicable at the same time, in which case put marks in both of the appropriate squares. Make bold crosses which can be clearly seen.

3. Where a housewife gives an answer which does not fit in any of the answers provided, then write her answer in in the margin.

4. Write clearly, and remember that someone who does not understand your writing will have to read the schedule.

5. Where a question requires you to supply the subject answer, use her own words. Do this as accurately as possible. This applies to all 'open-ended questions' where answers are not provided.

6. Several abbreviations are used throughout the interview schedule. D.K. stands for 'don't know'; N.A. stands for 'not applicable'; D.M. stands for 'don't mind'.

7. If any of the information required in the schedule is unobtainable, indicate this by writing 'unknown', 'uncertain', etc. Do not leave any blanks in the schedule, except when you are uncertain what to do - in which case consult the supervisor and fill in the blank according to the advice given. Cross out questions which do not apply, writing N.A. (not applicable), in the case of all questions which do not apply. Thus the only blanks will be in connection with queries you have, or because you forgot to ask a question.

8. When a housewife supplies relevant information for which space has not been provided in the schedule, write on either the margins of the schedule, or on the reverse side of the page. A final section at the end of the study is provided for any general comments if you feel it necessary to provide.

III. INSTRUCTIONS RELATING TO DIFFERENT PARTS OF THE INTERVIEW SCHEDULE:

Page A (viii): Please record the date and time of every visit whic you have made to a particular address. Also give the result of your visit - whether an interview was obtained, refusal was met with, or the housewife was out working, visiting, etc. Sign your name in the space provided next to the record of a particular visit. Where final non-response (such as a refusal) has been obtained, provide the full details in the space allotted.

Once the schedule has been completed, or the interview has been conducted but must remain incomplete, or final non-response has been obtained, then fill in the second square at the top right-hand corner of the page. Cross out the answers that do not apply. For example, if a complete interview has been obtained, then cross out 'incomplete' and 'non-response'.

Page A (x), Question 20: Please number the rooms in the house in the order given. Thus, if a house has a kitchen, a living room, and two bedrooms, then the first four rooms in the table would be filled in and would be numbered room No.1, No.2, 3 and 4 respectively. Where there are 'other' rooms in a house, other than those indicated in the table, then specify the basic use of the room concerned. The original flooring material of a room is to be filled in. Where a housewife does not know what the original material was, and it appears to have been subsequently altered, put D.K. next to the room concerned. In regard to present flooring material, it may be that a household has cement and lino in, for example, the kitchen. In this case, put a cross in both the square for cement and the square for lino. In regard to preferences, the preferred material for each room out of the four choices provided is to be noted.

Question 20, (26 and 41): The information must always be checked by observation in order to ascertain whether the respondent when she says the walls in the kitchen are painted, are indeed painted.

Question 21: 'Filled up floors' - refers to houses where floors were left incomplete when handed over to the tenant, being loose earth, and below floor level. Such floors subsequently had to be filled in by the tenant to bring them up to floor level. 'Cemented floors' - refers to floors which were either just loose earth or very roughly cemented and had to be subsequently re-cemented. 'Filled up gap between wall and roof' - refers to houses where the walls were not built flush with roof, and thus left a definite open space of several inches between the walls and the roof, which had to be subsequently filled in by the occupants.

Question 23: By internal 'white-washed unplastered walls' are meant walls such as unplastered brick, or cement block, which have merely been white-washed without any plastering.

Question 24: 'Severe cracks'. A crack is considered severe if:-

(a) It extends over at least half the length of the wall, and

(b) The width of the crack is at least $\frac{1}{16}$". (A small hair-like crack must not be regarded as severe.)

Page A (xi), Question 26: Please number the rooms in the same order as in question 20, so that the answers in this question can be directly related to those in question 20. Question 26 is to be filled in in the same way as in question 20. By a 'bagged' wall is meant a wall which has been plastered very roughly, by smearing a thin layer of plaster with a wet bag. This is to be contrasted with a 'plastered' wall, where a smooth layer of plaster has been applied to the wall. By a 'not treated' wall finish is meant that the original structural material has not been treated in any way. For example, concrete slabs which have not been plastered or painted would be untreated.

Page A (xi), Question 29: Please do not quote these possible answers to the housewife. The housewife is to think of her own answers, and where she mentions either thermal insulation and/or dustproofing, and/or appearance as the reason why ceilings are necessary, then you may fill in the square concerned. Where her answer does not fit in with any of these categories, then fill in 'other', providing details in the space below.

Page A (xii), Question 35: Where all rooms in a house have been provided with ceilings subsequent to the original construction of the dwelling, fill in the category 'all rooms'. Where only some of the rooms have been provided with ceilings, indicate the rooms concerned.

Question 36: Softboard ceilings are composed of sheets of the soft rather porous material usually used for ceilings. Hardboard is the shiny-faced very hard material usually used for cupboards and such like. If another type of material is used specify under 'other'.

Question 38: 'Classification of storage'. By 'out-building' is meant any concrete or brick building constructed separate and apart from the main building. By 'shanty outside' is meant any 'make-shift' structure. It could be made from scraps of tin or wood. By 'locked box outside' is meant a large wooden or iron box made or used specifically for the purpose of storage, and, which can be locked. By 'big box inside' is meant any large wooden or iron box kept inside the house. It need not necessarily be locked. A 'special cupboard' could refer to any of the following:-

(a) Built in cupboards.

(b) Cupboards attached to the walls. (American style).

(c) Any other cupboards used specifically for the purposes of storage excluding display cabinets.

The term 'groceries' includes all household commodities. It must be noted that some articles such as buckets, baths or bicycles may be stored in different places during the night and day, e.g. a bath may be kept outside during the day, but in the kitchen or under the bed at night. Thus, in this case a 'D' for day and an 'N' for night must be placed next to the cross in the appropriate squares.

Page A (xiv), Question 40: Please fill in in the housewife's own words, why she does, or does not, think it necessary to have internal doors in the house.

Page A(xiv), Question 41: Please number the rooms in exactly the same order as for question 20 and question 26, so that this information can be directly related back to the earlier questions. Put a cross next to the rooms which originally had doors - that is, against the rooms which had doors when the house was built. If this is unknown, then put D.K. next to the rooms concerned. Indicate in the column 'present doors', by means of crosses, which rooms have doors at the moment. Finally, by means of crosses, indicate in the column 'preferred doors' which rooms the housewife would like to have built with internal doors.

Definition of Internal Doors:

In defining doors there is no difficulty if the doors lead into the passage as the doors are identified with the rooms into which they lead. However, a problem is encountered when a door leads from one room into another - for example from the lounge into the kitchen or from the lounge into the bedroom. Thus in order to standardize the definition of internal doors, the following definitions should be adopted:-

(a) The door between the lounge and the bedroom will be regarded as a bedroom door.

(b) The door between the lounge and the kitchen will be regarded as a lounge door.

There are two main types of houses found in the locations:- N.E.51/6 and N.E.51/9. These are illustrated on pages A(ii)-(iii). It must be noted that in N.E.51/9 all the internal doors lead into the small passage-way whereas in N.E.51/6 the internal doors lead from room to room.

Questions 48 and 49: 'Ownership of car': It must be noted that if in question 48 the respondent owns a van or motor-cycle instead of a car, the interviewer must, in question 49 substitute van or motor-cycle in place of a car - whichever is applicable.

Page A(xvi), Questions 56,57, 58: Please fill in the answers to questions 56, 57, and 58, using the housewife's own words. Where she has difficulty in thinking about what she likes or dislikes, gently probe by means of neutral phrases such as 'I see: can you perhaps think of anything else which you have found you liked or disliked about the house?' Probe until she can think of nothing further to mention.

Question 66: By 'family' is meant the family of the household head i.e. the head, his wife and children. If the couple is newly married only their married period of urbanisation will be taken into consideration.

Question 68: The interviewer must not be satisfied with vague answers. For example, if the respondent gives 'own property' as an answer, it must be established whether the respondent is referring to 'own property' in the Township, Mission Reserve or Rural Area. A special column headed 'Associations' has been provided to enable the interviewer to link together the appropriate places, e.g.

Own property
Mission reserve
Rural area.

Question 70: The interviewer must use a tactful approach when asking this question. The respondent whether she is Traditionalist (ancester cult), Separatist or Christian must be made to feel that her religion is just as accepted and respected as any other. This is emphasised due to the fact that some Separatists and Traditionalists feel despised by the Christians. It is important for the interviewer to write down the name of the church to which the respondent belongs.

Page A (xix), Question 71: This particular question applies only to a man, woman, and unmarried children living with them. In the first column fill in the number of the room in which a particular person sleeps. This is to be the number as applied to question 20 or question 26.

In the column 'relation to head' fill in categories such as wife,$^{(W)}$ son$^{(S)}$ daughter$^{(D)}$.

Age is to be age at last birthday. Where the age is estimated, try to establish it as closely as possible by means of important historical dates.

For sex, write 'M' for male, and 'F' for female.

For marital status, use the following abbreviations:-

married - 'M'; single adults - 'N.M.'; separated - 'S'; deserted - 'DES'; divorced - 'D'; widowed - 'W'.

Highest educational standard passed: please ring cases where further education is currently being pursued - for example where the person concerned is still at school. Denote standard Sub A by this sign o.

The column for occupation is meant only for adults aged 18+ years and working children who have left school. Give the actual job done (e.g. teacher, sweeper, clerk). Do not indicate where the person works, such as 'Council, or Railways'.

Address of work refers to the actual suburb in the town where the person works.

Degree of dependence: Note that in the case of wives and children who hand all their wages to the household head, the cross is to be put in the column 'fully dependent'. In this case, their earnings are reflected as part of the head's income in question 75. In cases where the children only provide the head with part of their wages, but pay part of their expenses, indicate in the column which of their expenses are met by the head of the household. Thus for example, if a working child gives part of his income to the head, and receives only food in return (paying for his own clothing and transport to and from work), then a cross would be put in the column 'food'.

Number of meals provided per week by employer's of working adults: this can be usually calculated quite simply by enquiring how many meals per day are provided, and whether or not they are also provided on the days that the worker has 'time off'. Thus for example, a domestic servant who receives three meals per day, but does not receive dinner on the two afternoons per week that she is off would receive 19 meals per week.

Page A (xx), Questions 72 and 73: These are to be filled in in exactly the same way as question 71. Two additional columns are provided at the end of the table, to indicate whether the person pays the head for board and lodging (that is, food and accommodation), or pays for lodging only (that is, for the room in the house). Relatives include both blood relatives and in-laws of the head. A married son with his own family would appear here in question 72 rather than in question 71 which relates to the basic family only. Guests staying for more than 3 months with the household are to be included as part of the household. School children spending term-time with the household, but living either with relatives or with their own parents elsewhere during the holidays are also to be counted as part of the household. Children at boarding school are also regarded as part of the household. Visitors and other persons not staying with the household for 3 months are not to be included. Bracket members of one family together. An unmarried daughter living with illegitimate children must be bracketed alone because they form a potential separate family.

Page A (xxi), Question 75: Introduce the question of income by pointing out the importance for architects of knowing how much a person can afford for a house. It is impossible to plan a house, without knowing at what cost level it must be built.

Care must be taken with this question, and probe to try and obtain as full a picture as possible. Some people are reluctant to tell how much they earn, while others who earn a living illegally through sales of liquor, dagga, prostitution, stolen goods, etc., are very unlikely to divulge this source of income. Where a person is too reluctant, do not press them further, but make a note that you doubt the complete accuracy of their replies.

Some people suspect that knowledge of their income - such as business income - might lead to taxation, others fear that knowledge of their income would lead to increase in rents. Where you suspect one or other of these problems exist, try to reassure the person by stressing the confidentiality of the information. Try to handle the whole question with great tact. Where a wife does not know what income her husband has, but only knows how much he pays her, try to obtain the correct figure from the man himself. Where necessary, probe in regard to income received from children and lodgers. In the latter regard, additional beds in the house which appear to be used but which have not been accounted for by the housewife in her description of the number of persons living in the house, can be used as a check. You can assure the person that we are not interested in whether or not they have illegal boarders or lodgers - we are only interested in what their full income is. The income is to be only for the previous week or month if the person is paid monthly. If the person received no income due to illness state it, but note on opposite page what the income normally is.

Page A (xxii), Question 76: Indicate clearly whether the amounts paid are on a weekly or monthly basis.

Question 77: Put a cross clearly under the type of transport which applies. If need be, rule a vertical line to make it quite clear in which column a cross falls. Where somebody travels to work by car or taxi, enquire whether it would have been possible for them to go to work by bus or train instead. Where this is the case, also fill in an estimate of what the bus or train fare would have been. Where the costs quoted are on a monthly basis, fill them in under the 'monthly costs' column, leaving the 'weekly costs' column empty. The grand total is not to be filled in under question 77. The office staff will do this subsequently.

Page A (xxiv), Question 78: Please fill in the room number with th same numbers as for question 20. Measure the room in feet and to the nearest inch. Where a standard plan is used for a whole lot of houses in the township, all that is necessary is to measure one house, and then apply the same measurements to other cases you have to visit. The attitude of the housewife in regard to the size of each room is necessary. Ask her what function each room serves - for example a kitchen may be used for cooking, eating, sleeping, bathing, family gathering and for meeting friends. This means that more than one cross may be made next to a particular room. Observe the present floor covering in each room, and also see what alterations and improvements have been made (whether or not they have been made by the present occupier or the previous one).

During the course of the interview observe if possible how the rooms are being used. For example, the housewife might say the lounge is used for eating and yet you may find the family eating in the kitchen. There is a tendency for the housewife to tell you the standard expected uses instead of the actual uses of the rooms. Thus this question requires intensive probing and a tactful approach.

Page A (xxix) onwards: Attitudes of the housewife towards the township's community centre: Please staple this schedule to the housing survey schedule for the same informant. It is only in Daveyton and Kwa Thema that this supplementary section of the interview will be conducted.

Before finalising the schedule design, and before deciding on the sampling scheme to be used, two pilot surveys were conducted. One was conducted in Durban in mid 1966, and this was followed shortly afterwards by a pilot survey in Pretoria and Daveyton.

Fieldwork for the main survey commenced during the latter part of 1966 and continued until early 1967. Housewives in all households, where families were found were interviewed (a few dwellings in Umlazi (Durban), housing single persons, were excluded from the survey). The study was essentially conceived of as investigating the housing needs of urban Bantu families, and housewives were selected as informants. This was because fieldwork trials suggested that the housewife (defined as the wife of the male head of the household, or the female head in the absence of a male head in the dwelling) was the person best able to speak about the needs of both the adults and the children living in the dwelling. Interviews were conducted by trained Bantu interviewers, working under the guidance of one of the authors (Mrs. H.J. Sibisi). The length of the interview averaged about three-quarters of an hour to an hour. With only few exceptions, the informants proved most co-operative, and the various local authorities went out of their way to assist with the fieldwork.

Table A.1 and A.2 below give details of the sample design with the number of cases drawn, and also the level of non-response.

It will be seen that in the end a total sample size of 1139 was obtained. This was fairly close to the target figure of 1100 interviews. The non-response level was on the whole very satisfactory, being below five per cent for the total sample from each town. While there was some variation between townships within a town, this was often where the township concerned was fairly small, and there are no grounds for believing that serious bias results. The actual refusal rate is just under two per cent for the complete sample, which is again satisfactory. The sample appears to be satisfactory, and therefore a detailed analysis was undertaken.

After the fieldwork was completed, editing and coding of the information was undertaken. Statistical tabulations were prepared by electronic computer. The sample data were raised, by means of raising factors, to give estimates for each of the towns concerned. These factors took into account varying sampling fractions produced by actual response rates in each stratum.

The overall level of non-response (3.1%), is excellent. This is also true of individual strata - except for Chesterville, with only a tiny sample, and Saulsville, non-response is about five per cent or less. Thus we can have confidence in the sample response.

