# SOME INDICES OF COLOURED HOUSING ACCOMMODATION IN CAPE TOWN



## MEMORANDUM BY THE SOCIAL SURVEY OF CAPE TOWN

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# APPENDIX A

## Some Indices of Coloured Housing Accommodation in Cape Town

### Memorandum by the Social Survey of Cape Town

§ 1

Of Cape Town's total population, the Africans and Asiatics constitute a small and the Europeans a sheltered section. The worst housing conditions are in the mass chiefly encountered by the mixed Euro-Afro-Asiatic group called Coloured.

Some indices of the conditions under which this Cape Town Coloured population is housed have become available in preliminary statistics recently computed by the Social Survey of Cape Town, from which the following are summarized.* These indices by no means mark the whole range of sub-standard housing conditions in Cape Town. They do not, for instance, indicate the extent of all the conditions within the scope of Section 1 (2) of the Slums Act. In other words, the following statistics must be regarded as an understatement of the total extent of sub-standard housing in Cape Town.

§ 2

In housing surveys it is usual to deal with occupancy by comparing households with dwellings. In Cape Town such is the shortage of accommodation for large sections of the population that a more practicable first step is to compare households not with dwellings but with rooms.

At the time of the Social Survey there were about 25,000 Coloured private households in Cape Town. Of these no less than 34 per cent. were living in single rooms. The distribution of households according to the number of rooms occupied by each was as follows :

| Complete Rooms Occupied | Percentage of Households |
|---|---|
| 1 ... ... | 34 |
| 2 ... ... | 19 |
| 3 ... ... | 22 |
| 4 ... ... | 18 |
| 5 ... ... | 5 |
| 6 or more ... | 2 |
| *All households* | 100 |

* See *Reports and Studies issued by the Social Survey of Cape Town*, Nos. SS 11, SS 12, and SP 19, University of Cape Town, 1943. The statistics quoted in the present paper are the "probable" statistics drawn directly from the statistically random sample of households from which the Survey calculations were made. These statistics, which represent the best single estimate which the data permit us to make of conditions in the population from which the sample was selected, may not be taken as precise. The range within which they are reliable is, however, calculable, and is sufficiently narrow to be negligible for the purposes of the present memorandum. Fuller details are given in the reports referred to above. In the present memorandum "room" means living-room or bedroom, but not bathroom,

A "household", however, may consist of one person only, or of an indefinitely large number. (The largest household encountered in the Social Survey consisted of two parents, four unmarried children, a married son and his wife, a married daughter and her husband, and four grandchildren. Four per cent. of the households, on the other hand, consisted of one person only.) The distribution of households according to size was as follows :

| No. of Persons in Household | Percentage of Households |
|---|---|
| 1 ... ... | 4 |
| 2 ... ... | 13 |
| 3 ... ... | 17 |
| 4 ... ... | 14 |
| 5 ... ... | 14 |
| 6 ... ... | 12 |
| 7 ... ... | 9 |
| 8 ... ... | 6 |
| 9 ... ... | 5 |
| 10 or more ... | 6 |
| *All households* | 100 |

Had the accommodation been so distributed that the largest households occupied the largest dwellings, the conditions of each individual household might have been if not comfortable at least within range of the conditions commonly recognized as constituting a tolerable minimum. The distribution was in fact much more unsatisfactory even than such a state of affairs. The estimated distribution was as follows :

ESTIMATED DISTRIBUTION OF HOUSEHOLDS ACCORDING TO SIZE AND ACCOMMODATION

| No. of Persons in Household | Distribution of Households by No. of Rooms Occupied | | | | | | Total Households |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 or more | |
| 1 ... ... ... | 700 | 200 | 100 | ... | ... | ... | 1,000 |
| 2 ... ... ... | 2,000 | 600 | 500 | 100 | ... | ... | 3,200 |
| 3 ... ... ... | 2,000 | 1,100 | 800 | 300 | ... | ... | 4,200 |
| 4 ... ... ... | 1,400 | 500 | 900 | 600 | 100 | ... | 3,500 |
| 5 ... ... ... | 1,200 | 800 | 800 | 600 | 100 | ... | 3,500 |
| 6 ... ... ... | 600 | 600 | 700 | 800 | 200 | 100 | 3,000 |
| 7 ... ... ... | 300 | 300 | 600 | 800 | 200 | 100 | 2,300 |
| 8 ... ... ... | 200 | 300 | 400 | 500 | 200 | 100 | 1,700 |
| 9 ... ... ... | 100 | 100 | 400 | 300 | 300 | 100 | 1,300 |
| 10 or more ... | 100 | 100 | 300 | 500 | 200 | 100 | 1,300 |
| *Households of all sizes* | 8,600 | 4,600 | 5,500 | 4,500 | 1,300 | 500 | 25,000 |

and not kitchen except when the kitchen is used as a living-room by members of the household who are not servants. "Household" means a group of persons, or a single person, having independent occupation of a room, tenement, flat, or house, and thus a single rent account and (usually) a single household budget. The references exclude altogether rooms which are occupied jointly by two or more households (as, for example, shared kitchen-living-rooms), save where exception is made in §3.

This table implies that—

1. There was a slight tendency for the larger households to occupy the larger dwellings ; but——
2. Of the households occupying one room, 68 per cent. consisted of three or more persons, 45 per cent. of four or more, 29 per cent. of five or more.
3. Of the households occupying two rooms, 82 per cent. consisted of three persons or more, 59 per cent. of four or more, 48 per cent. of five or more.
4. Of the households occupying three rooms, 91 per cent. consisted of three persons or more, 77 per cent. of four or more, 61 per cent. of five or more.
5. Of the households consisting of less than five persons, 90 per cent. occupied three rooms or less, 72 per cent. occupied two rooms or less, 52 per cent. occupied one room.
6. Of the households consisting of five or more persons, 61 per cent. occupied three rooms or less, 36 per cent. occupied two rooms or less, 19 per cent. occupied one room.

§ 3

We may obtain a slightly different view of the situation by relating these factors to some measure of adequacy of accommodation. There are many such standards. Of those used by the Social Survey, the following is the simplest :

> Each person aged 10 or more counts as an adult, each younger person as half an adult. A household of not more than $2\frac{1}{2}$ adults requires one room, of 3 or $3\frac{1}{2}$ adults requires two rooms, and of from 4 to 5 adults three rooms, with one further room for every further $2\frac{1}{2}$ adults or fraction of $2\frac{1}{2}$ adults ; provided that no adult is obliged to sleep in the same room with an adult of the opposite sex to whom he is not married legally or by repute.

A household with accommodation which just reaches this standard is defined as "crowded," and with accommodation which does not reach this standard as "overcrowded".*

Assessed on this scale, the Coloured households of Cape Town required 65,000 rooms to avoid overcrowding (an average of one room for every two members of the population). The distribution of households according to the number of rooms required by each was as follows :

| Rooms Required | Percentage of Households |
|---|---|
| 1 | 25 |
| 2 | 22 |
| 3 | 26 |
| 4 | 21 |
| 5 | 6 |
| 6 | 1 |
| *All requirements* | 100 |

* An *Occupancy Ratio* for a household may be calculated by expressing the number of rooms it occupies as a percentage of the number needed according to the above standard. Overcrowded households are thus those with Occupancy Ratio, or OR, $<100$, crowded households those with $OR=100$. For certain purposes the condition $OR=100$ may be taken as a minimum standard, for other purposes the condition $OR>100$.

The relationship between size of household and minimum requirement is indicated in the following table :

ESTIMATED DISTRIBUTION OF HOUSEHOLDS ACCORDING TO SIZE AND REQUIREMENTS

| No. of Persons in Household | Distribution of Households by No. of Rooms Required | | | | | | Total Households |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | |
| 1 ... ... | 1,000 | ... | ... | ... | ... | ... | 1,000 |
| 2 ... ... | 2,900 | 300 | ... | ... | ... | ... | 3,200 |
| 3 ... ... | 2,200 | 2,000 | ... | ... | ... | ... | 4,200 |
| 4 ... ... | ... | 2,200 | 1,300 | ... | ... | ... | 3,500 |
| 5 ... ... | ... | 1,100 | 2,400 | ... | ... | ... | 3,500 |
| 6 ... ... | ... | ... | 2,100 | 900 | ... | ... | 3,000 |
| 7 ... ... | ... | ... | 800 | 1,500 | ... | ... | 2,300 |
| 8 ... ... | ... | ... | ... | 1,600 | 100 | ... | 1,700 |
| 9 ... ... | ... | ... | ... | 1,000 | 300 | ... | 1,300 |
| 10 or more ... | ... | ... | ... | 100 | 1,100 | 100 | 1,300 |
| *Households of all sizes* | 6,100 | 5,600 | 6,600 | 5,100 | 1,500 | 100 | 25,000 |

The total number of rooms occupied was 60,000—actually less than the total minimum requirement. Of course, individual households lived above the average level, but they were in a minority. Even if we added to the total of "complete" rooms occupied the number of rooms shared between households (mainly kitchen-living-rooms) we should raise the total only to 62,000, which would still be less than the total minimum requirement.