TABLE A.1

RECORD, BY TOWN AND TOWNSHIP, OF THE SAMPLE SELECTED

Town and Township	Total No. of Plots at time of Survey	Total No. of Plots Drawn by Sample	Plots not Relevant for Survey		No. of Relevant Plots in Sample	Resp f Rel Pl
			No. of Non-Residential Plots in Sample	No. of Sample Plots Occupied by Single Persons		
Johannesburg : A Sample of Townships: (Soweto)						
Molapo	1,481	36	0	0	36	
Senaoane	1,835	46	0	0	46	
Dube	2,096	50	0	0	50	
Moroko	2,928	71	0	0	71	
Orlando East	5,945	148	1	0	147	
Chiawelo	4,275	102	0	0	102	
Total	18,560	453	1	0	452	
Durban : All Townships:						
Kwa Mashu	13,136	103	8	0	95	
Chesterville	1,262	11	0	0	11	
Lamontville	2,762	23	4	0	19	
Glebeland	748	5	0	0	5	
Umlazi	10,600	98	15	8	75	
Total	28,508	240	27	8	205	
Pretoria : All Townships:						
Mamelodi	12,507	113	2	0	111	
Atteridgeville	6,278	60	4	0	56	
Saulsville	4,172	42	2	0	40	
Total	22,957	215	8	0	207	
Benoni : Daveyton:	13,827	103	1	0	102	
Springs : Kwa Thema Only:	8,671	106	3	3	100	
Witbank : Lynville Only:	1,580	53	3	0	50	

TABLE A.1 (Contd.)

Town and Township	Total No. of Plots at Time of Survey	Total No. of Plots Drawn by Sample	Plots not Relevant for Survey		No. of Relevant Plots in Sample	Res i Rel Pl
			No. of Non-Residental Plots in Sample	No. of Sample Plots Occupied By Single Persons		
Greytown:						
Municipal Scheme	500	50	0	0	50	
Hut Area	100	10	0	0	10	
Total	600	60	0	0	60	
GRAND TOTAL	94,703	1,230	43	11	1,176	1

NOTES: *Seven cases were not coded, as they were partial non-responses and had insufficient information to warrant processing.

In Soweto, the sample consisted of a first stage of townships, stratified by the socio-economic character, and ethnic group of the townships. The second stage consisted of blocks drawn from the chosen townships, with dwellings (plots) constituting the final stage. The selected townships had the following socio-economic and ethnic character:

Township	Economic Status	Ethnic Group
Molapo	Economic	Sotho
Senaoane	Economic	Nguni
Dube	Upper Income Group	Mixed
Moroko	Economic	Nguni, and Sotho
Orlando East	Sub-Economic	Mixed
Chiawelo	Economic and Sub-Economic	Venda and Shangaan

In the other townships, simple random samples of plots were selected from each township. Prior to replacement, the same sampling fraction throughout a town was used.

Details of Non-Response are provided in the next table over the page:-

TABLE A.2

RECORD, BY TOWN AND TOWNSHIP, OF SAMPLE NON-RESPONSE

Town and Township	No. of Plots Occupied by Families, and Drawn in Sample	No. of Non-Responders	% Non-Response	Reasons for Non-Response from the Housewife		
				Sick or Away in Country	Always out	Refu
Johannesburg: (Soweto)						
Molapo	36	0	0	0	0	0
Senaoane	46	1	2.2	0	0	1
Dube	50	1	2.0	0	0	1
Moroko	71	4	5.6	0	0	4
Orlando East	147	7	4.8	0	0	7
Chiawelo	102	2	2.0	0	0	2
Total	452	15	3.3	0	0	15
Durban:						
Kwa Mashu	95	5	5.3	3	0	2
Chesterville	11	3	27.3	2	0	1
Lamontville	19	1	5.3	0	0	1
Glebeland	5	0	0	0	0	0
Umlazi	75	1	1.3	0	0	1
Total	205	10	4.9	5	0	5
Pretoria:						
Mamelodi	111	2	1.8	0	2	0
Atteridgeville	56	3	5.4	0	1	2
Saulsville	40	4	10.0	1	3	0
Total	207	9	4.3	1	6	2
Benoni:						
Daveyton	102	2	2	2	0	0
Springs:						
Kwa Thema	100	0	0	0	0	0
Witbank:						
Lynville	50	1	2	0	0	1

TABLE A.2 (Contd.)

Town and Township	No. of Plots Occupied by Families, and Drawn in Sample	No. of Non-Responders	% Non-Response	Reasons for Non-Response from the Housewife		
				Sick, or Away in Country	Always out	Ref
Greytown:						
Municipal Township	50	0	0	0	0	0
Hut Area	10	0	0	0	0	0
Total	60	0	0	0	0	0
GRAND TOTAL	1,176	37	3.1	8	6	23
Per cent of Relevant cases	-	3.1	3.1	0.7	0.5	1

NOTE: *A further group of seven cases were only partial replies. as due to illness and other factors incomplete interviews were obtained.

Finally, a word should be said about the precision of the final results. It must be realised that all samples provide an *estimate* of the true picture. This estimate is always subject to a margin of error. We can obtain some idea of the error for individual towns if we know that a percentage of 50 calculated from a simple random sample of 100 cases has, at the 95 per cent confidence level, upper and lower confidence limits of 40 - 60 per cent. Thus the range is 50 $\pm$ 10 per cent. Percentages smaller or larger than 50 per cent have smaller limits - e.g. the limits for 20 per cent would be 13 - 29 per cent. Corresponding values for a simple random sample of 200 cases would be; 50 $\pm$ 12 per cent; and for 20 per cent, 15 - 26 per cent. It was not deemed desirable, because of cost factors and a limited research budget, to calculate detailed confidence limits for the survey results. Our stratified samples have sampling errors of the order outlined. In the case of the cluster sample from Soweto the order of magnitude of error for the complex clustered sample is unknown. As such sample designs *usually* have a higher margin of error than a simple random sample, we can guess the margin of error is perhaps on the same scale as the smaller samples from the other towns.

Taking the samples all together, the results probably have confidence limits for most items of less than $\pm$ 5 per cent when estimating for the universe they represent. Thus the results are likely to present a fair reflection of the urban Bantu households studied.

APPENDIX B

THE CALCULATION OF RENT-PAYING CAPACITY FOR BANTU HOUSEHOLDS IN THE THREE CITIES AND FOUR TOWNS STUDIED IN 1966

The substance of this appendix is taken from the paper by Watts[1]. For fuller details the original source should be consulted. Essentially the measurement of rent-paying capacity is in terms of the poverty datum line technique. In this investigation it was necessary to keep the costing of the items for the poverty datum line as far as possible on the same basis as that used by the Committee on Socio-economic Surveys for Bantu Housing Research[2]. Unfortunately the details published in this latter report were not sufficient to indicate fully how the various specific details of the poverty datum line were calculated. This is particularly true in regard to the variations in the cost of food for various age and sex groups. The published diets given were not detailed enough. Therefore a search was made for a comparable diet for which full details were available. In the end, on the advice of Professor J.F. Potgieter of the Institute for Planning Studies at the University of Port Elizabeth (and formerly of the National Nutrition Research Institute of the Council for Scientific and Industrial Research), it was decided to use the daily food rations for adults and children put out by the Department of Agricultural Technical Services. A careful comparison of the diet with published information on the Committee's study was made, and it appears that in all major respects the diet adopted for this present study is comparable with the earlier one. After some calculations it was decided not to use the man-unit approach for estimating food costs, as the use of calories alone does not reflect the full variation in costs of diet for individuals of various age and sex groups. It was decided to be as precise as possible and the full variations in diet put out by the Department of Agricultural Technical Services were used.

As with food, in regard to the costing of clothing components and the minimum costs of fuel and lighting, and washing and cleansing materials, every attempt was made to produce a basis for costing which was comparable with the study undertaken by the Committee. For fuller details and a discussion of some of the problems

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1) Watts, H.L. (1967): *The Poverty Datum Line in Three Cities and Four Towns in the Republic of South Africa* : Institute for Social Research, University of Natal, Durban : Fact Paper No.1.

2) Committee on Socio-economic Surveys for Bantu Housing Research (1960): *A Survey of Rent-Paying Capacity of Urban Natives in South Africa* : South African Council for Scientific and Industrial Research, Pretoria : pp. 55ff.

involved see the paper by Watts (1967), pp. 6 - 10. The details of the costing of the various poverty datum line items in the towns are given in the following tables:-

TABLE B.1

MINIMUM DIET, ON A MONTHLY BASIS, FOR PERSONS OF VARIOUS AGE AND SEX GROUPS

Derived from the Daily Food Rations for Adults, published in July 1965 by the Department of Agricultural Technical Services, Pretoria.

ITEM	In Fractions of a Pound					
	Very Active Man	Mod. Active Man	Mod. Active Woman	Child under 4 yrs.	Child 4-6 yrs.	Child 7-9 yrs.
Skimmed Milk Powder	2.813	2.813	2.813	2.813	2.813	3.750
Meat/Fish	3.750	3.750	3.750	3.750	3.750	3.750
Dried Beans/Peas	7.500	3.750	3.750	1.875	1.875	1.875
Potatoes	3.750	3.750	3.750	3.750	3.750	3.750
Fresh Vegetables	15.000	15.000	15.000	7.500	7.500	11.250
Margarine	2.813	1.875	1.875	0.938	0.938	0.938
Oil	1.875	0.938	0.938	-	0.469	0.469
Brown Bread	15.000	15.000	15.000	5.625	9.375	11.250
Mealie Meal	30.000	15.000	9.375	5.625	7.500	9.375
Samp/Mealie Rice	11.250	11.250	3.750	-	1.875	3.750
Sugar	7.500	3.750	3.750	1.875	1.875	3.750
Coffee/Tea	0.938	0.469	0.469	-	-	0.268
Salt	0.938	0.938	0.938	0.234	0.234	0.469

ITEM	In Fractions of a Pound				
	Child 10-12 yrs.	Boy 13-15 yrs.	Boy 16-20 yrs.	Girl 13-15 yrs.	Girl 16-20 yrs.
Skimmed Milk Powder	3.750	4.688	4.688	4.688	4.688
Meat/Fish	3.750	3.750	3.750	3.750	3.750
Dried Beans/Peas	1.875	3.750	3.750	3.750	3.750
Potatoes	3.750	3.750	3.750	3.750	3.750
Fresh Vegetables	11.250	15.000	15.000	15.000	15.000
Margarine	1.406	1.875	2.813	1.875	1.875
Oil	0.469	0.938	1.406	0.469	0.469
Brown Bread	15.000	15.000	15.000	15.000	15.000
Mealie Meal	11.250	15.000	22.500	15.000	11.250
Samp/Mealie Meal	7.500	9.375	9.375	3.750	3.750
Sugar	3.750	3.750	5.625	3.750	3.750
Coffee/Tea	0.268	0.268	0.268	0.268	0.268
Salt	0.469	0.938	0.938	0.938	0.938

NOTE: Based on a month of 30 days, 1 oz. daily = 1.875 pounds per month.

TABLE B.2

PRICES OF FOODSTUFFS, 1966, PER POUND

Item	Johannesburg[1)]	Pretoria	Durban	Witbank	Greytown	Benoni/Springs
Skim Milk Powder	30c	30c	30c	30c	30c	30c
Meat/Fish	23	21	32	30	40	28
Dried Beans/Peas	16	16	14	16	22.8	16
Potatoes	5	5	2.4	5	8	5
Fresh Vegetables	5	3.5	6.6	4	8	3.5
Margarine	20	20	16	24	14	15
Oil[2)]	15.4	15.4	18.6	15.7	18.6	15.4
Brown Bread	3.75	3.75	3.75	3.75	3.75	3.75
Mealie Meal	3	2.8	3	2.8	3.3	2.8
Samp	3.5	3.3	3.6	3.2	3.1	3.0
Sugar	6.7	7.3	6	7.5	6.5	7.5
Coffee/Tea	45	45	44	45	50	44
Salt	3.5	3	3.5	3.5	2.5	3.5

1) These costs are taken from Suttner, Sheila (1966): *Cost of Living in Soweto, 1966* : South African Institute of Race Relations, Johannesburg, p.6. Some additions were made for items that she did not use.

2) Costed as the fraction of a 26 fluid ounce bottle which 16 ozs. represents.

TABLE B.3

ITEMS COSTED FOR THE CLOTHING COMPONENT OF THE POVERTY DATUM LINE

Items To Last One Year	Annual Cost in Various Towns					
	Soweto (Johannesburg)	Pretoria	Durban	Kwa Thema & Daveyton (Springs & Benoni)	Witbank	Greytown
I. ADULT MAN:	R	R	R	R	R	R
1/3 overcoat (1 over 3 yrs.)	5.32	5.32	2.98	3.00	3.98	5.00
1 sports jacket	5.99	5.99	5.99	5.99	4.90	5.00
2 prs. flannel trousers	5.98	5.98	5.98	5.98	6.96	7.00
2 prs. brown walking shoes	5.98	5.98	5.98	5.98	6.78	8.50
4 white cotton shirts (long sleeves)	6.36	6.36	6.36	7.36	8.06	6.60
2 prs. cotton underpants	0.78	0.78	0.78	1.18	1.18	0.65
2 cotton vests	0.78	0.78	0.78	1.18	1.18	0.60
1 sleeveless cotton /wool pullover	1.99	1.99	1.99	1.99	4.00	2.45
3 prs. cotton socks	0.75	0.75	0.87	1.47	0.78	0.75
1 pr. cotton pyjamas (long legs)	1.99	1.99	1.99	1.99	2.59	2.99
Total Annual Cost	35.92	35.92	33.70	36.12	40.41	39.54
Cost Averaged Per Month	3.00	3.00	2.81	3.01	3.37	3.30

TABLE B.3 (Contd.)

Items To Last One Year	Annual Cost in Various Towns					
	Soweto (Johann-esburg)	Pre-toria	Durban	Kwa Thema & Daveyton (Springs & Benoni)	Wit-bank	Grey-town
II. ADULT WOMAN:	R	R	R	R	R	R
1/3 coat (1 over 3 yrs.)	3.33	3.33	3.33	3.33	2.17	1.9
3 cotton dresses	8.97	8.97	9.97	11.97	8.97	8.9
1 skirt	2.99	2.99	2.99	2.99	2.99	2.6
1 cotton short-sleeved blouse	1.39	1.39	1.39	1.39	1.39	1.1
2 prs. shoes	3.98	3.98	3.98	3.98	2.99	5.1
2 prs. panties	0.70	0.70	0.58	0.58	0.78	0.7
2 vests	0.90	0.90	0.58	0.58	0.98	0.7
2 brassieres	0.78	0.78	1.10	1.10	1.10	1.1
1 cotton petticoat	1.49	1.49	1.49	1.49	2.29	0.4
1 summer locknit nightgown	1.29	1.29	1.29	1.29	1.59	1.6
1 wool/cotton jersey	1.99	1.99	1.99	1.99	2.79	2.5
3 prs. stockings	0.75	0.75	0.75	0.43	0.87	1.0
2 head squares	0.58	0.58	0.58	0.58	0.38	0.9
Total Annual Cost	29.14	29.14	30.02	31.70	29.29	28.7
Cost Averaged Per Month	2.43	2.43	2.50	2.64	2.44	2.4

NOTES: The source for the detailed items to be costed for the clothing component is Suttner (1966): op. cit., p.9. Her prices for Soweto are quoted above. The other towns were costed specially. Springs and Benoni appeared to have the same lowest prices, and so are grouped together.

One of the major problems in costing clothes is to choose the same quality from one town to another - in this case that level of quality which will last for one year's wear. Variations in quality can produce wide variations in the cost of the clothing component. The prices quoted in Table B.3 are not the very cheapest available. However, the even cheaper grades will not last as long, and appear to be more expensive in the end. The quality chosen was (as far as one can judge so unquantifiable an item as quality) that which was in terms of price in relation to wearing qualities a minimum level. In this respect the Johannesburg prices given by Suttner (1966), and quoted above, were used as a guide for determining the quality level to be aimed at.

In attempting to standardise from one town to another, the Johannesburg figures were taken as a rough guide to check that approximately the same quality was being priced. In towns with a branch

of a national chain-store, this was relatively easy, because of the company's policy of maintaining the same prices for the same article in all their branches. However, variations in stock prevented complete uniformity in quality priced. (Even with the chain-store, not always precisely the same garments were available in different branches.) When in doubt, the guidance of shop assistants was sought in selecting garments which would wear for one year.

There is no doubt that of the various poverty datum line items to be priced, clothing presents the greatest difficulty, with the problem of setting and maintaining the same quality to be priced in different towns.

The following is the basis on which clothing for children was costed:

TABLE B.4

BASIS FOR COSTING CLOTHING FOR CHILDREN

Age Group	Percentage of Cost of Adult Woman's Clothes applied
0 - 4 years	25%
5 - 9 years	50%
10 - 15 years	75%

Source: Committee on Socio-Economic Surveys for Bantu Housing Research (1960): op. cit., p.47. To fit in with the dietary age groupings, the oldest group was made 10-15 years, and not 10-16 years as in the original source.

TABLE B.5

MONTHLY ITEMS COSTED FOR CLEANING MATERIALS, FUEL AND LIGHTING, FOR A HOUSEHOLD OF 5 PERSONS

ITEMS	PRICE PER TOWN STUDIED					
	Johannesburg	Pretoria	Durban	Benoni/ Springs	Witbank	Greytown
2 one pound bars of blue soap	R0.26	R0.26	R0.24	R0.24	R0.24	R0.28
2 one pound bars of yellow soap	0.26	0.26	0.24	0.24	0.24	0.28
1 large double Sunlight soap	0.13	0.13	0.14	0.13	0.13	0.16
2 large packets soap powder (Rinso)	0.58	0.58	1.00	0.62	0.90	0.64
2 tins floor polish (Dandy)	0.36	0.36	0.42	0.30	0.42	0.46
1 small tin shoe polish	0.08	0.08	0.08	0.08	0.08	0.08
1 small tin stove polich	0.14	0.14	0.19	0.19	0.15	0.09
1 tin Vim	0.13	0.13	0.14	0.14	0.14	0.13
½ bottle Jik	0.10	0.10	0.09½	0.10	0.12	0.17½
3 bags Coal	1.63½	1.50	3.00	1.50	1.05	2.30
1 bag Wood	0.54	0.50	0.50	0.35	0.25	0.25
2 gallons Paraffin	0.70	0.60	0.40	0.50	0.50	0.50
4 1/3 packets candles	0.56	0.65	0.47	0.65	0.65	0.65
4 boxes matches	0.04	0.04	0.04	0.04	0.04	0.04

Source of items and Johannesburg prices : Suttner (1966): op. cit., pp. 10-11, and based on her average family of 5 persons.

The way in which these items were split up between individual and household costs is described in the Fact Paper by Watts (1967): op. cit.

TABLE B.6

PRIMARY POVERTY DATUM LINE, THREE CITIES, 1966

Age and Sex	SOWETO, JOHANNESBURG				
	Clothing	Fuel & Cleansing	Total Clothing & Fuel & Cleansing	Food	Total all Items
I. Children:	R	R	R	R	R
Under 4 years	0.61	0.46	1.07	3.27	4.34
4 - 6 years	1.22	0.46	1.68	3.60	5.28
7 - 9 years	1.22	0.46	1.68	4.52	6.20
10 - 12 years	1.82	0.46	2.28	4.94	7.22
II. Boys and Men:					
13 - 15 years	1.82	0.46	2.28	6.07	8.35
16 - 20 years	3.00	0.46	3.46	6.68	10.14
21+ years - manual workers	3.00	0.46	3.46	7.51	10.97
21+ years - other workers	3.00	0.46	3.46	5.66	9.12
III. Girls and Women:					
13 - 15 years	1.82	0.46	2.28	5.80	8.08
16 - 20 years	2.43	0.46	2.89	5.69	8.58
21+ years	2.43	0.46	2.89	5.23	8.12
Household as a whole - Cleansing, Fuel and Lighting for all members			R3.23		

TABLE B.6 (Contd.)

Age and Sex	PRETORIA				
	Clothing	Fuel & Cleansing	Total Clothing & Fuel & Cleansing	Food	Total all Items
I. Children:	R	R	R	R	R
Under 4 years	0.61	0.46	1.07	3.08	4.15
4 - 6 years	1.22	0.46	1.68	3.41	5.09
7 - 9 years	1.22	0.46	1.68	4.27	5.95
10 - 12 years	1.82	0.46	2.28	4.68	6.96
II. Boys and Men:					
13 - 15 years	1.82	0.46	2.28	5.74	8.02
16 - 20 years	3.00	0.46	3.46	6.35	9.81
21+ years - manual workers	3.00	0.46	3.46	7.17	10.63
21+ years - other workers	3.00	0.46	3.46	5.33	8.79
III. Girls and Women:					
13 - 15 years	1.82	0.46	2.28	5.48	7.76
16 - 20 years	2.43	0.46	2.89	5.38	8.27
21+ years	2.43	0.46	2.89	4.93	7.82
Household as a whole - Cleansing, Fuel and Lighting for all members			R3.04		

TABLE B.6 (Contd.)

Age and Sex	DURBAN				
	Clothing	Fuel & Cleansing	Total Clothing & Fuel & Cleansing	Food	Tota all Item
I. Children:	R	R	R	R	R
Under 4 years	0.62	0.54	1.16	3.54	4.7
4 - 6 years	1.25	0.54	1.79	3.89	5.6
7 - 9 years	1.25	0.54	1.79	4.85	6.6
10 - 12 years	1.88	0.54	2.42	5.26	7.6
II. Boys and Men:					
13 - 15 years	1.88	0.54	2.42	6.41	8.8
16 - 20 years	2.81	0.54	3.35	6.99	10.3
21+ years - manual workers	2.81	0.54	3.35	7.74	11.0
21+ years - other workers	2.81	0.54	3.35	6.01	9.3
III. Girls and Women:					
13 - 15 years	1.88	0.54	2.42	6.12	8.5
16 - 20 years	2.50	0.54	3.04	6.01	9.0
21+ years	2.50	0.54	3.04	5.57	8.6
Household as a whole - Cleansing, Fuel and Lighting for all members			R4.23		

NOTES: The figures for Soweto are calculated from prices given by Suttner (1966): op. cit., except that the food components differed to a slight extent from her diet; the figures for Pretoria and Durban are the lowest prevailing prices (usually Bazaar prices) during the latter part of 1966.

TABLE B.7

PRIMARY POVERTY DATUM LINE, FOUR TOWNS, 1966

Age and Sex	BENONI (DAVEYTON)				
	Clothing	Fuel & Cleansing	Total Clothing & Fuel & Cleansing	Food	T I
I. Children:	R	R	R	R	
Under 4 years	0.66	0.47	1.13	3.30	
4 - 6 years	1.32	0.47	1.79	3.62	
7 - 9 years	1.32	0.47	1.79	4.48	
10 - 12 years	1.92	0.47	2.39	4.86	
II. Boys and Men:					
13 - 15 years	1.92	0.47	2.39	5.89	
16 - 20 years	3.01	0.47	3.48	6.45	
21+ years - manual workers	3.01	0.47	3.48	7.27	1
21+ years - other workers	3.01	0.47	3.48	5.47	
III. Girls and Women:					
13 - 15 years	1.92	0.47	2.39	5.65	
16 - 20 years	2.64	0.47	3.11	5.54	
21+ years	2.64	0.47	3.11	5.09	
Household as a whole - Cleansing, Fuel and Lighting for all members			R2.75		

TABLE B.7 (Contd.)

Age and Sex	SPRINGS (KWA THEMA)				
	Clothing	Fuel & Cleansing	Total Clothing & Fuel & Cleansing	Food	To a It
I. Children:	R	R	R	R	
Under 4 years	0.66	0.47	1.13	3.30	
4 - 6 years	1.32	0.47	1.79	3.62	
7 - 9 years	1.32	0.47	1.79	4.48	
10 - 12 years	1.92	0.47	2.39	4.86	
II. Boys and Men:					
13 - 15 years	1.92	0.47	2.39	5.89	
16 - 20 years	3.01	0.47	3.48	6.45	
21+ years - manual workers	3.01	0.47	3.48	7.27	
21+ years - other workers	3.01	0.47	3.48	5.47	
III. Girls and Women:					
13 - 15 years	1.92	0.47	2.39	5.65	
16 - 20 years	2.64	0.47	3.11	5.54	
21+ years	2.64	0.47	3.11	5.09	
Household as a whole - Cleansing, Fuel and Lighting for all members			R2.75		

TABLE B.7 (Contd.)

Age and Sex	WITBANK				
	Clothing	Fuel & Cleansing	Total Clothing & Fuel & Cleansing	Food	T I
I. Children:	R	R	R	R	
Under 4 years	0.61	0.52	1.13	3.50	
4 - 6 years	1.22	0.52	1.74	3.83	
7 - 9 years	1.22	0.52	1.74	4.71	
10 - 12 years	1.83	0.52	2.35	5.13	
II. Boys and Men:					
13 - 15 years	1.83	0.52	2.35	6.23	
16 - 20 years	3.37	0.52	3.89	6.88	1
21+ years - manual workers	3.37	0.52	3.89	7.71	1
21+ years - other workers	3.37	0.52	3.89	5.82	
III. Girls and Women					
13 - 15 years	1.83	0.52	2.35	5.98	
16 - 20 years	2.44	0.52	2.96	5.87	
21+ years	2.44	0.52	2.96	5.42	
Household as a whole - Cleansing, Fuel and Lighting for all members			R2.30		

TABLE B.7 (Contd.)

Age and Sex	GREYTOWN				
	Clothing	Fuel & Cleansing	Total Clothing & Fuel & Cleansing	Food	T I
I. Children:	R	R	R	R	
Under 4 years	0.60	0.46	1.06	4.33	
4 - 6 years	1.20	0.46	1.66	4.67	
7 - 9 years	1.20	0.46	1.66	5.71	
10 - 12 years	1.80	0.46	2.26	6.09	
II. Boys and Men:					
13 - 15 years	1.80	0.46	2.26	7.45	
16 - 20 years	3.30	0.46	3.76	8.04	1
21+ years - manual workers	3.30	0.46	3.76	9.18	1
21+ years - other workers	3.30	0.46	3.76	7.04	1
III. Girls and Women					
13 - 15 years	1.80	0.46	2.26	7.19	
16 - 20 years	2.40	0.46	2.86	7.06	
21+ years	2.40	0.46	2.86	6.63	
Household as a whole - Cleansing, Fuel and Lighting for all members			R3.65		

Note: These prices were costed at the lowest prevailing prices in each town during the latter part of 1966.

Tables B.6 and B.7 are used in the following way to calculate the primary poverty datum line for a household:

The primary poverty datum line for a household is the sum of the components for each individual in a household, together with the household items for fuel, lighting and cleaning. Thus, given a household of six persons consisting of a man who is a manual labourer, a women, a boy aged 15, a girl aged 12, and two children of seven and eight years respectively, for Durban we would have the sum of R (11.09 + 8.61 + 8.83 + 7.68 + 6.64 + 6.64 + 4.23) equals R53.72.

Rent-paying capacity was estimated for a household by taking the income of that household. In practice this was defined as the total income from all sources of a head of a household and his wife.(Thus for example if they had a boarder who stayed with them only the boarder's contribution to the head of the household was taken account of, and not the full income of that boarder insofar as it was not made available to the other members of the household.) From this total income of the household head and his wife was subtracted the primary poverty datum line. (In calculating the primary poverty datum line the procedure outlined above was followed, with the exception that where someone such as a boarder, or a working child who was responsible for part of his expenses was part of the household, then the costs under the poverty datum line items incurred by the household for that person or persons were added in. This means that for instance where a working child lived with his parents and received food from his father and mother, and contributed towards the household income, only the cost of his food was added into the primary poverty datum line. Clothing was not taken into account as the individual himself had to buy his own clothes. Cleansing, fuel and lighting materials were added in on behalf of the individual on the grounds that he received these from the household. This means that the primary poverty datum line as calculated reflected the total costs under the poverty datum line which had to be met out of the total income of the head of the household and his wife.) In addition to subtracting the primary poverty datum line from the income of the head of the household and his wife, the cost of workers' transport insofar as it was paid by the head or his wife, was subtracted. The remaining income was then in theory available for rent. This, following Batson, has been called the 'available rent margin'. So it is for example that if a household head and his wife had an income of R60.00, the primary poverty datum line as calculated was R50.00, and the cost of workers' transport R5.00, we have R60.00 - (R50.00 + R5.00) equals R5.00. Therefore the household's available rent margin was R5.00 and in theory this was the maximum they could pay for rent.

The secondary poverty datum line was calculated for each household in order to calculate the relincome of the household. The relincome has been indicated in the text, is the income of a household (which we have de facto defined as the income from all sources of a head of a household and his wife) divided by the

secondary poverty datum line multiplied by 100. Thus it expresses in percentage form the size of the income of the household as a percentage of the secondary poverty datum line. This secondary poverty datum line consists of the primary poverty datum line of a household plus the cost of rent and workers' transport to and from work.

The poverty datum line for the three cities and four towns studied gives an indication of variation in the minimum cost of living. Thus for instance taking our hypothetical family of six persons described above, the primary poverty datum line (that is the theoretical minimum cost of living after rent and workers' transport have been paid) in 1966 in each of the seven towns studied was:

Johannesburg	R50.29 per month
Pretoria	R48.37 per month
Durban	R53.72 per month
Springs	R49.77 per month
Benoni	R49.77 per month
Witbank	R51.24 per month
Greytown	R58.74 per month

These variations reveal differences in the minimum cost of living in the different towns studied. It is important to note that the smallest town, Greytown, has the highest cost structure mainly because of food prices. This is a phenomenon which we have suspected was occurring in small towns, and Greytown's figures suggested the hypothesis may be correct. This warrants investigation on a wider basis with a sample of small towns, for it implies that if as seems likely there is a lower wage structure in small towns, this combination of higher prices and lower wages means greater poverty.

It must be emphasised that the poverty datum line figures given in this appendix are theoretical minima. They take only short-term considerations into account. They also assume the wisest budgeting and household expenditure - something which in nearly all cases is of course an ideal. Batson has commented that the poverty datum line

> '.... is perhaps more remarkable for what it omits than for what it includes. It does not allow a penny for amusements, for sport, hobbies, education, medicine, medical or dental care, holidays, newspapers, stationery, tobacco, sweets, gifts, or pocket money, or for comforts or luxuries of any kind, or for replacement of household equipment and furniture, or for hire purchase or insurance or saving .... It is not a "human" standard of living. It thus admirably fulfils

> 'its purpose of stating the barest minimum upon which sustenance and health can theoretically be achieved under Western conditions'[1].

In the Fact Paper on the poverty datum line, Watts (1967) has commented:

> 'Because the Poverty Datum Line excludes so much, in practice the income has to be considerably above that indicated by the poverty line before the amount spent on the components is the minimum suggested. Obviously other items not included in the poverty datum line absorb some of the household income. Batson has found that only when the income reaches about 150 per cent of the poverty datum line, is a family able to actually spend on food and other components of the line the minimum indicated. With a lower income than this, food and clothing are sacrificed to the detriment of health in order to find money for other items. Batson calls this level of one and a half times his secondary poverty datum line the "minimum effective level"[2]. From this it follows that because the poor do not and cannot restrict their expenditure purely to the minimum items, in any community the amount of poverty present will be greater than that suggested by merely taking the proportion of households whose income falls below the secondary poverty datum line. Any estimates based purely on the secondary poverty datum line are conservative.
>
> The poverty datum line also provides a theoretical basis for determining minimum wage levels. The secondary poverty datum line must be used for this purpose, and not the primary poverty datum line which excludes the very important factors of rent and transport to and from work. However, a far more desirable level to be used in determining minimum wages would be the minimum effective level, and this is commended for serious consideration.'

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1) Batson, E. (1944): *Report No. RS.203 : Series of Reports issued by the Social Survey of Cape Town* : University of Cape Town, Cape Town. (Mimeographed): p. 2.