Of those households that occupied one room each, over half were (by the above low standard) overcrowded, and the rest crowded. The general position was as shown in the following table :

ESTIMATED DISTRIBUTION OF HOUSEHOLDS ACCORDING TO OCCUPANCY

| No. of Rooms Occupied | No. of Households | | |
|---|---|---|---|
| | Overcrowded | Crowded | Uncrowded |
| 1 ... ... ... ... | 4,600 | 3,900 | ... |
| 2 ... ... ... ... | 2,100 | 1,200 | 1,300 |
| 3 ... ... ... ... | 1,700 | 1,800 | 1,900 |
| 4 ... ... ... ... | 600 | 1,600 | 2,300 |
| 5 ... ... ... ... | ... | 300 | 900 |
| 6 or more ... ... | ... | ... | 500 |
| *All households* ... | 9,100 | 8,900 | 7,000 |

There were thus 9,100 overcrowded households, 50 per cent. of them living in one room, 23 per cent. in two rooms, most of the rest in three rooms. Only 28 per cent. of all the households were not crowded, 36 per cent. were overcrowded.

§ 4

It is of importance to inquire into the incidence and distribution of the conditions OR<100, OR=100, OR>100.

In relation to *size of household*, the incidence of these conditions among households was as follows :

| Size of Household (persons) | Percentage Incidence of Overcrowding | Crowding | Other Conditions | All Conditions |
|---|---|---|---|---|
| 1 ... ... ... ... | | 75 | 25 | 100 |
| 2 ... ... ... | 3 | 62 | 34 | 100 |
| 3 ... ... ... | 15 | 44 | 41 | 100 |
| 4 ... ... ... | 45 | 22 | 33 | 100 |
| 5 ... ... ... | 50 | 25 | 25 | 100 |
| 6 ... ... ... | 46 | 29 | 25 | 100 |
| 7 ... ... ... | 43 | 37 | 20 | 100 |
| 8 ... ... ... | 48 | 28 | 24 | 100 |
| 9 ... ... ... | 64 | 24 | 11 | 100 |
| 10 or more ... | 67 | 18 | 15 | 100 |
| *All households* | 36 | 36 | 28 | 100 |

The figures may be so presented as to indicate the distribution of each of the occupancy conditions among the several groups :

| Size of Household (persons) | Percentage Share of Overcrowding | Crowding | Other Conditions | All Conditions |
|---|---|---|---|---|
| 1 ... ... ... ... | | 8 | 3 | 4 |
| 2 ... ... ... | 1 | 22 | 16 | 12 |
| 3 ... ... ... | 7 | 20 | 24 | 16 |
| 4 ... ... ... | 17 | 8 | 16 | 14 |
| 5 ... ... ... | 20 | 10 | 13 | 14 |
| 6 ... ... ... | 15 | 9 | 10 | 12 |
| 7 ... ... ... | 11 | 9 | 6 | 9 |
| 8 ... ... ... | 9 | 5 | 6 | 6 |
| 9 ... ... ... | 10 | 4 | 2 | 5 |
| 10 or more ... | 11 | 3 | 3 | 6 |
| *All households* | 100 | 100 | 100 | 100 |

*Other things equal*, we should expect large households to run a greater risk of overcrowding than small households. Other things—income for instance—are not equal in this matter, larger households frequently containing more earners than small households. Nevertheless, as the foregoing figures show, a definite association between size and sub-standard occupancy does exist.

§ 5

The above statistics are in terms of households. Since overcrowding is commoner among the larger households, it follows that statistics in terms of households fail to indicate the full extent of the *personal* incidence of overcrowding. The following two tables show the above distribution in terms of persons :

| Size of Household (persons) | Percentage Personal Incidence of | | | |
|---|---|---|---|---|
| | Overcrowding | Crowding | Other Conditions | All Conditions |
| 1 ... ... ... ... | | 75 | 25 | 100 |
| 2 ... ... ... | 3 | 62 | 34 | 100 |
| 3 ... ... ... | 15 | 44 | 41 | 100 |
| 4 ... ... ... | 45 | 22 | 33 | 100 |
| 5 ... ... ... | 50 | 25 | 25 | 100 |
| 6 ... ... ... | 46 | 29 | 25 | 100 |
| 7 ... ... ... | 43 | 37 | 20 | 100 |
| 8 ... ... ... | 48 | 28 | 24 | 100 |
| 9 ... ... ... | 64 | 24 | 11 | 100 |
| 10 or more ... | 67 | 18 | 15 | 100 |
| *All households* ... | 46 | 30 | 24 | 100 |

It will be seen that while single-person households happened to be immune from overcrowding, two-thirds of all the members of the largest households were overcrowded. At the same time, as far as the Survey sample is an indication, the prevalence of the condition OR>100 is greatest, not among the members of the very smallest households, but among those in households consisting of three persons. Beyond this point, the personal incidence of adequate accommodation falls from a peak of about 40 per cent. to a low level of about 10 per cent. It appears that a child born into a household of more than eight persons has not much more than a one-in-eight chance of escaping crowding or overcrowding; but, in the Coloured population *as a whole*, the personal chances of escaping crowding or overcrowding are only about one in four.

Expressed so as to show the personal distribution of each of the occupancy conditions among the several groups, the above figures give the following table :

| Size of Household (persons) | Percentage Personal Share of | | | |
|---|---|---|---|---|
| | Overcrowding | Crowding | Other Conditions | All Conditions |
| 1 ... ... ... ... | | 2 | 1 | 1 |
| 2 ... ... ... ... | | 10 | 7 | 5 |
| 3 ... ... ... | 3 | 14 | 16 | 10 |
| 4 ... ... ... | 11 | 8 | 15 | 11 |
| 5 ... ... ... | 16 | 12 | 14 | 14 |
| 6 ... ... ... | 14 | 13 | 14 | 14 |
| 7 ... ... ... | 12 | 15 | 10 | 13 |
| 8 ... ... ... | 11 | 9 | 10 | 10 |
| 9 ... ... ... | 14 | 8 | 4 | 10 |
| 10 or more ... | 19 | 8 | 8 | 13 |
| *All households* ... | 100 | 100 | 100 | 100 |

It will be seen that half the overcrowded persons were in households containing 7 or more persons, half the crowded persons in households of 6 or more, half the remaining persons in households of 5 or less.

§ 6

If we desire to study the question of accommodation from the point of view of dwellings, there is no recognized yardstick to apply except indeed the simple

widely-accepted rule that each household should occupy a separate dwelling, either a house or a flat. Fulfilment of such a rule is of course no guarantee of satisfactory housing; nevertheless, a large proportion of Coloured households in Cape Town failed to attain even this standard.

The 25,000 Coloured households in Cape Town, with 1,000 households of other ethnic groups, occupied a total of 17,000 dwellings, an average of 1.5 households per dwelling. Of these Coloured households, 11,300, or 45 per cent., occupied a separate dwelling, and 13,700, or 55 per cent., shared a dwelling with one or more other households. Of these in single dwellings, 10,000, or 40 per cent. of the whole, lived in houses (including, however, pondokkies) and 1,300, or 5 per cent. of the whole, in flats. Of those sharing dwellings, 12,300, or 49 per cent. of the whole, shared with Coloured families only, and 1,400, or 5 per cent. of the whole, shared with European, Native, or Asiatic households. While the density of households per dwelling was 1.5 over the whole Coloured population, among those living in shared dwellings the density was 2.5. In those dwellings where Coloured households shared with non-Coloured households, the average density of all households was 3.5 per dwelling.