2) Batson, E. (1945): *The Poverty Line in Salisbury* : University of Cape Town, Cape Town, p. 14.

APPENDIX C

STATISTICAL TABLES

The following selected statistical tables relate to samples drawn from the areas studied during the last half of 1966, and the first couple of months in 1967. All the areas except Kwa Thema and Lynville were completed during 1966.

TABLE C.1

AGE-SEX STRUCTURE FOR BANTU LIVING IN FAMILY DWELLINGS IN JOHANNESBURG (SOWETO), ESTIMATED FROM A SAMPLE, 1966-7

Age in Years	Percentage Distribution		
	Males	Females	Total
0 - 4	6.0	6.8	12.8
5 - 9	8.2	7.7	15.9
10 - 14	7.0	7.9	14.9
15 - 19	4.8	6.0	10.8
20 - 24	3.4	3.7	7.1
25 - 29	2.1	3.9	6.0
30 - 34	2.4	3.9	6.3
35 - 39	2.6	3.8	6.4
40 - 44	2.3	2.2	4.5
45 - 49	2.9	1.8	4.7
50 - 54	1.4	1.4	2.8
55 - 59	1.5	1.8	3.3
60 - 64	0.8	1.2	2.0
65 - 69	0.6	0.6	1.2
70+	0.3	1.0	1.3
Total	46.3	53.7	100.0
Estimated No. of Persons	179,100	207,100	386,200

Sex Ratio 0.86

Note: The Percentages are based on 'known cases' only. Ages were unknown in 0.8% of the cases.

FIGURE C.1

Age-Sex Pyramid for the Bantu Population living in Family Dwellings, Johannesburg (Soweto), based on a sample, 1966/67.

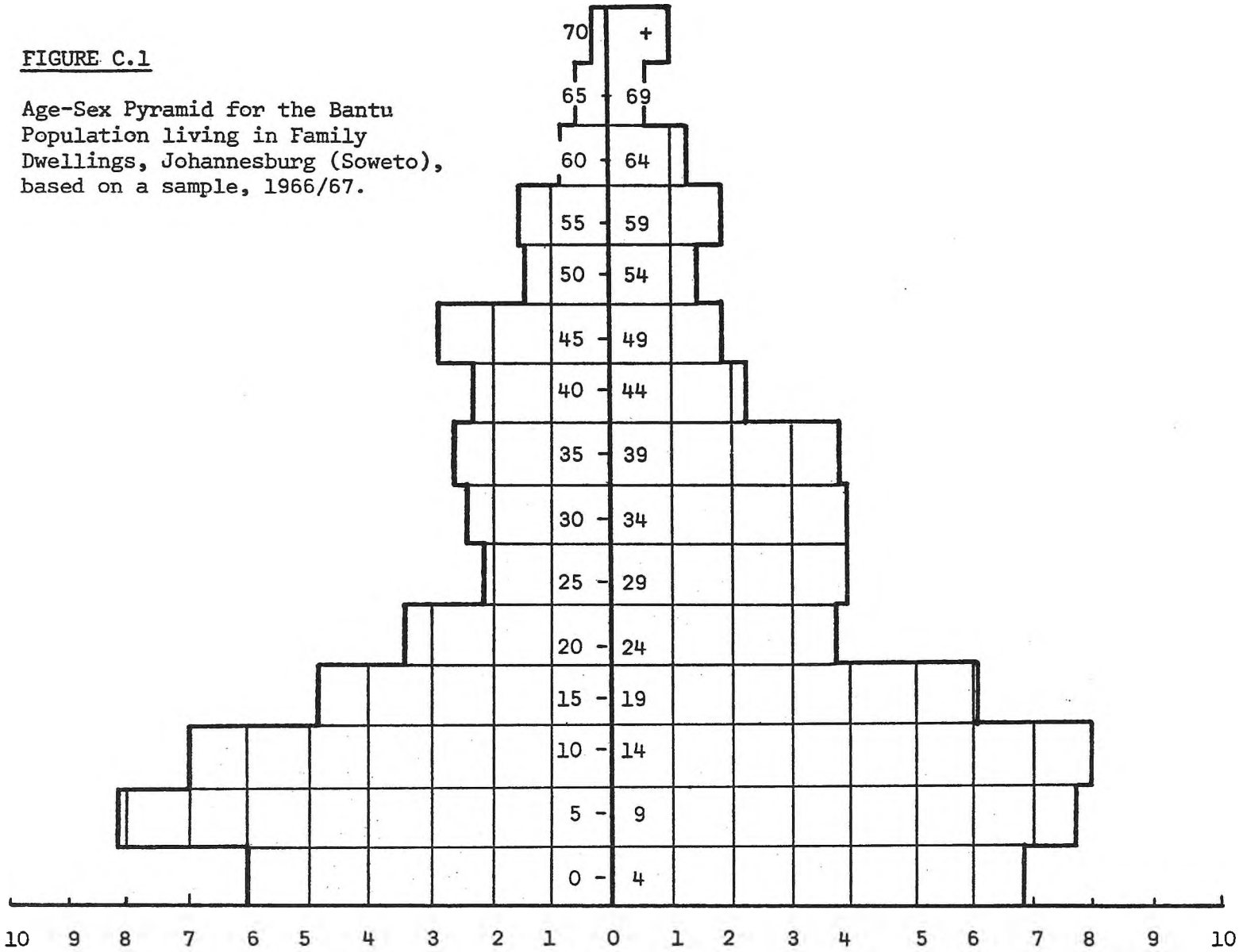


TABLE C.2

AGE-SEX STRUCTURE FOR BANTU LIVING IN FAMILY DWELLINGS IN DURBAN, ESTIMATED FROM A SAMPLE, 1966-7

Age in Years	Percentage Distribution		
	Males	Females	Total
0 - 4	7.9	8.6	16.5
5 - 9	7.6	7.8	15.4
10 - 14	5.9	6.2	12.1
15 - 19	4.2	6.8	11.0
20 - 24	4.0	5.2	9.2
25 - 29	3.3	4.0	7.3
30 - 34	2.8	2.7	5.5
35 - 39	3.5	3.6	7.1
40 - 44	2.1	2.5	4.6
45 - 49	2.6	1.3	3.9
50 - 54	1.6	1.7	3.3
55 - 59	0.3	0.9	1.2
60 - 64	1.4	0.5	1.9
65 - 69	0.3	0.5	0.8
70+	0.1	0.1	0.2
Total	47.6	52.4	100.0
Estimated No. of Persons	82,100	89,800	171,900

Sex Ratio 0.91

Note: The Percentages are based on 'known cases' only. Ages were unknown in 1.7% of the cases.

FIGURE C.2

Age-Sex Pyramid for the Bantu Population living in Family Dwellings, Durban, based on a sample, 1966/67.

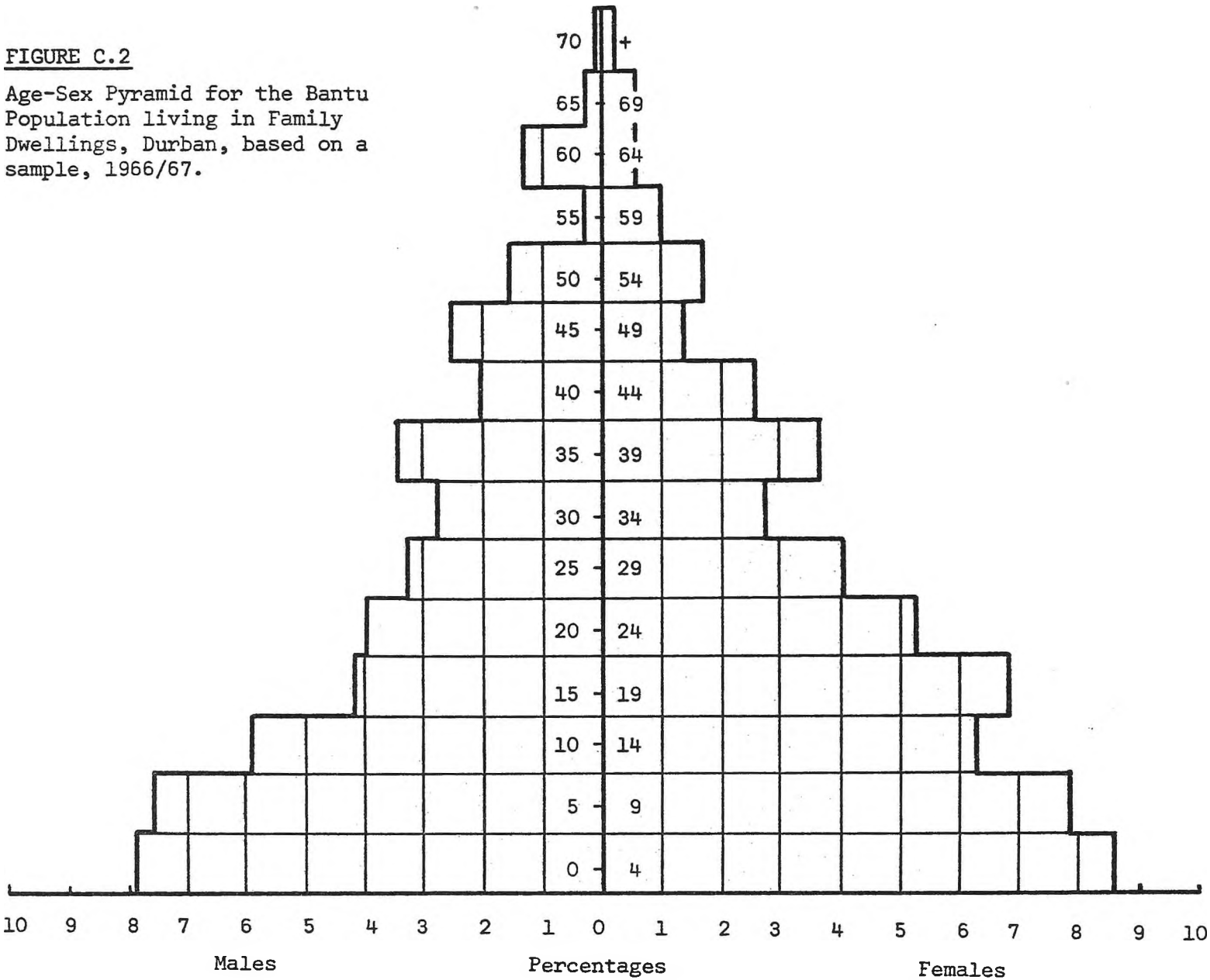


TABLE C.3

AGE-SEX STRUCTURE FOR BANTU LIVING IN FAMILY DWELLINGS IN PRETORIA, ESTIMATED FROM A SAMPLE, 1966-7

Age in Years	Percentage Distribution		
	Males	Females	Total
0 - 4	6.9	5.8	12.7
5 - 9	7.4	8.6	16.0
10 - 14	5.6	8.1	13.7
15 - 19	4.6	6.3	10.9
20 - 24	4.4	5.4	9.8
25 - 29	2.1	4.6	6.7
30 - 34	3.1	3.0	6.1
35 - 39	2.9	2.4	5.3
40 - 44	1.7	1.6	3.3
45 - 49	2.1	2.7	4.8
50 - 54	2.0	2.7	4.7
55 - 59	1.5	1.1	2.6
60 - 64	0.7	0.6	1.3
65 - 69	0.7	0.4	1.1
70+	0.3	0.7	1.0
Total	46.0	54.0	100.0
Estimated No. of Persons	75,600	88,100	163,700

Sex Ratio 0.86

Note: The Percentages are based on 'known cases' only. Ages were unknown in 0.3% of the cases.

FIGURE C.3

Age-Sex Pyramid for the Bantu Population living in Family Dwellings, Pretoria, based on a sample, 1966/67.

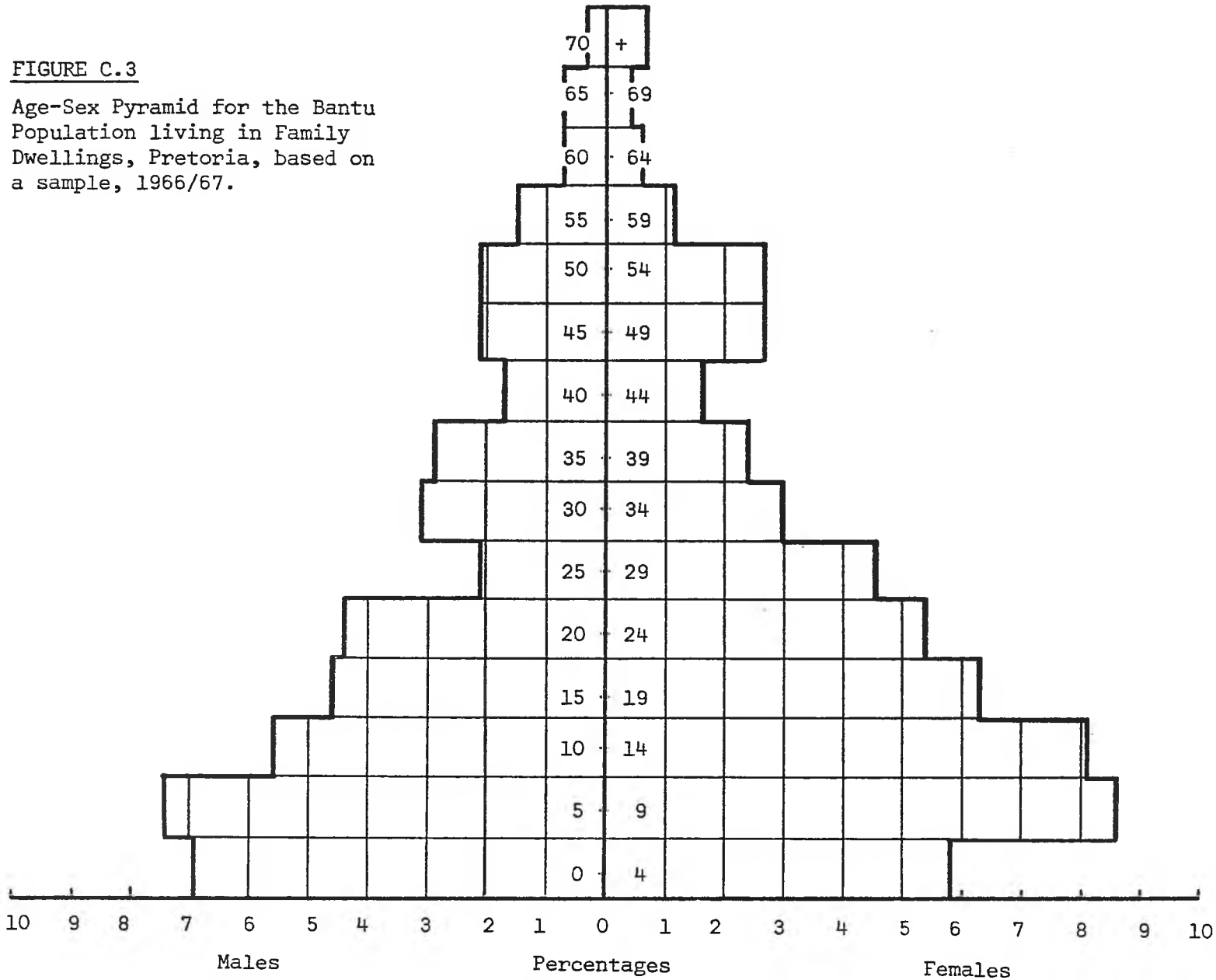


TABLE C.4

AGE-SEX STRUCTURE FOR BANTU LIVING IN FAMILY DWELLINGS IN DAVEYTON TOWNSHIP, BENONI, ESTIMATED FROM A SAMPLE, 1966-7

Age in Years	Percentage Distribution		
	Males	Females	Total
0 - 4	9.4	8.5	17.9
5 - 9	8.8	8.1	16.9
10 - 14	6.3	5.9	12.2
15 - 19	4.5	5.0	9.5
20 - 24	2.5	4.9	7.4
25 - 29	1.9	4.7	6.6
30 - 34	3.8	4.4	8.2
35 - 39	3.0	1.4	4.4
40 - 44	2.0	2.0	4.0
45 - 49	2.4	3.1	5.5
50 - 54	1.7	0.5	2.2
55 - 59	1.4	1.1	2.5
60 - 64	0.5	0.8	1.3
65 - 69	0.3	0.6	0.9
70+	0.0	0.5	0.5
Total	48.5	51.5	100.0
Estimated No. of Persons	46,400	49,500	95,900

Sex Ratio 0.94

Note: The Percentages are based on 'known cases' only. Ages were unknown in 0.2% of the cases.