§ 7

We must note, however, that even when a dwelling was occupied by a single household, that household may have contained the members of more than one family. Ignoring servants, 4 per cent. of the Coloured households in the Survey sample were *one-person households*, a further 70 per cent. consisted of two or more persons belonging to *one connubial family*, and the remaining 26 per cent. comprised members of *more than one connubial family*. In greater detail, the distribution was as follows :—

| Type of Household | Percentage of All Households |
|---|---|
| One-person households : ... ... | 4 |
| male ... ... ... ... ... | 2 |
| female ... ... ... ... | 2 |
| One-family households : ... ... | 70 |
| childless ... ... ... ... | 10 |
| broken (one parent absent) ... | 9 |
| complete (containing both parents and a child or children) ... | 51 |
| Compound households : ... ... | 26 |
| all members related by blood or marriage ... ... ... ... | 23 |
| members not all related by blood or marriage ... ... ... | 3 |
| *Total* ... ... ... | 100 |

It is of interest to compare these various types of household in respect of occupancy. The one-person households and the childless-couple household cannot be overcrowded,* but were most often crowded. The incidence of crowding and overcrowding varied somewhat among the remaining types in the sample

* So long as they occupy at least one separate room.

and it is probable that some of these variations are statistically significant. The following table summarizes these variations :

| Type of Household | Percentage Incidence of Overcrowding | Crowding | Other Conditions | All Conditions |
|---|---|---|---|---|
| One-person : ... ... | | 75 | 25 | 100 |
| male ... ... ... | | 73 | 27 | 100 |
| female ... ... ... | | 77 | 23 | 100 |
| One-family : ... | 38 | 35 | 27 | 100 |
| childless ... ... ... | | 67 | 33 | 100 |
| broken ... ... | 31 | 41 | 28 | 100 |
| complete ... | 47 | 28 | 25 | 100 |
| Compound : ... | 38 | 31 | 31 | 100 |
| all related ... | 38 | 32 | 30 | 100 |
| not all related ... | 38 | 29 | 33 | 100 |

It should be noted that groups which, as far as this sample was concerned, were most free from crowding and overcrowding were the childless-couple households and (perhaps a little surprisingly) the compound households. The incidence of overcrowding was greatest in those households (comprising half the total Coloured households in the municipality) which consisted of a married couple and their unmarried children. In this group, nearly half the households were overcrowded and three-quarters were either crowded or overcrowded. (To obviate a possible misuse of the above figures it should be pointed out that, while there was no overcrowding in one-person households or childless-couple households, it does not follow that unmarried persons and childless couples were free from overcrowding. The only permissible conclusion of this nature would be that such persons were not overcrowded when comprising separate households.)

These same figures may be so analyzed as to indicate how the total amount of crowding and overcrowding in the sample was divided among the several household types :

| Type of Household | Percentage Share of Overcrowding | Crowding | Other Conditions | All Conditions |
|---|---|---|---|---|
| One-person ... ... ... | | 8 | 3 | 4 |
| One-family ... ... | 73 | 69 | 67 | 70 |
| Compound ... ... | 27 | 23 | 28 | 26 |
| *Total* ... ... | 100 | 100 | 100 | 100 |
| One-person (male) ... ... | | 4 | 2 | 2 |
| One-person (female) ... ... | | 4 | 2 | 2 |
| Childless ... ... ... | | 19 | 12 | 10 |
| Broken ... ... ... | 8 | 10 | 9 | 9 |
| Complete ... ... | 66 | 40 | 46 | 51 |
| Related compound ... | 24 | 20 | 24 | 23 |
| Unrelated compound | 3 | 2 | 3 | 3 |
| *Total* ... ... | 100 | 100 | 100 | 100 |

The outstanding feature of this table is the concentration of childless households in the crowded rather than the overcrowded category and the disproportionate share of the total overcrowding (no less than two-thirds of the total incidence) falling to households consisting of ordinary families with children.

As has been pointed out, the above figures do not directly answer the question of the relation of overcrowding and crowding to given *family* patterns, Interesting light is thrown upon this question by the following tables which indicate the personal incidence of these conditions within the several age-groups.

| Age | Percentage Incidence of Overcrowding | Crowding | Other Conditions | All Conditions |
|---|---|---|---|---|
| 0–4 ... ... ... | 54 | 28 | 18 | 100 |
| 5–9 ... ... ... | 54 | 24 | 22 | 100 |
| 10–14 ... ... ... | 56 | 25 | 19 | 100 |
| 15–19 ... ... ... | 46 | 31 | 24 | 100 |
| 20–24 ... ... ... | 39 | 39 | 23 | 100 |
| 25–29 ... ... ... | 29 | 43 | 28 | 100 |
| 30–34 ... ... ... | 41 | 35 | 24 | 100 |
| 35–39 ... ... ... | 44 | 30 | 26 | 100 |
| 40–44 ... ... ... | 43 | 28 | 31 | 100 |
| 45–49 ... ... ... | 48 | 26 | 25 | 100 |
| 50–59 ... ... ... | 28 | 39 | 34 | 100 |
| 60 and over ... ... | 26 | 30 | 44 | 100 |
| *All ages* ... ... | 46 | 30 | 24 | 100 |

Overcrowding in the sample was greatest in the years up to 15 and again in the late forties (and there is a likelihood, but not conclusive evidence, based on figures condensed in the above table, that this condition recurs in old age). The general effect of this table is strongly to support the view that the burden of overcrowding falls most heavily on children and those adults who live in households with children.

Analyzed to reveal the personal distribution of overcrowding and other occupancy conditions, the above figures yield the following table :

| Age | Percentage Share of Overcrowding | Crowding | Other Conditions | All Conditions |
|---|---|---|---|---|
| 0–4 ... ... ... | 19 | 15 | 12 | 16 |
| 5–9 ... ... ... | 18 | 12 | 14 | 15 |
| 10–14 ... ... ... | 16 | 10 | 10 | 13 |
| 15–19 ... ... ... | 9 | 9 | 9 | 9 |
| 20–24 ... ... ... | 7 | 10 | 7 | 8 |
| 25–29 ... ... ... | 5 | 11 | 9 | 8 |
| 30–34 ... ... ... | 6 | 8 | 7 | 7 |
| 35–39 ... ... ... | 6 | 6 | 7 | 6 |
| 40–44 ... ... ... | 4 | 4 | 6 | 5 |
| 45–49 ... ... ... | 5 | 4 | 4 | 4 |
| 50–59 ... ... ... | 3 | 7 | 8 | 5 |
| 60 and over ... ... | 3 | 5 | 8 | 5 |
| *All ages* ... ... | 100 | 100 | 100 | 100 |

§ 9

It does not fall within the scope of the present purely descriptive report to analyze the determinants of the housing conditions that we have referred to. It may be worth while, however, to devote a little space to the presumption of an association between income and occupancy, or, more accurately, between poverty and occupancy. We may choose as our index of poverty the Survey Available Income Ratio or A.I.R. Since this is fully described elsewhere* it may here suffice to state that households with an A.I.R. of less than 100 have not the means of procuring the barest essentials of health and decency and may be described as *in poverty*, households with an A.I.R. of 100 but not 150 have the *means* of procuring the barest essentials of health and decency but will be *unlikely* to procure them in the face of the competition of other, cultural, necessaries and may be described as in a state of *deprivation*, while households with an A.I.R. of 150 upwards are likely in the absence of special circumstances to procure at least the barest means of health and decency and may be described as in possession of an *effective income.* Prima facie we might expect sub-standard housing to be associated especially with the states of poverty and deprivation. The figures drawn from the Survey sample are as follows :

| Socio-Economic Condition | Percentage Incidence of Overcrowding | Crowding | Other Conditions | All Conditions |
|---|---|---|---|---|
| Poverty ... ... ... | 52 | 29 | 19 | 100 |
| Deprivation ... ... | 27 | 41 | 31 | 100 |
| Effective income ... | 15 | 43 | 41 | 100 |
| *All socio-economic conditions* | 36 | 36 | 28 | 100 |

Analyzed to reveal the distribution of overcrowding and other occupancy conditions the above figures yield the following table :

| Socio-Economic Condition | Percentage Share of Overcrowding | Crowding | Other Conditions | All Conditions |
|---|---|---|---|---|
| Poverty ... ... ... | 73 | 43 | 37 | 53 |
| Deprivation ... ... | 16 | 25 | 24 | 21 |
| Effective income ... | 11 | 32 | 39 | 26 |
| *All socio-economic conditions* | 100 | 100 | 100 | 100 |

The association which we should normally expect is certainly present. Overcrowding was diagnosed among 52 per cent. of the households in poverty and among only 15 per cent. of the households with an effective income ; households in poverty shared 73 per cent. of the overcrowding and only 37 per cent. of the adequate occupancy. At the same time, it must not be overlooked that 10 per cent. of all the households in the sample were in poverty but were not overcrowded or even crowded, while 16 per cent. were crowded or overcrowded but had effective incomes. It is clear that other factors besides income adequacy determine the incidence of overcrowding and at the present stage it would be rash .to offer more than tentative hypotheses concerning the connection between them

Cape Town, 14 *December*, 1943. E.B.

* *The Poverty Line in Cape Town.* Report SP 3 of The Social Survey of Cape Town.



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# THE ETHNIC AND SOCIO-ECONOMIC DIFFERENTIATION OF PROTEIN, FAT AND CARBOHYDRATE CONTENT IN THE FOOD OF THE POPULATION OF CAPE TOWN

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**OPSOMMING**

Klassifikasie van die voedselaankope van die armer Blanke-, Kleurling- en Naturellegesinne in Kaapstad bring aan die lig:—

(*a*) dat in Blanke huise die gemiddelde verbruik van proteïnevoedsel en vette en olie nie veel wissel volgens die sosio-ekonomiese status nie;

(*b*) dat dieselfde waar is in die geval van Naturellehuise, maar dat hulle in verhouding minder proteïne koop en veral minder vet, as Blanke huise van dieselfde sosio-ekonomiese peil;

(*c*) dat in Kleurlinghuise, hetsy van die Christelike of Maleise geloof, die aankoop van vette en olie relatief tot die aankoop van koolhidraatvoedsel vermeerder namate die sosio-ekonomiese peil verhoog, sodat die verhouding tussen hierdie voedselsoorte van omtrent die „Naturel" tot die „Blanke" se peil styg.

**SUMMARY**

Classification of the food purchases of the poorer European, Coloured, and African households of Cape Town reveals:—

(*a*) that in the European households the mean consumption of protein foods and of fats and oils does not vary much with socio-economic status;

(*b*) that the same is true in the African households, but that they purchase proportionately less protein, and particularly less fat, than European households on the same socio-economic level;

(*c*) that in Coloured households, whether Christian or Malay, purchases of fats and oils increase relatively to purchases of carbohydrate foods as socio-economic level increases, the proportions of these foods rising from about the "African" to about the "European" level.

This paper continues my report on the 1951-1953 inquiry into the food-purchasing habits of the poorer population of Cape Town(1).

The preceding paper (2) reported a significant difference in the proportion of fat in the diet, independent of socio-economic status, in the three broad ethnic groups European, Coloured, and African(3). The present paper extends this study (*a*) by examining comparatively the food-purchases of the poorer Europeans, all the Christian Coloured households, all the Malay households, and six ecologically-differentiated groups comprising most of the African households, and (*b*) by analysing the distribution of these purchases among three main categories of foodstuffs.

In the present paper the definition of "poorer households" is extended to cover all households with an Available Income Ratio less than 400(4). The samples of these households were as follows, all geographically stratified.

The *European* households investigated were the 78 found to have AIR less than 400 in a general stratified sample representing the 42,000 European households of the Municipality.

The *Christian Coloured* households investigated were the 312 with AIR less than 400 in a sample of 319 representing the 25,000 Christian Coloured households in the Municipality.

The *Malay* households investigated were the 92 with AIR less than 400 in a sample of 98 representing the 8,000 Malay households in the Municipality.

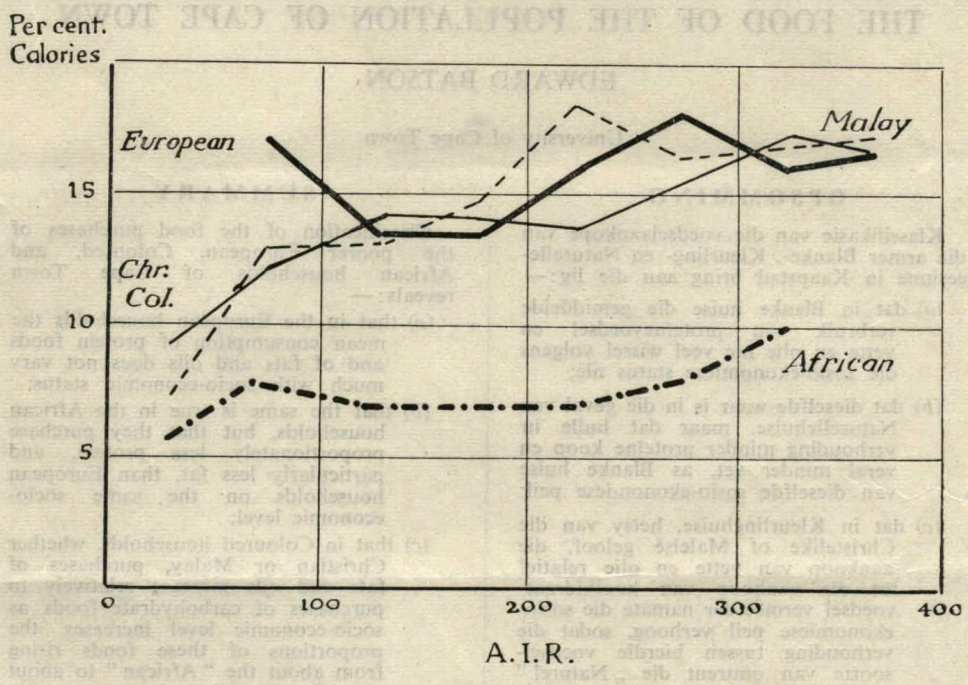


FIGURE I

SOCIO-ECONOMIC STATUS AND RELATIVE CALORIC VALUE OF FATS AND OILS PURCHASED

The *African* households investigated comprised six samples, with different raising factors, representing the following six main ecological groups of African private households in the Municipality :—

123 households comprising all with AIR less than 400 in a sample of 126 representing approximately 1,300 African private households in *Langa Native Township.*

25 households, all with AIR below 300, representing the African households, estimated at 550 in number, resident in Central Cape Town, chiefly *District Six and Signal Hill.*

64 households comprising all with AIR less than 400 in a sample of 65 representing approximately 600 African households resident in *Athlone.*

67 households, all with AIR below 300, representing approximately 1,050 African households resident in *Retreat.*

99 households, all with AIR less than 400, representing approximately 2,050 African households resident in *Windermere.*

55 households, all with AIR below 250, representing approximately 600 African households in *Factreton,* adjacent to Windermere.

The relationship between the samples and the population is shown in Table 1.

TABLE 1

THE SAMPLED POPULATION AND THE SAMPLES

| Cultural category | No. of Private Households | | | |
|---|---|---|---|---|
| | With AIR less than 400 | | Estimated total with AIR not less than 400 | Estimated total in all socio-economic categories |
| | In sample | Estimated total | | |
| African: Langa | 123 | 1,270 | 30 ? | 1,300 |
| Central | 25 | 550 | — | 550 |
| Athlone | 64 | 590 | 10 ? | 600 |
| Retreat | 67 | 1,050 | — | 1,050 |
| Windermere | 99 | 2,050 | — | 2,050 |
| Factreton | 55 | 600 | — | 600 |
| African | 433 | 6,110 | 40 ? | 6,150 |
| Christian Coloured | 312 | 24,000 | 1,000 | 25,000 |
| Malay Coloured | 92 | 7,500 | 500 | 8,000 |
| African and all Coloured | 837 | 37,610 | 1,540 | 39,150 |
| European | 78 | 23,000 | 19,000 | 42,000 |
| African, all Coloured, and European | 915 | say 60,500 | say 20,500 | say 81,000 |

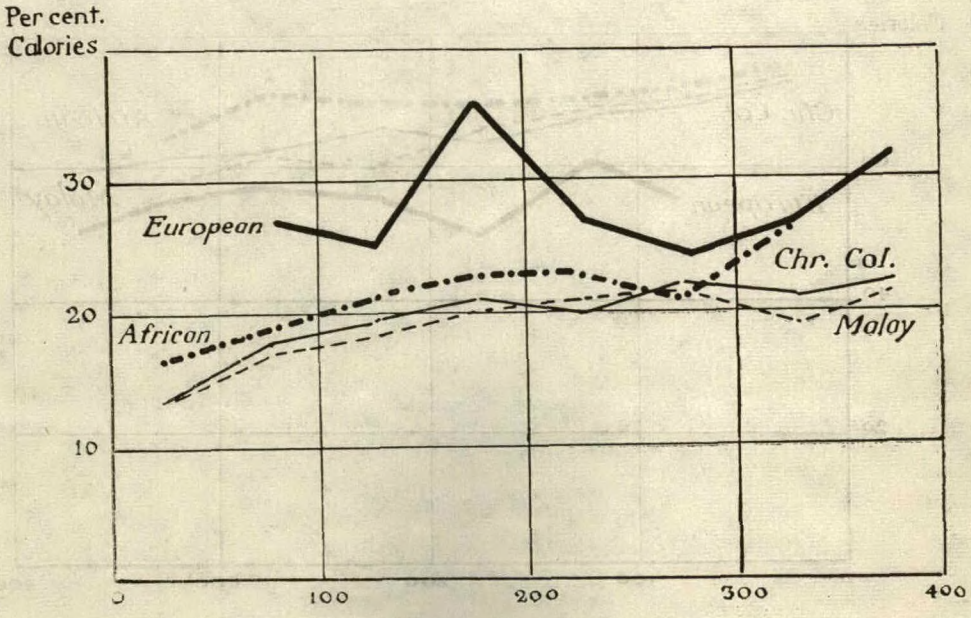


FIGURE II

SOCIO-ECONOMIC STATUS AND RELATIVE CALORIC VALUE OF PROTEIN FOODS PURCHASED

To account for the total population of the Municipality we must add some 700 African households scattered through other parts of the Municipality, the Asiatic population of about 1,300 households, domestic servants, and the population of all ethnic groups not resident in private households.