FIGURE C.4

Age-Sex Pyramid for the Bantu Population living in Family Dwellings, Daveyton, based on a sample, 1966/67.

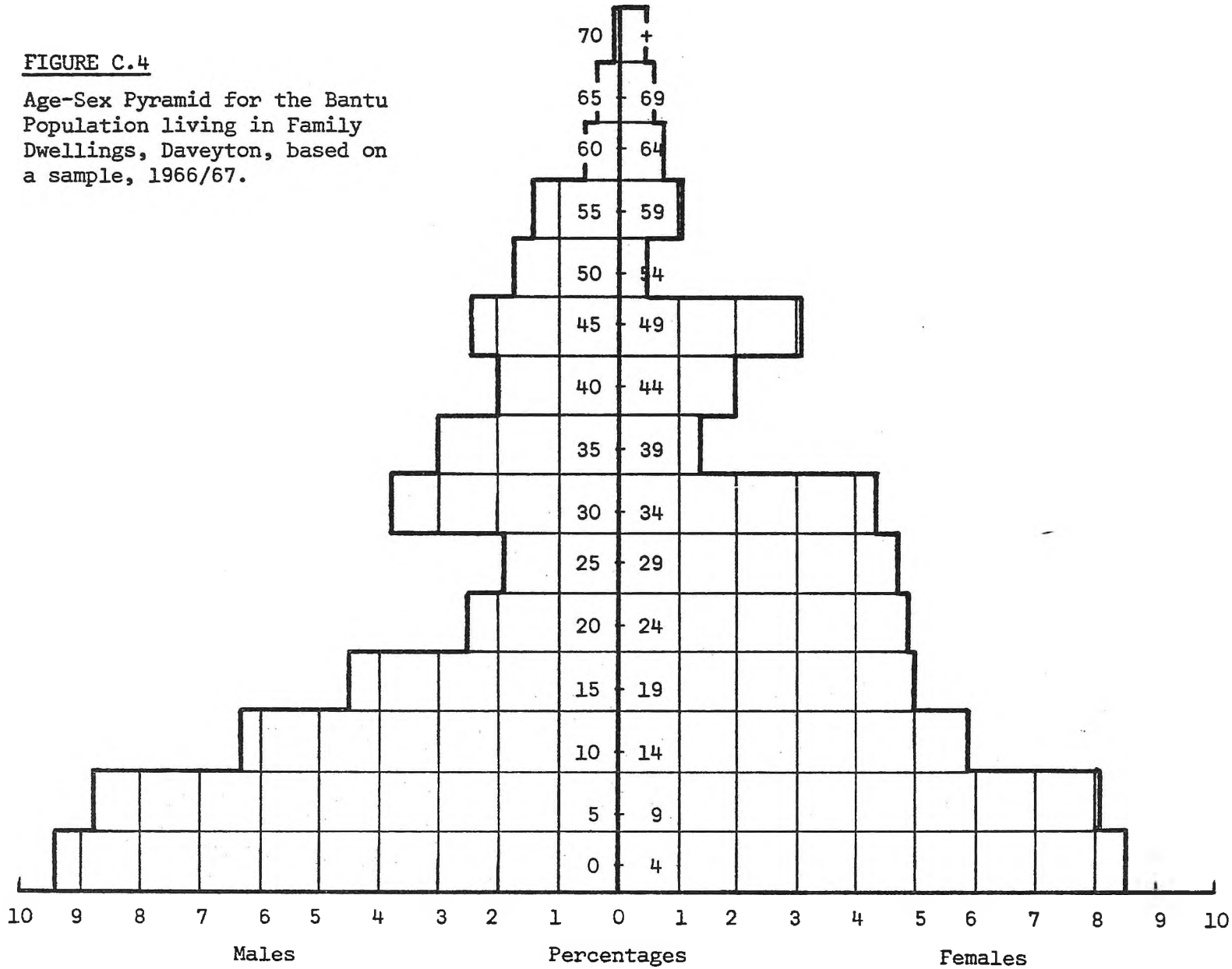


TABLE C.5

AGE-SEX STRUCTURE FOR BANTU LIVING IN FAMILY DWELLINGS IN KWA THEMA TOWNSHIP, SPRINGS, ESTIMATED FROM A SAMPLE, 1966-7

Age in Years	Percentage Distribution		
	Males	Females	Total
0 - 4	5.3	6.8	12.1
5 - 9	6.4	7.5	13.9
10 - 14	7.6	7.6	15.2
15 - 19	5.8	6.5	12.3
20 - 24	4.8	4.7	9.5
25 - 29	3.1	2.8	5.9
30 - 34	2.5	4.2	6.7
35 - 39	3.1	2.2	5.3
40 - 44	1.7	2.5	4.2
45 - 49	3.1	2.5	5.6
50 - 54	1.4	1.7	3.1
55 - 59	1.7	1.3	3.0
60 - 64	0.6	0.8	1.4
65 - 69	0.3	0.5	0.8
70+	0.2	0.8	1.0
Total	47.6	52.4	100.0
Estimated No. of Persons	27,600	30,400	58,000

Sex Ratio 0.91

Note: The Percentages are based on 'known cases' only. Ages were unknown in 0.5% of the cases.

FIGURE C.5

Age-Sex Pyramid for the Bantu Population living in Family Dwellings, Kwa Thema, based on a sample, 1966/67.

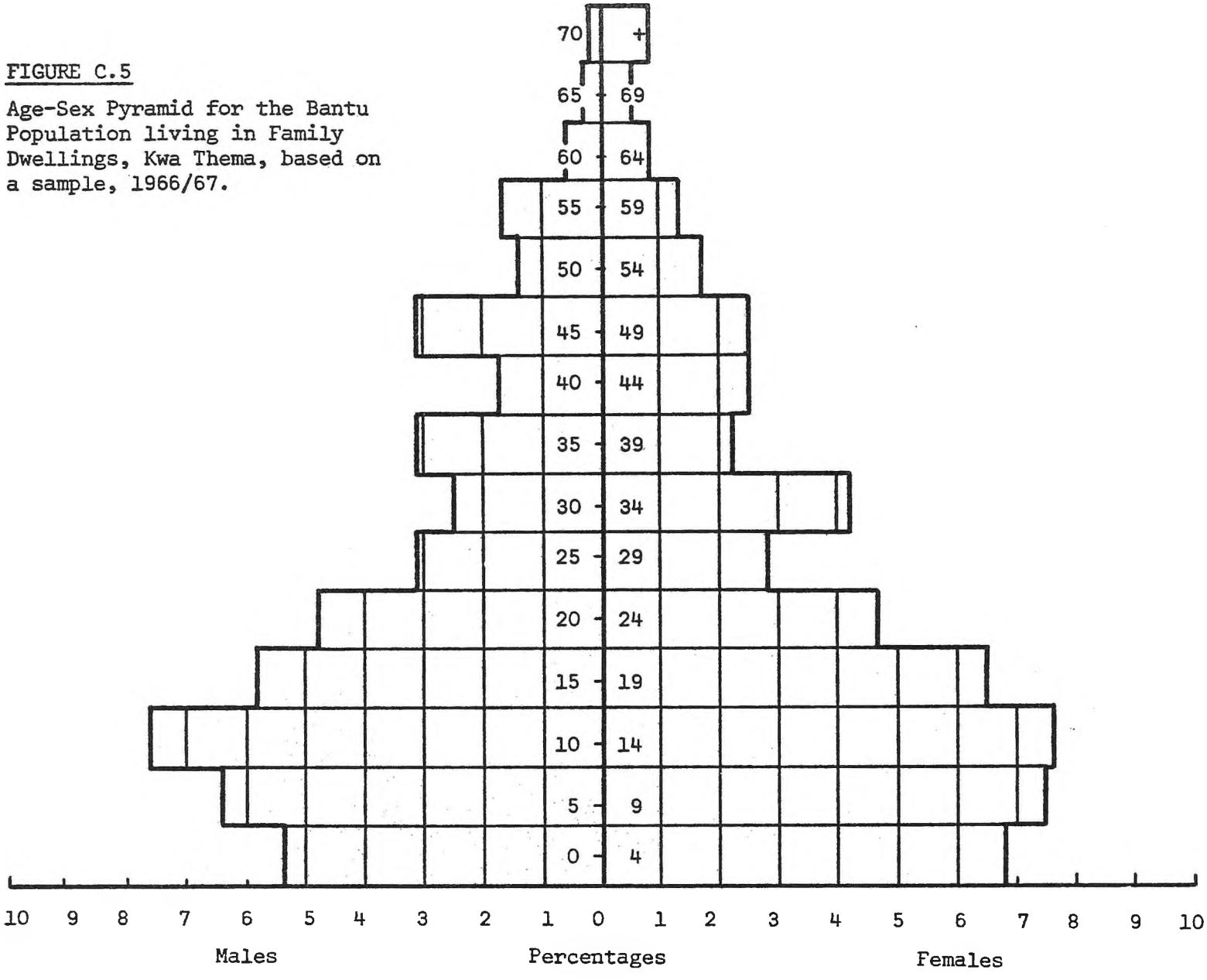


TABLE C.6

AGE-SEX STRUCTURE FOR BANTU LIVING IN FAMILY DWELLINGS IN LYNVILLE TOWNSHIP, WITBANK, ESTIMATED FROM A SAMPLE, 1966-7

Age in Years	Percentage Distribution		
	Males	Females	Total
0 - 4	6.0	10.9	16.9
5 - 9	5.3	6.5	11.8
10 - 14	4.0	8.1	12.1
15 - 19	3.1	5.3	8.4
20 - 24	3.4	7.2	10.6
25 - 29	4.0	5.0	9.0
30 - 34	4.3	2.8	7.1
35 - 39	2.8	3.4	6.2
40 - 44	2.2	1.2	3.4
45 - 49	2.2	2.5	4.7
50 - 54	1.2	2.2	3.4
55 - 59	1.9	1.2	3.1
60 - 64	0.9	0.6	1.5
65 - 69	0.0	0.3	0.3
70+	1.2	0.3	1.5
Total	42.5	57.5	100.0
Estimated No. of Persons	5,500	7,400	12,900

Sex Ratio 0.74

Note: The Percentages are based on 'known cases' only. Ages were unknown in 0.0% of the cases.

FIGURE C.6

Age-Sex Pyramid for the Bantu Population living in Family Dwellings, Lynville, based on a sample, 1966/67.

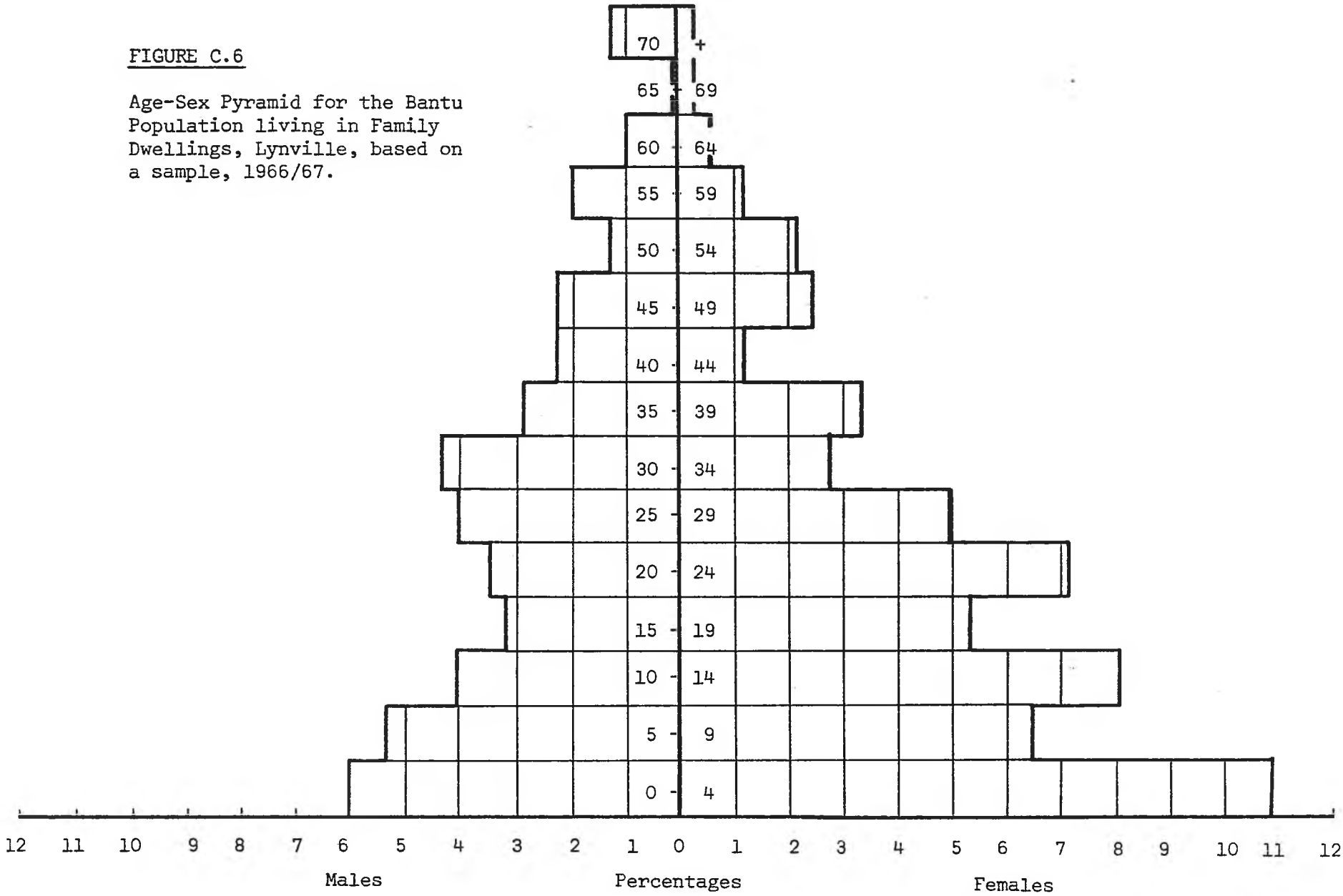


TABLE C.7

AGE-SEX STRUCTURE FOR BANTU LIVING IN FAMILY DWELLINGS IN GREYTOWN, ESTIMATED FROM A SAMPLE, 1966-7

Age in Years	Percentage Distribution		
	Males	Females	Total
0 - 4	6.5	8.7	15.2
5 - 9	10.7	9.5	20.2
10 - 14	7.7	6.5	14.2
15 - 19	4.7	6.5	11.2
20 - 24	1.7	3.2	4.9
25 - 29	2.7	3.0	5.7
30 - 34	2.5	3.0	5.5
35 - 39	2.7	3.0	5.7
40 - 44	2.2	1.7	3.9
45 - 49	1.2	2.5	3.7
50 - 54	2.0	2.0	4.0
55 - 59	1.7	0.5	2.2
60 - 64	0.3	0.7	1.0
65 - 69	0.6	0.7	1.3
70+	0.6	0.7	1.3
Total	47.8	52.2	100.0
Estimated No. of Persons	3,900	4.200	8,100

Sex Ratio 0.92

Note: The Percentages are based on 'known cases' only. Ages were unknown in 0.5% of the cases.

FIGURE C.7

Age-Sex Pyramid for the Bantu Population living in Family Dwellings, Greytown, based on a sample, 1966/67.