All the foodstuffs recorded as purchased by the samples in the week of investigation were classified as protein foods, fats and oils, or carbohydrate foods. The commonest foodstuffs in the three categories were:—

| *Protein foods.* | *Fats and oils.* | *Carbohydrate foods.* |
|---|---|---|
| Cheese. | Butter. | Cereals. |
| Eggs. | Dripping. | Fruit. |
| Fish. | Margarine. | Sugar. |
| Meat. | Oil. | Vegetables. |
| Milk. | | |
| Nuts. | | |
| Pulses. | | |

The basis of this classification is indicated in Table 2.

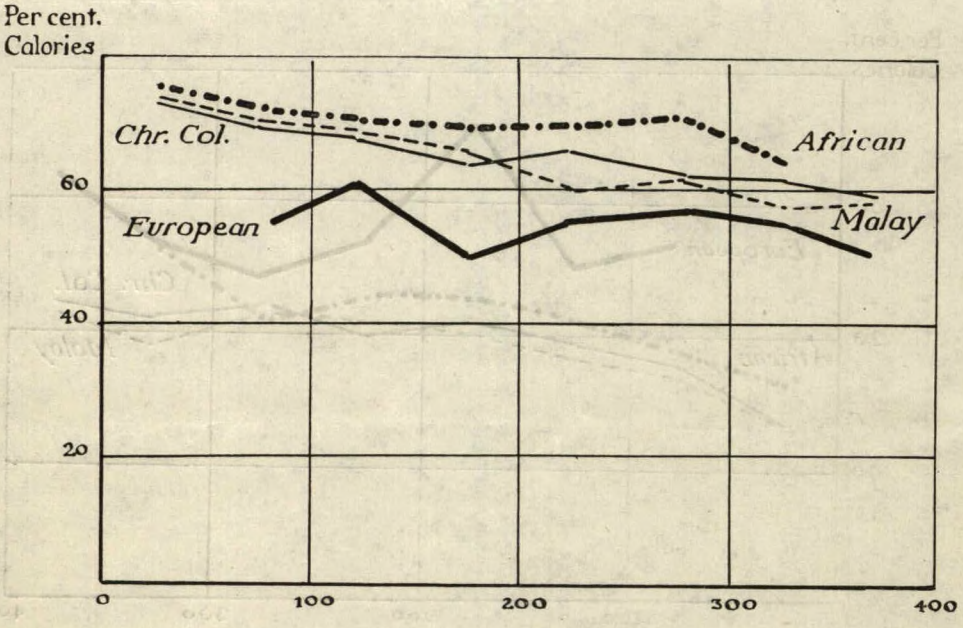


FIGURE III

SOCIO-ECONOMIC STATUS AND RELATIVE CALORIC VALUE OF CARBOHYDRATE FOODS PURCHASED

TABLE 2

CONSTITUENTS OF THE COMMONEST FOODSTUFFS IN EACH OF THREE CATEGORIES

Approximate minimum and maximum values per lb. of foodstuff as purchased.

| Category of foodstuffs | Grams animal protein | Grams vegetable protein | Grams fat | Grams carbohydrate | Calories |
|---|---|---|---|---|---|
| Protein foods.. | 40–110* | 90–100* | 0–150 | 0–200 | 300–1,900 |
| Fats and oils... | negligible | negligible | 350–450 | negligible | 3,300–4,200 |
| Carbohydrate foods..... | nil | 0–70 | 0–30 | 200–450† | 1,200–1,800† |

* Dried separated milk 162 grams protein, 236 grams carbohydrate (Fox and Golberg).

† Fruit and vegetables with large water content, up to 100 grams carbohydrate, up to 400 calories.

All the households covered by this particular study were classified in nine socio-economic categories according to their AIRs, the poorest categories being the *destitute* (with AIR negative) and those, also *in poverty*, with AIR from zero to short of 100, and the most prosperous category of the nine comprising the very few non-Europeans and more numerous European households with AIR from 350 to anything short of 400.

The proportions of protein foods, fats and oils, and carbohydrate foods, expressed in the common denominator of calories, among the total food-purchases of the households in each cultural and socio-economic category, are shown in Tables 3-12([5]).

TABLE 3

DISTRIBUTION OF CALORIES IN FOOD-PURCHASES OF EUROPEAN HOUSEHOLDS

| AIR | No. of Cases in Sample | Percentage of Calories derived from | | |
|---|---|---|---|---|
| | | Protein Foods | Fats and Oils | Carbohydrate Foods |
| Negative..... | 1 | 33 | 17 | 50 |
| 0–..... | 1 | 21 | 17 | 62 |
| 50–..... | 5 | 27 | 17 | 56 |
| 100–..... | 4 | 25 | 14 | 61 |
| 150–..... | 13 | 36 | 14 | 50 |
| 200–..... | 17 | 28 | 16 | 56 |
| 250–..... | 12 | 25 | 18 | 57 |
| 300–..... | 14 | 27 | 17 | 56 |
| 350–..... | 11 | 32 | 17 | 51 |
| All levels..... | 78 | 29 | 16 | 55 |

TABLE 4

DISTRIBUTION OF CALORIES IN FOOD-PURCHASES OF COLOURED CHRISTIAN HOUSEHOLDS

| AIR | No. of Cases in Sample | Percentage of Calories derived from | | |
|---|---|---|---|---|
| | | Protein Foods | Fats and Oils | Carbohydrate Foods |
| Negative..... | 3 | 14 | 15 | 71 |
| 0–..... | 20 | 13 | 10 | 77 |
| 50–..... | 74 | 17 | 13 | 70 |
| 100–..... | 77 | 19 | 14 | 67 |
| 150–..... | 66 | 22 | 14 | 64 |
| 200–..... | 26 | 20 | 14 | 66 |
| 250–..... | 29 | 22 | 16 | 62 |
| 300–..... | 11 | 22 | 17 | 61 |
| 350–..... | 6 | 23 | 17 | 60 |
| All levels..... | 312 | 19 | 14 | 67 |

TABLE 5

DISTRIBUTION OF CALORIES IN FOOD-PURCHASES OF MALAY HOUSEHOLDS

| AIR | No. of Cases in Sample | Percentage of Calories derived from | | |
|---|---|---|---|---|
| | | Protein Foods | Fats and Oils | Carbohydrate Foods |
| Negative..... | — | — | — | — |
| 0–..... | 5 | 13 | 7 | 80 |
| 50–..... | 23 | 17 | 13 | 70 |
| 100–..... | 28 | 19 | 13 | 68 |
| 150–..... | 19 | 20 | 15 | 65 |
| 200–..... | 6 | 21 | 19 | 60 |
| 250–..... | 5 | 22 | 17 | 61 |
| 300–..... | 4 | 19 | 23 | 58 |
| 350–..... | 2 | 25 | 17 | 58 |
| All levels..... | 92 | 19 | 14 | 67 |

TABLE 6

DISTRIBUTION OF CALORIES IN FOOD-PURCHASES OF AFRICAN HOUSEHOLDS (LANGA)

| AIR | No. of Cases in Sample | Percentage of Calories derived from | | |
|---|---|---|---|---|
| | | Protein Foods | Fats and Oils | Carbohydrate Foods |
| Negative..... | 1 | 19 | 14 | 67 |
| 0–..... | 16 | 20 | 7 | 73 |
| 50–..... | 40 | 19 | 9 | 72 |
| 100–..... | 32 | 21 | 11 | 68 |
| 150–..... | 15 | 21 | 11 | 68 |
| 200–..... | 7 | 26 | 9 | 65 |
| 250–..... | 7 | 26 | 6 | 68 |
| 300–..... | 5 | 27 | 10 | 63 |
| 350–..... | — | — | — | — |
| All levels..... | 123 | 21 | 9 | 70 |

TABLE 7

DISTRIBUTION OF CALORIES IN FOOD-PURCHASES OF AFRICAN HOUSEHOLDS (CENTRAL CAPE TOWN)

| AIR | No. of Cases in Sample | Percentage of Calories derived from | | |
|---|---|---|---|---|
| | | Protein Foods | Fats and Oils | Carbohydrate Foods |
| Negative..... | 1 | 31 | 0 | 69 |
| 0–..... | 2 | 12 | 6 | 82 |
| 50–..... | 2 | 23 | 3 | 74 |
| 100–..... | 4 | 21 | 9 | 70 |
| 150–..... | 7 | 28 | 7 | 65 |
| 200–..... | 7 | 28 | 12 | 60 |
| 250–..... | 2 | 26 | 11 | 63 |
| 300–..... | — | — | — | — |
| 350–..... | — | — | — | — |
| All levels..... | 25 | 25 | 9 | 66 |