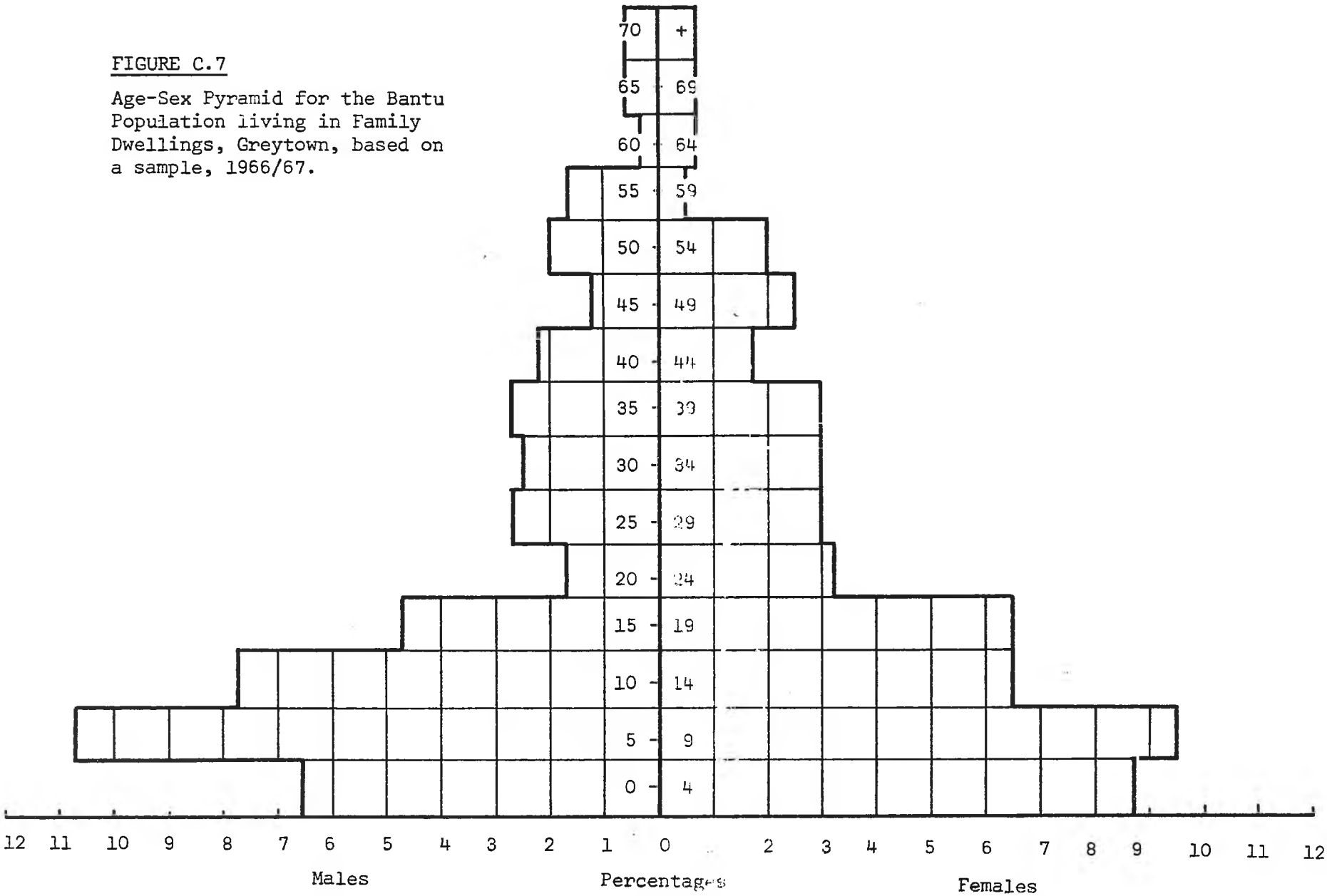


TABLE C.8

AGE DISTRIBUTIONS FOR THE AREAS STUDIED, GROUPED ACCORDING TO SUNDBARG'S CLASSIFICATION, AND COMPARED WITH SUNDBARG'S THREE THEORETICAL POPULATION MODELS

Town or Township Studied	Percentage Distribution by Age		
	Under 15 years	15-49 Years	50+ Years
Johannesburg	43.6	45.8	10.6
Durban	44.0	48.6	7.4
Pretoria	42.3	46.7	11.0
Daveyton	47.0	45.6	7.4
Kwa Thema	41.2	49.5	9.3
Lynville	40.8	49.4	9.8
Witbank	49.6	40.6	9.8
Sundbarg's Population Model			
Progressive	40.0	50.0	10.0
Stationary	26.5	50.5	23.0
Regressive	20.0	50.0	30.0

TABLE C.9

MEDIAN AND QUARTILE AGES FOR THE BANTU POPULATION IN FAMILY DWELLINGS IN THE AREAS STUDIED, ESTIMATED FROM A SAMPLE, 1966-7

Town or Township Studied	Ages		
	First Quartile	Median	Third Quartile
Johannesburg	8.85	17.95	35.80
Durban	7.75	17.75	33.30
Pretoria	8.85	18.50	34.30
Daveyton	7.10	16.55	32.70
Kwa Thema	9.60	18.50	34.45
Lynville	8.45	20.40	34.45
Witbank	7.40	15.20	33.25

Notes: The *median age* is that age below which half the population falls, and above which the other half lies. The *first quartile age* is the age below which one-quarter falls, whilst the *third quartile age* is the age above which one-quarter lies - i.e. one-quarter are older than this age.

TABLE C.10

MARITAL STATUS OF BANTU AT ALL AGES LIVING IN FAMILY DWELLINGS, ESTIMATED FROM A SAMPLE, 1966-7

Marital Status	Percentage Distribution						
	Johannes-burg	Durban	Pretoria	Davey-ton	Kwa Thema	Lynville	Grey town
Never Married - Under 16 years of age	44.9	45.1	44.6	49.3	43.7	43.2	51
Never Married - Aged 16+ years	19.0	18.6	20.8	14.4	22.2	21.1	17
Total Never Married	63.9	63.7	65.4	63.7	65.9	64.3	68
Married	27.0	30.7	27.7	29.4	26.7	31.0	25
Living Together	0.4	0.2	0.2	0.3	0.0	0.0	0
Divorced	0.5	0.3	0.1	0.2	0.0	0.0	0
Widow/er	4.6	3.7	2.8	2.2	3.7	2.2	4
Separated/Deserted	0.6	0.2	0.1	0.3	0.5	0.0	0
Unmarried Mother	2.8	1.2	3.7	3.3	3.2	2.5	0
Unknown	0.2	0.0	0.0	0.6	0.0	0.0	1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100

TABLE C.11

PERCENTAGE DISTRIBUTION OF HOUSEHOLD SIZE, FOR ALL HOUSEHOLDS EXCEPT SINGLE-PERSON HOUSEHOLDS, 1966-7

No. of Persons	City/Town							All Towns Surveye
	Johann-esburg	Durban	Pre-toria	Davey-ton	Kwa Thema	Lyn-ville	Grey-town	
2	10.07	14.14	7.18	9.44	6.94	1.96	9.68	10.06
3	13.43	7.14	8.61	9.44	3.96	13.73	6.45	10.27
4	17.50	10.84	11.96	14.15	12.87	5.88	9.68	14.37
5	15.35	16.78	11.00	17.92	17.82	17.65	11.29	15.34
6	14.63	13.66	12.44	7.55	15.84	19.61	8.06	13.37
7	9.35	9.01	16.27	11.32	12.87	11.76	19.35	10.98
8	7.19	7.18	9.09	9.43	10.89	13.73	12.90	8.09
9	4.80	10.44	10.05	6.60	6.93	3.92	9.68	7.19
10	2.64	4.91	2.87	7.55	3.96	3.92	6.45	3.80
11	1.20	2.78	3.83	3.77	2.97	1.96	4.84	2.39
12	1.92	1.76	2.87	1.89	0.99	3.92	1.62	2.01
13	0.48	0.40	1.91	-	1.98	1.96	-	0.76
14	0.72	0.48	0.48	-	-	-	-	0.49
15	0.24	-	0.48	0.94	0.99	-	-	0.35
16+	0.48	0.48	0.96	-	0.99	-	-	0.53
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Estimated No. of House-holds (exclu-ding single person House-holds	58,660	27,670	22,990	14,840	8,080	1,530	630	134,400
Estimated No. of Single Person House-holds in Fami-ly Dwellings	4,900	1,610	880	-	160	-	50	7,600
Total Esti-mated No. of Households in Family Dwellings	63,560	29,280	23,870	14,840	8,240	1,530	680	142,000

TABLE C.12

SIZE OF FAMILY, FOR ALL TYPES OF FAMILIES

No. of Persons in Family	Percentage Distribution						
	Johannes-burg	Durban	Pretoria	Daveyton	Kwa Thema	Lynville	Greytown
2	22.4	17.4	17.9	20.5	20.8	14.5	13.4
3	15.9	15.6	16.4	18.9	11.2	14.5	10.5
4	15.0	14.1	16.8	15.2	18.4	12.9	16.4
5	14.1	19.4	12.3	15.9	12.0	19.5	13.4
6	11.5	12.7	11.9	6.8	12.0	17.7	11.9
7	9.6	6.3	11.6	7.6	12.0	4.8	19.4
8	6.7	4.8	5.2	8.3	8.0	8.1	4.5
9	3.1	5.4	4.5	3.0	4.0	3.2	4.5
10	0.9	2.7	1.9	2.3	1.6	1.6	3.0
11	0.2	1.2	0.7	1.5	-	3.2	3.0
12	0.2	0.4	0.4	-	-	-	-
13	0.4	-	0.4	-	-	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE C.13

TYPES OF FAMILIES IN THE BANTU POPULATIONS STUDIED, 1966-7

Type of Family	Percentage Distribution						
	Johann-esburg	Durban	Pretoria	Davey-ton	Kwa Thema	Lyn-ville	Grey-town
A. Main Families							
Whole Families	71.2	78.0	81.9	79.6	80.8	83.7	70.9
Incomplete Families	8.8	7.2	7.3	10.2	7.1	10.2	10.9
Broken Families	20.0	14.8	10.8	10.2	12.1	6.1	18.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Estimated No. of Main Families	57400	24210	21230	13720	7920	1470	550
B. Additional Families							
Whole Families	18.2	25.8	17.3	11.8	11.5	38.5	33.3
Incomplete Families	10.5	25.9	12.0	14.7	-	-	-
Broken Families	71.3	48.3	70.7	73.5	88.5	61.5	66.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Estimated No. of Additional Families	20020	6950	8250	4760	2080	390	120
C. All Families							
Whole Families	57.5	66.4	63.8	62.1	66.4	74.2	64.1
Incomplete Families	9.2	11.4	8.6	11.4	5.6	8.1	8.9
Broken Families	33.3	22.2	27.6	26.5	28.0	17.7	26.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Estimated No. of Families	77980	31290	29480	18760	9840	1890	690
% Main Families	74.1	77.7	72.0	74.2	79.2	79.0	82.1
% Additional Families	25.9	22.3	28.0	25.8	20.8	21.0	17.9

Notes: A family consists of a man and woman living together (an 'incomplete'family); plus dependent children, own or adopted (which makes a 'whole' family); or a man or woman only plus children (i.e. a 'broken' family, broken by the death or desertion of one of the partners, or by divorce, or separation).

The 'main family' in a dwelling is the family owning the dwelling, or officially responsible for renting the whole dwelling. Other families are 'additional', and share the dwelling with the main family.

TABLE C.14

AVERAGE (MEAN) BANTU FAMILY AND HOUSEHOLD SIZES, 1966-7

Type of Family or Household	Mean Number of Persons per Family or Household						
	Johannes-burg	Durban	Pretoria	Davey-ton	Kwa Thema	Lynville	G t
Main Families	5.06	5.36	5.37	5.01	5.36	5.55	
Additional Families	3.27	3.13	3.21	3.38	2.44	3.23	
All Families	4.59	4.87	4.85	4.65	4.81	5.06	
Main Households	5.62	6.37	6.75	6.27	6.46	6.49	
Additional House-holds	2.36	2.59	2.05	2.67	1.67	3.0	
All Households	5.16	5.66	6.34	6.07	6.32	6.35	
All Households (excluding single person households)	5.38	5.94	6.55	6.07	6.43	6.35	

TABLE C.15

PERCENTAGE DISTRIBUTION OF THE COMPOSITION OF HOUSEHOLDS IN THE TOWNS STUDIED, 1966-7

(a) Main Households

Household Composition	Towns Studied							All House-Holds
	Johann-esburg	Durban	Pretoria	Davey-ton	Kwa Thema	Wit-bank	Grey-town	
(a) Whole/Incomplete Families Only	%	%	%	%	%	%	%	%
M + W	5	5	3	5	5	2	8	5
M + W + C	45	47	48	55	54	63	48	48
M + 1st.W + 2nd.W + C	*	-	-	-	-	-	-	*
Sub-Total	50	52	51	60	59	65	56	53
(b) Broken Families Only								
M + C	*	1	-	-	-	-	-	*
W + C	7	7	5	2	5	4	5	6
Sub-Total	7	8	5	2	5	4	5	6
Sub-Total All Families	57	60	56	62	64	69	61	59
(c) Incomplete/ Whole + Relatives/ and Non-Relatives								
M + W + R	3	1	3	1	-	4	2	2
M + W + R + NR	*	-	-	-	-	-	-	*
M + W + C + R	23	29	32	26	27	27	15	26
M + W + C + NR	1	-	-	-	-	-	3	1
M + W + C + R + NR	-	2	-	-	-	-	-	*
Sub-Total	27	32	35	27	27	31	20	29
(d) Broken Families + Relatives/ and Non-Relatives								
M + C + R	2	*	1	-	-	-	-	1
W + C + R	13	7	6	10	8	-	14	10
W + C + R + NR	*	-	-	-	-	-	-	*
Sub-Total	15	7	7	10	8	-	14	11

TABLE C.15 (Contd.) (a) Main Households

Household Composition	Towns Studied							All House-Holds
	Johann-esburg	Durban	Pretoria	Davey-ton	Kwa Thema	Wit-bank	Grey-town	
(e) Single Persons + Relatives/ Non-Relatives	%	%	%	%	%	%	%	%
W + R	1	*	2	1	1	-	5	1
W + NR	*	-	-	-	-	-	-	*
Sub-Total	1	*	2	1	1	-	5	1
(f) Single Persons Only								
Related Lodgers	-	-	-	-	-	-	-	-
Unrelated Lodgers	-	-	-	-	-	-	-	-
W only	*	1	-	-	-	-	-	*
Sub-Total	*	1	-	-	-	-	-	*
GRAND TOTAL	100	100	100	100	100	100	100	100
Estimated No. of Households	60200	24320	21780	14000	8000	1470	590	130360

Notes:

1. Only combinations actually found are listed.
2. * = under ½%.
   - = no sample cases in the category concerned.
3. M = Man; W = his wife; C = Child(ren) of M or W; R = Relatives of M or W; NR = Unrelated persons (non-relative).
4. A Household is a housekeeping unit formed by a person or persons (usually but not necessarily related), who keep house together with a common housekeeping budget. Typically, the clearest indications of belonging to a household is eating with the members of that household.
5. A 'Main Household' in a dwelling is the household owning the dwelling, or officially renting the dwelling.