TABLE 8

DISTRIBUTION OF CALORIES IN FOOD-PURCHASES OF AFRICAN HOUSEHOLDS (ATHLONE)

| AIR | No. of Cases in Sample | Percentage of Calories derived from | | |
|---|---|---|---|---|
| | | Protein Foods | Fats and Oils | Carbohydrate Foods |
| Negative..... | 1 | 11 | 0 | 89 |
| 0–..... | 7 | 19 | 6 | 75 |
| 50–..... | 23 | 21 | 10 | 69 |
| 100–..... | 16 | 21 | 7 | 72 |
| 150–..... | 12 | 19 | 8 | 73 |
| 200–..... | 4 | 21 | 9 | 70 |
| 250–..... | 1 | 16 | 2 | 82 |
| 300–..... | — | — | — | — |
| 350–..... | — | — | — | — |
| All levels..... | 64 | 20 | 8 | 71 |

TABLE 9

DISTRIBUTION OF CALORIES IN FOOD-PURCHASES OF AFRICAN HOUSEHOLDS (RETREAT)

| AIR | No. of Cases in Sample | Percentage of Calories derived from | | |
|---|---|---|---|---|
| | | Protein Foods | Fats and Oils | Carbohydrate Foods |
| Negative..... | — | — | — | — |
| 0–..... | 11 | 16 | 4 | 80 |
| 50–..... | 29 | 20 | 9 | 71 |
| 100–..... | 12 | 23 | 8 | 69 |
| 150–..... | 8 | 28 | 5 | 67 |
| 200–..... | 6 | 19 | 6 | 75 |
| 250–..... | 1 | 26 | 10 | 64 |
| 300–..... | — | — | — | — |
| 350–..... | — | — | — | — |
| All levels..... | 67 | 21 | 7 | 72 |

TABLE 10

DISTRIBUTION OF CALORIES IN FOOD-PURCHASES OF AFRICAN HOUSEHOLDS (WINDERMERE)

| AIR | No. of Cases in Sample | Percentage of Calories derived from | | |
|---|---|---|---|---|
| | | Protein Foods | Fats and Oils | Carbohydrate Foods |
| Negative..... | 1 | 18 | — | 82 |
| 0–..... | 7 | 15 | 6 | 79 |
| 50–..... | 22 | 18 | 7 | 75 |
| 100–..... | 29 | 20 | 5 | 75 |
| 150–..... | 15 | 21 | 6 | 73 |
| 200–..... | 16 | 22 | 4 | 74 |
| 250–..... | 6 | 18 | 9 | 73 |
| 300–..... | 1 | 31 | 7 | 62 |
| 350–..... | 2 | 22 | 8 | 70 |
| All levels..... | 99 | 20 | 5 | 75 |

TABLE 11

DISTRIBUTION OF CALORIES IN FOOD-PURCHASES OF AFRICAN HOUSEHOLDS (FACTRETON)

| AIR | No. of Cases in Sample | Percentage of Calories derived from | | |
|---|---|---|---|---|
| | | Protein Foods | Fats and Oils | Carbohydrate Foods |
| Negative..... | 1 | 14 | 0 | 86 |
| 0–..... | 3 | 12 | 6 | 82 |
| 50–..... | 16 | 19 | 6 | 75 |
| 100–..... | 22 | 19 | 7 | 74 |
| 150–..... | 9 | 19 | 5 | 76 |
| 200–..... | 4 | 28 | 3 | 69 |
| 250–..... | — | — | — | — |
| 300–..... | — | — | — | — |
| 350–..... | — | — | — | — |
| All levels..... | 55 | 19 | 6 | 75 |

TABLE 12

DISTRIBUTION OF CALORIES IN FOOD-PURCHASES OF ALL AFRICAN HOUSEHOLDS

| AIR | Total Cases in all Weighted Samples | Percentage of Calories derived from | | |
|---|---|---|---|---|
| | | Protein Foods | Fats and Oils | Carbohydrate Foods |
| Negative..... | 5 | * | * | * |
| 0–..... | 46 | 17 | 6 | 77 |
| 50–..... | 132 | 19 | 8 | 73 |
| 100–..... | 115 | 21 | 7 | 72 |
| 150–..... | 66 | 23 | 7 | 70 |
| 200–..... | 44 | 23 | 7 | 70 |
| 250–..... | 17 | 21 | 8 | 71 |
| 300–..... | 6 | 27 | 10 | 63 |
| 350–..... | 2 | * | * | * |
| All levels..... | 433 | 21 | 7 | 72 |

* Cases too few for inclusion in this table.

Figures I, II and III, which are based on Tables 3, 4, 5 and 12, draw attention to the following characteristics of these distributions.

1. Among European households, and among African households taken all together, there is little or no apparent correlation between socio-economic status and proportion of protein foods, fats and oils, and carbohydrate foods. In Coloured households, both Christian and Malay, the apparent correlation is marked, and similar in kind and degree.

2. The mean consumption of protein foods and of fats and oils is markedly higher among European households than among African households, *not only for each sample as a whole but for each socio-economic group in the samples.* In other words, the European households in the sample buy relatively more protein foods and fats and oils, and therefore relatively less carbohydrate foods, than households of *equal economic status* in the African samples.

3. Among the Christian Coloured and Malay households the purchases of fats and oils relatively to the purchases of carbohydrate foods increase with socio-economic status from approximately the "African level" to approximately the "European level", and conversely with carbohydrate foods.

4. In respect of the data examined in these tables and figures there is no significant difference between the food purchases of the Christian Coloured people and the Malays.

These findings are summed up in the Z pattern characteristic of the three Figures.

The tripolar graphs in Figures IV-VIII shed further light on the ethnic and socio-economic correlates of variations in the composition of the food purchases.

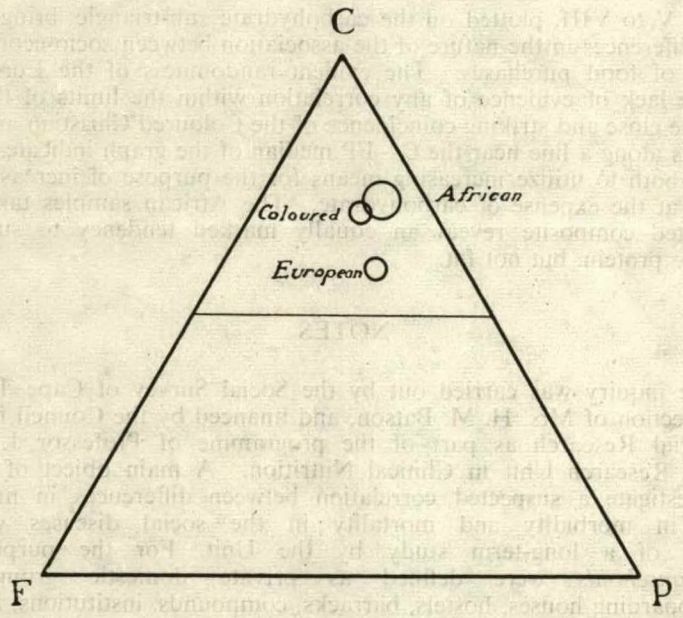


FIGURE IV

This Figure shows the percentage of total calories contributed by each of the three groups of foodstuffs (carbohydrate foods, fats and oils, protein foods) to the total food purchases of European, Coloured (Christian and Malay), and African households within 50 points either side of the Poverty Datum Line (i.e. with A I R from 50 to 150). The co-ordinate half-way up the graph is the fifty-per-cent co-ordinate for carbohydrate foods (C). It will be noted that the European reading, the Coloured reading, and the larger circle covering the individual readings for the six African samples, all fall above this co-ordinate, and hence would necessarily fall below the similar co-ordinates for fats and oils (F) and protein foods (P). Figures V to VIII show the upper triangle only.

Figure IV has been prepared by plotting for each category of the population the mean proportionate distribution of food purchases among all the households within a range of 50 points on each side of the poverty datum line. The readings for all nine categories of the people are, as would be expected, in the carbohydrate sub-triangle. But within this limit the readings have individual characteristics of which the following are especially interesting:—

1. The clustering of all African samples within two or three points of C 72, F 8, P 20.

2. The coincidence of both Coloured samples, the Christian and the Malay, at C 69, F 13, P 18, significantly greater in F than the combined African samples.

3. The segregation of the European sample at C 59, F 15, P 26, significantly different in all three dimensions from the African reading and also significantly different from the Coloured readings in C and P.

Figures V to VIII, plotted on the carbohydrate sub-triangle, bring out clearly the ethnic differences in the nature of the association between socio-economic status and quality of food purchases. The evident randomness of the European track confirms the lack of evidence of any correlation within the limits of the available sample. The close and striking coincidence of the Coloured Christian and Coloured Malay tracks along a line near the C—FP median of the graph indicates a tendency common to both to utilize increasing means for the purpose of increasing both fat and protein at the expense of carbohydrate. The African samples taken together as a weighted composite reveal an equally marked tendency to substitute for carbohydrate protein, but not fat.

## NOTES

(1) The inquiry was carried out by the Social Survey of Cape Town, under the field direction of Mrs. H. M. Batson, and financed by the Council for Scientific and Industrial Research as part of the programme of Professor J. F. Brock's CSIR/UCT Research Unit in Clinical Nutrition. A main object of the inquiry was to investigate a suspected correlation between differences in nutrition and differences in morbidity and mortality in the social diseases which form the subject of a long-term study by the Unit. For the purpose of the inquiry, *households* were defined as private domestic groups, excluding hotels, boarding houses, hostels, barracks, compounds, institutions, and the like, and excluding persons dwelling in servants' quarters. An endeavour was made to secure findings representative of the whole poorer population of the Municipality. With this object, data were collected for stratified samples comprising 400 households in each of the three largest ethnic groups—Coloured (including Cape Malay), European, and African([3]).

(2) See " The Ethnic Differentiation of Fat-Calorie Ratios in Household Food-Purchases in Cape Town ", J.S.R., Dec. 1953, 113-5. The following misprints should be corrected on page 114:—

Line 5, for " medium " read " median ".

Line 13, insert comma after *is*.

fourth line below table, for " bt " read " be ".

(3) According to the Census of May, 1951 (Special Report No. 200), the numbers of the population of the Municipality of Cape Town were:—

| | |
|---|---|
| Coloured including Malay ... ... ... ... ... ... ... ... | 207,544 |
| European ... ... ... ... ... ... ... ... ... ... ... ... ... | 186,660 |
| African ... ... ... ... ... ... ... ... ... ... ... ... ... ... | 39,931 |
| Others [chiefly Indian] ... ... ... ... ... ... ... ... ... | 6,790 |
| Total population ... ... ... ... ... ... ... ... ... | 440,925 |

In my opinion the figures for Coloured persons are an overstatement and for Europeans and Africans an understatement. I estimate that a little less than a quarter of the Coloured households are Malay.

(4) " The Poverty Datum Line and the Available Income Ratio are calculations employed to measure family standards of living. The Poverty Datum Line is an estimate of the income needed by an individual household if it is to attain a defined minimum level of health and decency. The Available Income is the income that the household actually has at its disposal for the purchase of the minimum essentials for health and decency. The Available Income Ratio is the Available Income expressed as a percentage of the Poverty Datum Line income." *The Poverty Line in Cape Town,* Edward Batson, Report No. SP 3, The Social Survey of Cape Town, February, 1942.

(5) In all the tables, an entry like " 50— " is to be read as meaning " from 50 up to anything short of the beginning of the next interval ".

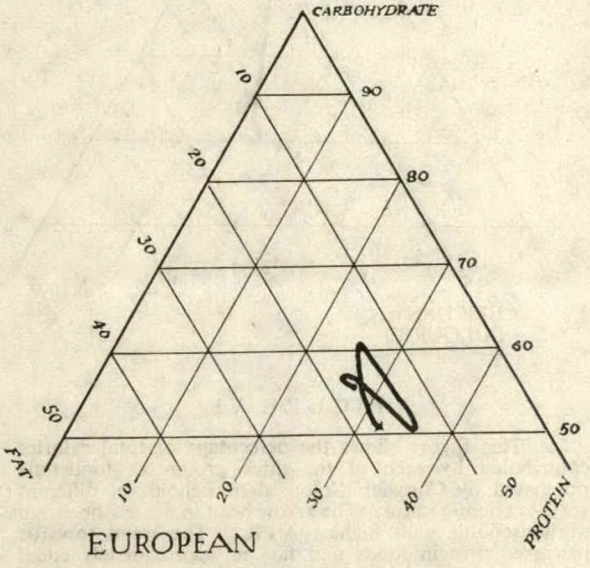


FIGURE V

This Figure shows the percentage of total calories contributed by each of the three groups of foodstuffs purchased by European households of different socio-economic status. The arrow head indicates the group of households with highest A I R. The lack of a trend is evident; the variations are all within the limits of possible sampling error. The readings on the three co-ordinates are as follows:—

| Mean A I R | C | F | P |
|---|---|---|---|
| 75 | 56 | 17 | 27 |
| 125 | 61 | 14 | 25 |
| 175 | 50 | 14 | 36 |
| 225 | 56 | 16 | 28 |
| 275 | 57 | 18 | 25 |
| 325 | 56 | 17 | 27 |
| 375 | 51 | 17 | 32 |

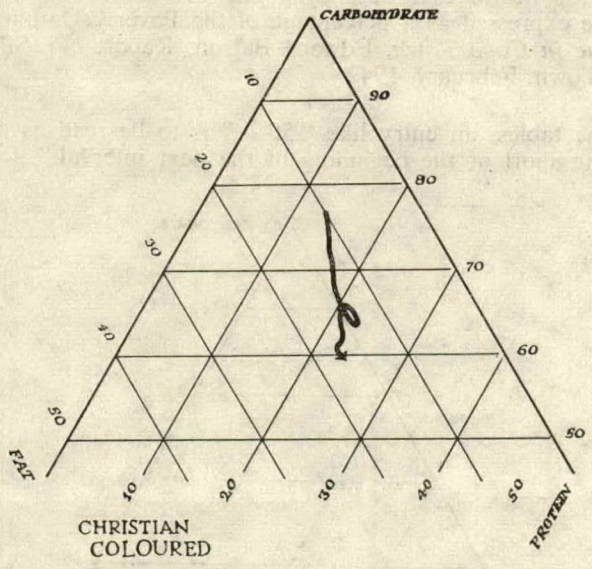


FIGURE VI

This Figure shows the percentage of total calories contributed by each of the three groups of foodstuffs purchased by Christian Coloured households of different socio-economic status. The arrow head indicates the group of households with highest A I R. The trend towards increased protein foods and fats in approximately equal caloric proportions is evident, and is beyond the limits of sampling error. The readings on the three co-ordinates are as follows.

| Mean A I R | C | F | P |
|---|---|---|---|
| 25 | 77 | 10 | 13 |
| 75 | 70 | 13 | 17 |
| 125 | 67 | 14 | 19 |
| 175 | 64 | 14 | 22 |
| 225 | 66 | 14 | 20 |
| 275 | 62 | 16 | 22 |
| 325 | 61 | 17 | 22 |
| 375 | 60 | 17 | 23 |

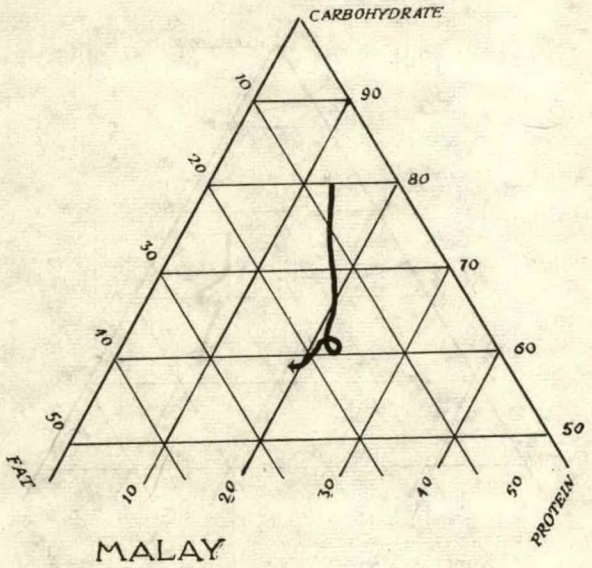


FIGURE VII

This Figure shows the percentage of total calories contributed by each of the three groups of foodstuffs purchased by Malay households of different socio-economic status. The arrow head indicates the group of households with highest A I R. The similarity of the trend to that shown in Figure VI is remarkable: any differences between the two are within the limits of possible sampling error, although that, of course, does not rule out the possibility of real differences of limited range. The readings on the three co-ordinates are as follows:—

| Mean A I R | C | F | P |
|---|---|---|---|
| 25 | 80 | 7 | 13 |
| 75 | 70 | 13 | 17 |
| 125 | 68 | 13 | 19 |
| 175 | 65 | 15 | 20 |
| 225 | 60 | 19 | 21 |
| 275 | 61 | 17 | 22 |
| 325 | 58 | 23 | 19 |