TABLE C.15 (Continued)

PERCENTAGE DISTRIBUTION OF THE COMPOSITION OF HOUSEHOLDS

(b) Additional Households

Household Composition	Towns Studied							All Additional House-Holds
	Johannesburg	Durban	Pretoria	Daveyton	Kwa Thema	Witbank	Greytown	
(a) Whole/Incomplete Families Only	%	%	%	%	%	%	%	%
M + W	25	30	28	66	-	-	-	30
M + W + C	29	14	22	17	33	100	25	21
M + 1st.W + 2nd.W + C	-	-	-	-	-	-	-	-
Sub-Total	54	44	50	83	33	100	25	51
(b) Broken Families Only								
M + C	-	-	-	-	-	-	-	-
W + C	-	5	-	17	-	-	12	3
Sub-Total	-	5	-	17	-	-	12	3
Sub-Total All Families	54	49	50	100	33	100	37	54
(c) Incomplete/Whole + Relatives/ and Non-Relatives								
M + W + R	-	-	-	-	-	-	-	-
M + W + R + NR	-	-	-	-	-	-	-	-
M + W + C + R	-	2	-	-	-	-	-	1
M + W + C + NR	-	-	-	-	-	-	-	-
M + W + C + R + NR	-	-	-	-	-	-	-	-
Sub-Total	-	2	-	-	-	-	-	1
(d) Broken Families + Relatives/ and Non-Relatives								
M + C + R	-	-	-	-	-	-	-	-
W + C + R	-	-	-	-	-	-	-	-
W + C + R + NR	-	-	-	-	-	-	-	-
Sub-Total	-	-	-	-	-	-	-	-

TABLE C.15 (Contd.) (b) Additional Households

Household Composition	Towns Studied							All Additional Households
	Johannesburg	Durban	Pretoria	Daveyton	Kwa Thema	Witbank	Greytown	
(e) Single Persons + Relatives/ Non-Relatives	%	%	%	%	%	%	%	%
W + R	-	-	6	-	-	-	-	1
W + NR	-	-	-	-	-	-	-	-
Sub-Total	-	-	6	-	-	-	-	1
(f) Single Persons Only								
Related Lodgers	21	34	22	-	67	-	-	25
Unrelated Lodgers	21	15	22	-	-	-	63	17
W Only	4	-	-	-	-	-	-	1
Sub-Total	46	49	44	-	67	-	63	43
GRAND TOTAL	100	100	100	100	100	100	100	99
Estimated No. of Households	3360	4960	2090	840	240	60	80	11630

TABLE C.16

PERCENTAGE DISTRIBUTION OF HIGHEST EDUCATIONAL LEVEL ATTAINED, BY THOSE WHO HAVE CEASED THEIR EDUCATION, 1966-7

Highest Educational Level Attained	Percentage Distribution of Known Cases						
	Johannes-burg	Durban	Pretoria	Davey-ton	Kwa Thema	Lyn-ville	Grey-town
No shcooling/Never passed any standard	24.8	15.6	24.0	24.3	23.8	25.9	18.8
Class i or its equiv.	0.0	0.9	0.2	0.3	1.0	0.6	0.0
Class ii " " "	0.9	1.2	1.7	1.9	1.0	0.6	0.6
Std. 1 " " "	4.9	5.7	3.4	4.9	5.4	2.9	7.3
Std. 2 " " "	6.0	8.3	5.3	7.4	6.0	9.8	7.3
Std. 3 " " "	7.5	9.0	6.8	7.8	5.7	8.6	6.0
Std. 4 " " "	11.6	9.6	10.7	14.2	10.8	9.8	9.0
Std. 5 " " "	12.4	11.6	14.1	8.7	9.0	10.3	9.0
Std. 6 " " "	19.0	14.1	17.0	14.9	16.9	12.6	10.2
Std. 7 " " "	2.0	8.1	5.1	5.5	5.4	4.0	9.6
Std. 8 " " "	3.3	5.3	4.1	3.3	4.5	4.0	5.4
Std. 9 " " "	5.4	6.0	3.8	2.9	6.6	6.9	10.2
Std. 10 " " "	0.0	0.5	0.3	0.0	0.0	0.6	0.6
Matric " " "	1.8	3.4	2.7	3.3	3.3	2.3	3.0
1 yr. post-matric or its equivalent	0.1	0.0	0.2	0.0	0.0	0.0	0.0
2 yrs. post-matric or its equivalent	0.0	0.3	0.2	0.0	0.0	0.0	1.8
3 yrs. post-matric or its equivalent	0.1	0.2	0.0	0.6	0.6	1.1	0.6
4+ yrs. post-martic or its equivalent	0.2	0.2	0.4	0.0	0.0	0.0	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Estimated Total of Bantu known to have ceased Education	170,810	86,710	84,240	46,650	29,970	6,960	3,320
Estimated No. who have ceased Education, whose Education Level is Unknown	-	290	-	300	90	-	-
Estimated No. Cases for which there was no information at all about Education	3,500	4,710	840	770	3,510	-	200
Estimated No. Cases aged 16+ yrs., pursuing an Education	22,420	6,840	9,260	3,180	3,560	550	570
Estimated Total No. 16+ yrs. old	211,400	95,690	91,320	48,770	32,940	7,360	3,880
No. 16+ yrs. pursuing an Education as a % of all 16+ yr. olds	10.6%	7.1%	10.1%	6.5%	10.8%	7.5%	14.7%

TABLE C.17

OCCUPATIONAL CATEGORY OF PERSONS AGED 16+ YEARS, 1966-7

Occupational Category	Percentage of Known Cases						
	Johann-esburg	Durban	Pretoria	Davey-ton	Kwa Thema	Lyn-ville	Grey-town
Independent Commercial and Managerial	0.3	0.0	0.4	0.3	1.4	0.0	0.0
Professional and Higher Administrative	0.3	0.6	0.4	0.3	1.1	1.1	3.1
Subordinate White Collar[1)]	8.2	7.1	8.9	7.8	8.8	7.1	13.1
Skilled Manual	0.0	0.7	0.1	0.6	0.8	0.0	1.6
Supervisory Manual, or Manual work with an element of responsibility	4.7	5.1	4.2	3.7	6.4	3.8	6.3
Semi-skilled	16.4	9.5	14.8	8.7	6.4	14.4	9.9
Unskilled[2)]	25.0	30.8	29.8	36.3	36.2	36.3	26.2
Traditional Skills[3)]	0.3	0.0	0.5	-	0.6	0.0	0.5
Retired/Pensioned	2.9	2.5	2.2	4.0	3.3	4.9	3.1
Disabled	1.3	0.6	2.0	0.9	0.3	2.7	0.5
Housewife	17.7	19.4	15.5	20.5	13.5	14.4	15.2
Student	9.5	6.5	9.5	4.7	9.4	6.0	10.5
Unemployed	13.4	17.2	11.7	12.2	11.8	9.3	10.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Estimated No. Aged 16+ years	211,400	94,690	91,320	48,770	32,940	7,360	3,880

Notes: 1) This category includes lower grades of independent commercial workers (such as hawkers), and clergymen with only a primary school education.

2) Including ordinary domestic servants.

3) Herbalist, diviner, spiritualist, and faith healer.

TABLE C.18

MEANS OF TRANSPORT TO AND FROM WORK, BANTU WORKERS, 1966-7

Means of Transport	Percentage Distribution of Known Cases						
	Johann-esburg	Durban	Pretoria	Davey-ton	Kwa Thema	Lyn-ville	Grey-town
Cycle	1.1	0.4	6.9	6.4	8.5	28.3	4.9
Motor Cycle/Scooter	0.2	0.6	0.2	-	0.5	-	-
Own Car	2.0	3.7	1.9	2.3	3.7	1.8	-
Friend's Car	0.6	-	0.5	1.7	-	1.8	-
Bus	5.9	42.9	3.8	1.1	69.0	13.6	-
Train	53.3	8.2	33.9	48.6	1.9	-	-
Taxi	2.7	0.7	5.3	5.2	0.9	1.8	2.0
Walk	3.9	5.9	6.2	6.4	3.7	36.4	62.6
Staying at/very near work	8.6	6.1	14.8	7.5	9.9	11.8	27.5
Taxi/bus and train	13.9	24.7	18.6	19.7	0.9	-	-
Bus and Walk	0.6	1.6	0.5	-	-	-	-
Cycle and Train	0.2	0.4	0.2	-	0.5	1.8	2.0
Firm's Vehicle	0.7	0.9	-	1.1	0.5	2.7	-
Horse	-	0.4	-	-	-	-	-
Train and Walk	6.3	3.5	7.2	-	-	-	1.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Estimated Total No. working	117,040	52,550	54,120	28,370	20,520	4,640	2,420
Unemployed/Invalid	30,940	36,470	28,440	17,850	9,810	2,280	1,100

TABLE C.19

A SUMMARY OF THE MEANS OF TRANSPORT TO WORK, BANTU WORKERS, 1966-7

Type of Transport	Percentage Distribution of Known Cases						
	Johann-esburg	Durban	Pretoria	Davey-ton	Kwa Thema	Lyn-ville	Grey-town
Private Transport Only	3.9	5.1	9.5	10.4	12.7	31.9	4.9
Public Transport	82.7	81.6	69.3	74.6	72.7	15.4	3.0
Private and Public	0.2	0.4	0.2	-	0.5	1.8	2.0
Walk only	3.9	5.9	6.2	6.4	3.7	36.4	62.6
No journey to work	8.6	6.1	14.8	7.5	9.9	11.8	27.5
Firm's Vehicle	0.7	0.9	-	1.1	0.5	2.7	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE C.20

MONTHLY COST OF TRANSPORT TO WORK, BANTU WORKERS, 1966-7

Cost in Rands	Percentage of Known Cases						
	Johannes-burg	Durban	Pretoria	Davey-ton	Kwa Thema	Lyn-ville	Grey-town
No cost at all	5.5	6.4	10.3	4.6	7.1	11.1	22.5
No direct cost*	9.9	9.0	18.8	17.9	19.3	69.4	75.5
Less than R1.00 p.m.	1.8	1.3	4.5	-	2.8	4.6	-
R 1.00 - 1.99 p.m.	31.5	9.3	8.7	3.5	33.5	0.9	2.0
2.00 - 2.99	34.2	28.0	35.0	52.7	33.0	10.2	-
3.00 - 3.99	9.4	24.3	12.3	16.2	1.4	1.9	-
4.00 - 4.99	4.1	7.0	6.5	1.7	0.5	-	-
5.00 - 9.99	3.0	12.5	3.4	1.7	1.9	1.9	-
10.00 - 14.99	0.5	2.2	0.5	1.7	0.5	-	-
15.00+	0.1	-	-	-	-	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: *Walking or cycling to work involves indirect costs not borne monthly.

TABLE C.21

TIME TAKEN BY JOURNEY TO WORK, BANTU WORKERS, 1966-7

Time Taken by Journey to Work	Percentage of Known Cases Journeying to Work						
	Johannes-burg	Durban	Pretoria	Davey-ton	Kwa Thema	Lyn-ville	Grey-town
Less than 15 minutes	1.5	3.2	7.0	9.6	4.4	8.0	41.1
15-29 minutes	3.7	8.0	6.0	6.4	13.7	13.6	9.6
30-44 minutes	5.4	20.6	25.7	42.3	38.2	37.5	35.6
45-59 minutes	6.3	25.0	20.2	6.4	9.3	6.8	-
1 hr. - 1 hr. 29 mins.	37.5	28.8	23.3	23.2	30.1	33.0	13.7
1½ hrs.- 1 hr. 59 "	29.7	13.6	12.7	8.3	1.6	1.1	-
2 hrs. or longer	15.9	0.8	5.1	3.8	2.7	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE C.22

TIME AT WHICH WORKERS LEAVE HOME IN THE MORNING FOR WORK, 1966-7

Time Worker Leaves Home	Percentage of Known Cases Leaving Regularly for Work						
	Johannes-burg	Durban	Pretoria	Davey-ton	Kwa Thema	Lyn-ville	Gre tow
Before 4.00 a.m.	2.4	1.9	0.9	2.0	0.6	1.2	1
4.00 - 4.59 a.m.	6.2	14.5	5.7	4.7	2.8	-	1
5.00 - 5.29 a.m.	11.0	13.7	16.4	14.1	8.8	5.8	1
5.30 - 5.59 a.m.	16.6	14.6	12.5	18.1	13.8	8.1	5
6.00 - 6.29 a.m.	26.3	30.0	29.1	28.9	23.8	24.4	1
6.30 - 6.59 a.m.	17.3	10.6	17.5	14.1	18.2	15.1	2
7.00 - 7.29 a.m.	11.4	8.0	10.1	8.7	17.1	26.8	2
7.30 - 7.59 a.m.	5.8	3.9	4.8	6.0	12.7	12.8	1
8.00 a.m. or later a.m.	3.0	2.8	3.0	3.4	2.2	5.8	1
Total	100.0	100.0	100.0	100.0	100.0	100.0	10
Estimated No. Workers leaving home regularly for work, for which information is available	97,020	34,930	40,320	22,350	16290	3,440	1,
Estimated No. of Shift Workers	1,400	970	1,680	1,650	900	400	
Estimated No. Living at or virtually next to work	10,220	2,590	7,680	1,950	1980	480	
Unknown Cases	8,120	13,730	4,200	2,420	1170	320	

TABLE C.23

TIME AT WHICH WORKERS RETURN HOME AT NIGHT FROM WORK, 1966-7

Time Worker Returns Home	Percentage of Known Cases for Regular Workers						
	Johannes-burg	Durban	Pretoria	Davey-ton	Kwa Thema	Lyn-ville	Gr to
Before 4.00 p.m.	4.1	7.6	9.5	5.4	11.1	9.4	1
4.00 - 4.59 p.m.	7.6	14.1	11.7	11.4	13.3	7.1	1
5.00 - 5.29 p.m.	12.1	17.5	18.9	24.8	24.4	35.3	4
5.30 - 5.59 p.m.	10.5	6.7	9.5	10.7	15.0	12.9	1
6.00 - 6.29 p.m.	25.4	27.0	24.3	23.5	20.0	29.4	
6.30 - 6.59 p.m.	20.4	8.2	7.5	8.1	5.6	2.4	
7.00 - 7.29 p.m.	11.2	6.4	10.5	7.4	5.0	-	
7.30 - 7.59 p.m.	3.9	1.9	4.5	6.7	1.7	-	
8.00 p.m. or later p.m.	4.8	10.6	3.6	2.0	3.9	3.5	
Total	100.0	100.0	100.0	100.0	100.0	100.0	10
Estimated No. of Regular Workers returning home from work for which information is available	96,040	34,790	40,080	22,350	16200	3,400	1,
Estimated No. of Shift Workers	1,400	970	1,680	1,650	900	400	
Estimated No. Living at or virtually next to work	10,220	2,590	7,680	1,950	1980	480	
Unknown Cases	9,100	13,870	4,440	2,420	1260	360	

TABLE C.24

LENGTH OF TIME BANTU WORKERS ARE AWAY FROM HOME, (FROM THE TIME THEY LEAVE FOR WORK UNTIL THE TIME THEY RETURN HOME), 1966-7

No. of Hours Away from Home	Percentage of Known Cases						
	Johannes-burg	Durban	Pretoria	Davey-ton	Kwa Thema	Lyn-ville	Gr to
Under 6 hrs.	0.1	0.4	1.5	-	-	-	
6 hrs.-6 hrs. 59 mins.	0.7	0.8	0.6	-	1.1	-	
7 " -7 " 59 "	1.3	0.8	2.1	2.7	2.7	1.1	
8 " -8 " 59 "	1.9	2.4	4.1	4.0	3.2	9.0	1
9 " -9 " 59 "	5.1	4.9	7.0	5.4	12.8	10.1	2
10 " -10 " 59 "	10.8	12.8	15.0	18.1	27.6	28.1	2
11 " -11 " 59 "	24.2	25.7	23.8	23.5	28.7	36.0	1
12 " -12 " 59 "	31.9	24.7	23.5	22.8	13.3	12.4	
13 " -13 " 59 "	14.9	13.6	16.4	14.8	4.3	1.1	
14 " -14 " 59 "	6.1	7.2	4.1	8.1	3.7	-	
15 " -15 " 59 "	2.2	4.8	0.9	0.6	2.1	2.2	
16 " -16 " 59 "	0.7	1.1	0.1	-	0.5	-	
17 " -17 " 59 "	0.0	0.8	-	-	-	-	
18+ hours	0.1	-	0.9	-	-	-	
Total	100.0	100.0	100.0	100.0	100.0	100.0	10

TABLE C.25

RURAL-URBAN BACKGROUND OF THE MAIN FAMILY IN A DWELLING, 1966-7

Background	Percentage Distribution						
	Johannes-burg	Durban	Pretoria	Davey-ton	Kwa Thema	Lyn-ville	Gr to
Urban	84.0	65.9	66.7	75.0	77.0	73.4	7
Partly Urban	11.3	23.1	12.1	15.0	13.0	10.2	
Rural	0.2	3.0	6.1	2.0	5.0	8.2	1
Rural (Homeland)	3.3	6.8	14.6	4.0	4.0	8.2	1
Other	-	-	-	-	-	-	
Inadequate Informa-tion	1.2	1.2	0.5	4.0	1.0	-	
Total	100.0	100.0	100.0	100.0	100.0	100.0	10

Notes: The following definitions were used:

Urban - A family's two previous places of residence were urban.
Partly Urban - One of the two previous places lived in by the family was an urban area.
Rural - A White farm, a Mission reserve as the two previous places lived in.
Rural (Homeland) - The two previous places lived in by the family were in a Bantu Homeland (Native Reserve).

TABLE C.26

PERCENTAGE OF BANTU DWELLINGS OVERCROWDED IN TERMS OF SLEEPING AREA, USING THE MINIMUM STANDARDS OF ACCOMMODATION FOR NON-WHITES AS CRITERION, 1966/67

Overcrowding	Percentage of Known Cases						
	Johann-esburg	Durban	Pretoria	Davey-ton	Kwa Thema	Lyn-ville	Grey town
Adequate area in Bedrooms for sleeping	39.4	37.1	35.4	37.0	38.0	26.6	40
1 Bedroom overcrowded	23.5	27.2	17.2	21.0	32.0	28.6	18
2 Bedrooms "	5.2	7.2	5.6	3.0	6.0	14.3	1
3 " "	-	0.5	1.0	1.0	-	-	
4+ " "	-	-	0.5	-	-	-	
1 Bedroom extremely overcrowded	23.1	20.6	26.8	21.0	15.0	16.3	25
2 Bedrooms extremely overcrowded	1.6	2.1	2.5	2.0	1.0	-	
1 Bedroom overcrowded, + 1 Bedroom extremely overcrowded	7.0	5.3	10.1	14.0	7.0	12.2	11
1 Bedroom overcrowded, + 2 Bedrooms extremely overcrowded	0.2	-	1.0	1.0	1.0	2.0	1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100

Notes: In terms of the minimum standards of accommodation for non-Whi a *minimum* area of 39.33 square feet per person is allowed for sleeping.

A bedroom, or other room used for sleeping purposes is regarde as overcrowded if there is less than an average of 39.33 squar feet per person at all ages, in that room.

A bedroom was taken to be extremely overcrowded if there was less than two-thirds of the minimum number of square feet required per person in that room.

TABLE C.27

THE NUMBER OF ROOMS PER HOUSE FOR BANTU LIVING IN FAMILY DWELLINGS, 1966/67

No. of Rooms	Percentages						
	Johannesburg	Durban	Pretoria	Daveyton	Kwa Thema	Lynville	Greytown
1	-	1.4	0.5	-	-	-	3.4
2	16.3	15.9	1.5	-	-	-	23.7
3	12.5	2.0	8.1	27.0	6.0	16.3	5.1
4	66.7	78.0	82.8	73.0	65.0	63.3	52.5
5	4.0	2.1	2.5	-	25.0	20.4	5.1
6	0.5	0.6	4.6	-	2.0	-	6.8
7	-	-	-	-	1.0	-	1.7
8	-	-	-	-	1.0	-	1.7
9	-	-	-	-	-	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes: For the purpose of this table, a room was taken as either a kitchen, bedroom, livingroom, or diningroom.

TABLE C.28

NUMBER OF BEDROOMS PER HOUSE FOR BANTU LIVING IN FAMILY DWELLINGS, 1966/67

No. of Bedrooms	Percentages						
	Johannesburg	Durban	Pretoria	Daveyton	Kwa Thema	Lynville	Greytown
1	27.2	19.3	9.6	27.0	6.0	16.3	32.2
2	7.9	18.5	14.7	3.0	11.0	63.3	5.1
3	3.5	2.1	3.0	-	25.0	20.4	6.7
4	-	-	0.5	-	4.0	-	5.1
5	-	-	-	-	-	-	1.7
1 Bedroom + 1 Living/Sleeping room	0.2	-	-	-	-	-	1.7
2 Bedrooms + 1 Living/Sleeping room	61.2	60.1	68.7	70.0	54.0	-	47.5
3 Bedrooms + 1 Living/Sleeping room	-	-	2.0	-	-	-	-
4 Bedrooms + 1 Living/Sleeping room	-	-	1.5	-	-	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE C.29

NUMBER OF ROOMS PER HOUSE REQUIRED BY EXISTING BANTU HOUSEHOLDS, APPLYING THE MINIMUM STANDARDS OF ACCOMMODATION FOR NON-WHITES TO HOUSEHOLD SIZE, 1966/67

No. of Rooms Required	Percentage Distribution of Households						
	Johann-esburg	Durban	Pretoria	Davey-ton	Kwa Thema	Lyn-ville	Grey tow
0 br. + 1 l/s.	23.50	21.28	15.79	18.88	10.90	15.69	16.1
1 br. + 1 l/s.	32.85	27.62	22.96	32.07	30.69	23.53	20.9
2 brs. + 1 l/s.	23.98	22.67	28.71	18.87	28.71	31.37	27.4
3 brs. + 1 l/s.	11.99	17.62	19.14	16.03	17.82	17.65	22.5
4 brs. + 1 l/s.	7.68	10.81	13.40	14.15	11.88	11.76	12.9
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.0

Notes: br. is an abbreviation of bedroom.
l/s. is an abbreviation of a room intended living in by day, and sleeping in at night.

The Minimum Standards only envisage households of up to 11 persons. Some households are larger than this. Projecting the scale used by the Minimum Standards, we find the following required:

No. of Rooms Required	Johann-esburg	Durban	Pretoria	Davey-ton	Kwa Thema	Lyn-ville	Grey tow
4 brs. + 1 l/s.	3.84	7.69	6.70	11.32	6.93	5.88	11.
5 brs. + 1 l/s.	2.40	2.16	4.78	1,89	2.97	5.88	1.
6 brs. + 1 l/s.	0.96	0.48	0.96	0.94	0.99	..	-
7 brs. + 1 l/s.	0.48	0.48	0.96	-	0.99	-	-

TABLE C.30

DETAILS OF SUPPLY OF WATER TO DWELLINGS

Type of Dwelling	Percentage Distribution						
	Johann-esburg	Durban	Pretoria	Davey-ton	Kwa Thema	Lyn-ville	Grey town
No water on plot	0.2	9.0	52.5	-	-	-	98.
Water on plot	91.9	48.9	42.4	-	42.0	34.7	-
Water in kitchen only	2.8	0.5	-	3.0	3.0	-	-
Water in Shower only	0.2	-	-	-	1.0	-	-
Water in shower and W.C.	-	5.1	1.0	1.0	6.0	-	-
Water in kitchen and bathroom	4.7	28.4	3.6	96.0	24.0	-	1.
Water in kitchen and W.C.	-	-	-	-	4.0	-	-
Water in shower and W.C. and plot	0.2	8.1	0.5	-	12.0	6.1	-
Water in W.C. and plot	-	-	-	-	8.0	59.2	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.

TABLE C.31

MONTHLY HOUSEHOLD INCOME, FROM ALL SOURCES FOR MAIN HOUSEHOLDS ONLY, 1966/67

Monthly Household Income	Percentage of Known Cases						
	Johann-esburg	Durban	Pretoria	Davey-ton	Kwa Thema	Lyn-ville	Grey town
No income during past month	-	-	-	-	-	-	-
R 0.01 - 9.99 monthly	1.9	-	-	-	-	2.1	3.
10.00 - 19.99 "	4.0	4.2	4.1	2.0	-	4.2	18.
20.00 - 29.99 "	5.8	4.2	13.7	4.0	7.1	12.5	25.
30.00 - 39.99 "	11.6	20.9	13.7	15.0	7.1	25.0	10.
40.00 - 49.99 "	18.5	22.4	13.7	20.0	17.2	22.8	13.
50.00 - 59.99 "	9.5	14.7	17.8	15.0	13.1	8.3	.
60.00 - 69.99 "	10.4	12.8	12.7	13.0	8.1	10.4	11.
70.00 - 79.99 "	7.8	6.6	4.1	9.0	13.1	6.3	5.
80.00 - 89.99 "	7.8	2.4	6.1	5.0	9.1	-	.
90.00 - 99.99 "	4.0	2.6	1.5	5.0	6.0	2.1	1
100.00 - 119.99 "	6.6	2.0	6.6	3.0	5.1	2.1	1
120.00 - 139.99 "	5.5	1.5	1.5	4.0	7.1	2.1	3
140.00 - 159.99 "	2.4	2.6	0.5	2.0	1.0	-	3
160.00 - 179.99 "	0.9	1.6	1.0	-	-	2.1	.
180.00 - 199.99 "	1.7	-	-	3.0	2.0	-	1
200.00 - 249.99 "	0.7	0.5	1.0	-	2.0	-	
250.00 - 299.99 "	0.5	0.5	0.5	-	1.0	-	
300.00 - 399.99 "	-	0.5	1.0	-	1.0	-	
400.00 - 499.99 "	0.2	-	0.5	-	-	-	
500.00+	0.2	-	-	-	-	-	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100

TABLE C.32

MEAN MONTHLY INCOME OF MALE HEADS OF HOUSEHOLDS, (MAIN HOUSEHOLDS ONLY) AND ALSO OF THEIR WIVES, 1966/67

Area Studied	Mean Incomes, Monthly			Percentages Without Income	
	All Male Heads, including those without an income	Income Receivers Only			
		Male Heads	Their Wives	Male Heads	Their Wives
Johannesburg	R54.56	R57.36	R26.77	4.9	0.0
Durban	49.05	50.61	27.74	3.1	68.0
Pretoria	49.76	51.93	22.84	4.2	55.3
Daveyton	50.98	50.98	23.29	0.0	61.6
Kwa Thema	62.38	62.38	21.94	0.0	51.0
Lynville	36.20	38.72	16.00	6.5	59.2
Greytown	36.56	39.17	19.00	6.7	49.2

TABLE C.33

SOURCE OF INCOME OF MAIN HOUSEHOLD IN DWELLING, 1966/67

Source	Percentage Known Cases						
	Johann-esburg	Durban	Pretoria	Davey-ton	Kwa Thema	Lyn-ville	Grey-town
Salaries only of Head and/or Wife	44.0	39.4	38.4	57.0	47.5	42.9	39.0
Own Business Only	2.4	1.6	1.5	4.0	3.0	2.0	-
Salaries and Own Business	2.8	3.0	4.6	3.0	5.1	4.1	5.1
Working Children Only	4.3	2.0	4.6	2.0	3.0	6.1	3.4
Salaries and Working Children	19.3	19.5	25.7	16.0	26.3	30.6	20.3
Own Business and Working Children	2.6	1.7	2.0	2.0	3.0	-	1.7
Salaries, Business, and Working Children	0.9	1.0	1.5	3.0	3.0	4.1	-
Boarders/Lodgers Only	-	-	-	-	-	-	-
Grants Only	0.9	-	-	-	-	-	1.7
Other Combinations of Sources	22.8	31.8	21.7	13.0	9.1	10.2	28.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

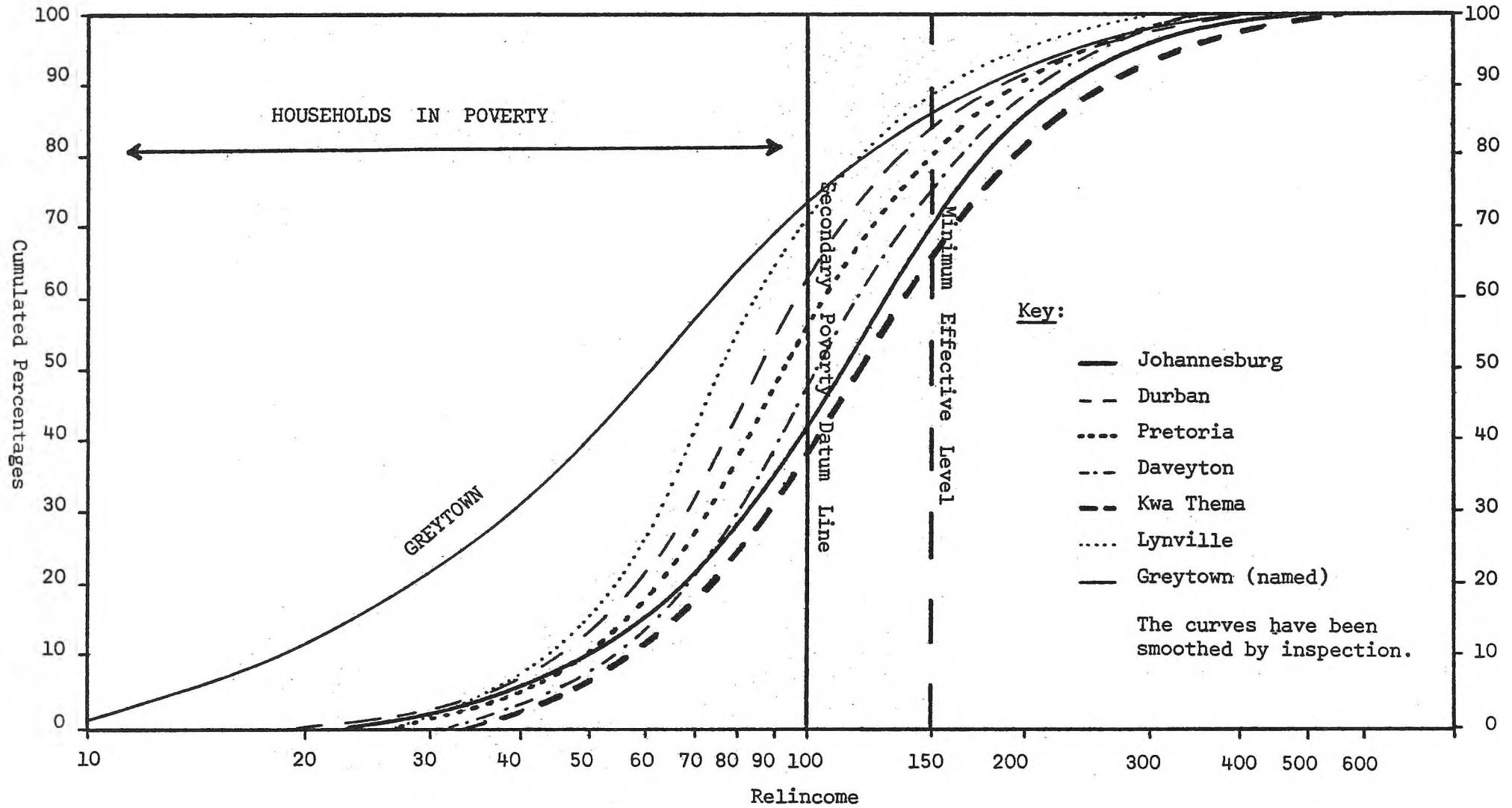
TABLE C.34

PERCENTAGE OF HOUSEHOLD INCOME SPENT ON RENT, 1966/67

Percentage Income spent on Rent	Percentage Distribution						
	Johann-esburg	Durban	Pretoria	Davey-ton	Kwa Thema	Lyn-ville	Grey-town
0 - 9	58.3	30.5	43.4	49.0	55.6	16.7	55.9
10 - 19	35.5	58.8	45.9	46.0	40.4	56.3	22.0
20 - 29	4.6	8.1	8.7	3.0	4.0	20.8	17.0
30 - 39	1.0	1.0	1.0	1.0	-	4.2	-
40 - 49	0.2	0.9	0.5	1.0	-	-	3.4
50 - 59	0.2	-	0.5	-	-	-	-
60+	0.2	0.7	-	-	-	2.0	1.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes: These figures refer only to the main household in a dwelling (which is officially responsible for paying the rent of the dwelling.)

FIGURE C.8 Cumulated Percentage Distribution of Bantu Household Relincomes for the Seven Areas Studied, 1966/67. (Plotted on a Semi-Logarithmic Scale.)



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