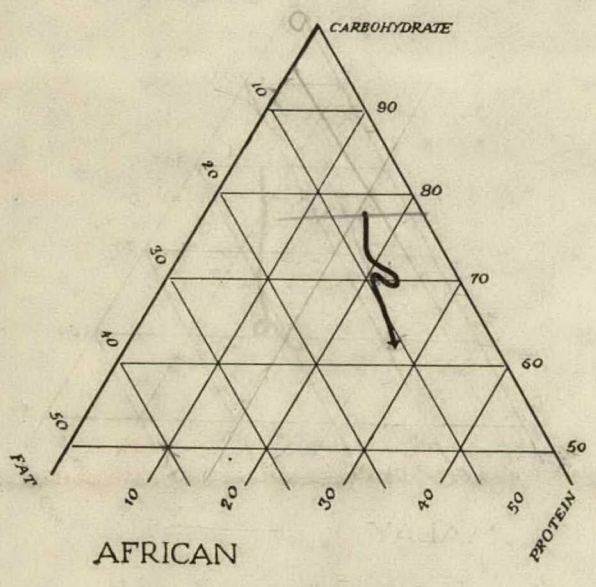


FIGURE VIII

This Figure shows the percentage of total calories contributed by each of the three groups of foodstuffs purchased by African households of different socio-economic status. The arrow head indicates the group of households with highest A I R. The trend towards increased protein foods, with hardly any appreciable increase in fats and oils, is evident. The readings on the three co-ordinates are as follows:—

| Mean A I R | C | F | P |
|---|---|---|---|
| 25 | 77 | 6 | 17 |
| 75 | 73 | 8 | 19 |
| 125 | 72 | 7 | 21 |
| 175 | 70 | 7 | 23 |
| 225 | 70 | 7 | 23 |
| 275 | 71 | 8 | 21 |
| 325 | 63 | 10 | 27 |

SERIES OF REPORTS AND STUDIES ISSUED BY THE SOCIAL SURVEY OF CAPE TOWN

# NOTES ON
# THE CONCEPT AND MEASUREMENT
# OF THE STANDARD OF LIVING

## I THE DEVELOPMENT OF THE CONCEPT

BY

BRUNHILDE HELM

MARCH 1949 REPORT SS 28

> It is hardly possible to form any accurate judgement of the condition of the labouring classes in any district of the kingdom without first knowing what a labouring man can earn, and how much of the necessaries of life he can purchase by his earnings. [Sir F.M. Eden. The State of the Poor: or a History of the Labouring People in England (London, 1797)]

In most recent attempts at setting a value on what have come to be called standards of living[1] it has seemed reasonable to

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1 The current use of the term "standards of living" is so diverse that some explanatory note is needed of the way it is here employed.

C.C. ZIMMERMAN in Consumption and Standards of Living (Williams and Norgate, London) distinguishes between the terms "systems of living" and "standards of living". He says: "By the term system of living is meant total individual and group behaviour as it is integrated about the efforts to satisfy desires. Thus, an extreme emphasis upon fashionable clothing may lead to a relative decline in expenditures for food and other necessities. Or, a deep interest in following out the tenets of a religious sect may lead to a general decrease in the consumption of economic goods."

Of the term standards of living, he says, there are "numerous definitions", which he groups into three classes: "the scientific, the attitudinal, and the typological".

> "The 'scientific' formulation of the standard of living ... is the ideal level of expenditures set up by social scientists as a means to a sanctioned end".
>
> "The second, or attitudinal approach conceives the standard of living as that which we want, as the attitudes which govern our expenditures, rather than the actual consumption of goods and services".
>
> "The third conception of standard of living ... is the typological. According to this view, a standard of living is the type of behaviour which most adequately expresses the dominant values found in the associated manner of living. In other words, it is a species of the systems of living. Thus, the description of a system of living as it is exemplified by the 'representative individual' corresponds to the appropriate

determine a measure, or standard, in terms of which income may be compared with expenditure. It has seemed equally reasonable to make this standard a minimum, and the term poverty line, or poverty datum line, becomes increasingly familiar.

Most studies of standards of living imply studies of the household budget; studies of the relationship between income and expenditure. When, therefore, we seek to measure standards of living, we seek to measure the relationship between income and expenditure on some agreed minimum. There will have been certain grounds for agreeing on one minimum rather than on another and it is with minimum standards and the criteria which have determined them that this paper is chiefly concerned.

Any measuring scale must be as objective as possible so as to give to any observer a similar reading in similar circumstances. Income may be stated objectively in terms of currency; the wares of the grocer and draper on which income is commonly expended may be stated in terms of objective units of weight or length. But the manner in which income and expenditure affect human behaviour is not so simple to state objectively. If it is not easy to arrive at objective measures of standards of living, such measures are nevertheless called for if any single measurement is to be compared with any other. It is with the means whereby closer comparability has been progressively achieved that this paper is further concerned.

It has been claimed that the methods of obtaining measures of standards of living are now "well established, and only the adjustments necessary for their application to the peculiarities of local circumstances need any detailed description".[1] This claim may perhaps not be considered as fully substantiated, but the pioneer contribution of Charles Booth to the development of such measures is indisputable.

Charles Booth's inquiry[2] was conducted from 1886 to 1888, "the subject being the condition and occupations of the inhabitants of London."[3]

In order to describe their condition, Booth found it conveni-

---

standard of living, properly so-called. This behaviour is neither average nor extreme: it is the type of behaviour common to those who successfully represent the habits and values of a given group".

(See Chapter I, pages 1 - 10)

It is this third use of the term which Zimmerman himself employs in Consumption and Standards of Living; it is the general use; and, unless otherwise stated, it is the way the term is used in this paper.

1 See P. FORD. Work and Wealth in a Modern Port, An Economic Survey of Southampton, Chapter V, page 92. George Allen and Unwin Ltd., London, 1934.

2 CHARLES BOOTH (Ed.) Life and Labour of the People in London. MacMillan and Co., London, 1892.

3 Ibid., Vol. I, page 1.

ent to divide the inhabitants of London into eight classes[1] according to their occupations, and thus, largely, according to their earnings. Substantially, his eight classes fall into two sections, those above the line of poverty, and those below. The latter, with the exception of the "lowest class"[2], may be divided into the "poor" and the "very poor". The "very poor", in turn, are "at all times more or less 'in want'"; but "only a percentage ... would be said ... to be 'in distress'"[3].

It is, however, abundantly clear that such a classification, the poor, the very poor, those in want, those in distress, is not made on the objective grounds to which all science aspires. It was in the interests of objectivity that Booth undertook the investigation and analysis of the expenditure of thirty London families and sought to establish a scale so as to "attach some positive value to the definition of 'poor' and 'very poor'."[4]

Booth did not determine any arbitrary standard of minimum needs; he stated what he found to be an average expenditure of each of a number of socio-economic classes.[5] He compared with these averages the income of individual families, and, "to facilitate comparison"[6], every family was expressed in terms of a unit, or equivalent. It is clear that where comparison is sought between one family and another by considering the variable income, other respects in which the families differ should, as far as

---

1 cf. CHARLES BOOTH (Ed.) Life and Labour of the People in London, Vol. I, Chapter II. "The 8 classes into which I have divided these people are:-

A. The lowest class of occasional labourers, loafers, and semi-criminals.
B. Casual earnings - "very poor".
C. Intermittent earnings
D. Small regular earnings ] together the "poor".
E. Regular standard earnings - above the line of poverty.
F. Higher class labour.
G. Lower middle class.
H. Upper middle class."

2 i.e. class A above.

3 Ibid., Vol. I, pages 131 - 132. Booth explains the terms "want" and "distress" as follows:-

"By 'want' is here meant an aggravated form of poverty, and by 'distress' an aggravated form of 'want'. There is to my mind a degree of poverty that does not amount to want and a degree of want that does not amount to distress."

4 Ibid., Vol. I, page 132.

5 Booth states the average for each class as follows:-

| | B | | C & D | | E | | F | | |
|---|---|---|---|---|---|---|---|---|---|
| | s. | d. | s. | d. | s. | d. | s. | d. | |
| On Food ..... | 3 | 6½ | 4 | 1½ | 5 | 4½ | 8 | 8 | per male adult per week |
| On Rent, &c .... | 2 | 3½ | 2 | 10½ | 3 | 8½ | 5 | 7 | per male adult per week |
| On Clothes, &c . | | 1 | | 4 | 1 | 1 | 2 | 2 | per male adult per week |
| | 5 | 11 | 7 | 4 | 10 | 2 | 16 | 5 | |

6 Ibid., Vol. I, page 132.