



DEPARTMENT  
OF  
SOCIOLOGY

UNIVERSITY OF RHODESIA

Drinking Patterns  
in Rhodesia

Highfield African  
Township

by

D. H. READER

and

JOAN MAY

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DRINKING PATTERNS  
IN RHODESIA

HIGHFIELD AFRICAN TOWNSHIP  
SALISBURY

Department of Sociology  
Occasional Paper No. 5

*by*

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## PREFACE

This is the first publication of the Alcoholism Research Unit of the University's Institute for Social Research, founded in 1968. The Unit began in 1969 when the Rhodesian National Council on Alcoholism asked the University to conduct a survey on African drinking patterns. This work commenced with certain disadvantages. The department of Sociology charged with it had three other and larger projects, also in their early stages. Financial resources for the alcoholism project being slender, few staff could be deployed and those who were could rarely be paid. With the country under sanctions, it seemed unlikely that figures would be released which were needed for calculations of *per capita* alcohol consumption.

In the event all these obstacles have been turned to some advantage. The alcoholism project has blended well with a more general urban studies project being undertaken by the Urban Studies Research Unit of the Institute in Highfield township. Funds kindly supplied by the Rhodesian National Council on Alcoholism from limited resources have been substantially augmented by the Salisbury Municipality and by Government. The authorities have been generous in supplying the alcohol consumption figures which were needed. Finance has also been provided by the Bulawayo Municipality for the study to be replicated there.

Finally we are grateful to Mr. A. A. le Roux, department of Economics of the University of Rhodesia, and to Mr. E. R. Mullenix of Daystar Communications Inc., both of whom kindly commented on the statistical basis of the present work.

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## SUMMARY OF FINDINGS

### National Figures

1. Corrected crude annual per capita rates for African beer drunk in the African townships of five urban centres in Rhodesia show a range of consumption of 58·2 to 100·2 imperial gallons (mean 84·2 gals.), comparable with a consumption in certain South African townships of from 4 to 116 Imp. gals. (mean 40·3 gals.).
2. In South Africa and in Rhodesia the value of African beer as a food has been reduced in recent years by a gradual displacement of sorghum in the brewing process by maize grits.
3. The European estimated crude per capita consumption rate of European beer in Rhodesia of 19·0 Imp. gals. per annum is only a medium one compared with countries like Czechoslovakia and West Germany at one extreme and Norway and Italy at the other.
4. The European estimated crude per capita rate for spirits drunk in Rhodesia of 7·3 litres per annum is high compared with known other countries of the world. If Coloureds and Asians are included in the Rhodesian estimate the per capita consumption becomes 6·3 litres which is then broadly comparable with the United States figure of 5·0 litres per annum and to a less extent with the corresponding South African figure of 8·6 litres per annum. It should be noted that spirits are cheap by Western European standards in both Rhodesia and South Africa.

### African Drinkers

#### —General

5. The general pattern of African drinking in the present Highfield township sample is essentially one of weekend opportunism—half of the male sample drink at least once a week, and half of that number at weekends only.
6. Male consumption rises over 35 years of age, with increase in income and at the highest educational level.
7. Beerhalls are by far the preferred locality for drinking, and must be regarded as well integrated with Highfield social life for purposes of beer, companionship and entertainment.

8. Catholics and persons of no religious affiliation tend to include a higher proportion of drinkers than other denominations.
9. Approximately two-thirds of the Methodist male sample drink in spite of the known antipathy of their church towards liquor. Of those who do drink, one-third are heavy drinkers.
10. Among the heavy drinkers, Methodists and non-affiliated persons are over-represented.

—*African Beer*

11. Drinking of African beer is essentially a male behaviour pattern.
12. African beer is traditionally held to have food value, so that it is difficult to cost as a luxury or to negate as a dietary item.
13. Stated consumption of African beer is accordingly high—213.9 gals. effective male per capita rate per annum in Highfield.
14. However, males tend to exaggerate their consumption and underestimate their expenditure on African beer.
15. Stated expenditure on African beer seems to be at a modal level of about \$1.00 per week, and may actually be more. In the absence of the latest Central Statistical Office budget study it is difficult to say how great an inroad this represents on income and on other vital expenditure.

—*European Beer*

16. With rise in income in the sample, beverage consumption increases in favour of European beer.
17. While sales of European beer to African males may be underestimated by the Breweries, male respondents heavily exaggerate their own consumption. European beer has status value, but they cannot afford it as often as they would wish.
18. Proportionately more African women than men in the sample drink European beer.
19. African women who drink are as heavy users of European beer as the men—an effective annual per capita consumption of 46.3 gals. compared with 43.4 gals. for the men (sample error  $\pm$  8.2 gals.).

20. There are indications that about half the small group of African women drinkers of European beer are emancipated women who drink quite heavily in public, among them being some prostitutes.

—*Spirits*

21. Quantities drunk and expenditure are negligible for most African men and women in the sample.
22. Of the very few African men who drink spirits, the educated tend to use them in much the same drinking pattern as Europeans, whereas the remainder often use spirits to “lace” their beer.
23. The effective male per capita consumption by users of spirits is 9·4 litres per annum; of female users 6·9 litres.

**Abstainers**

24. Thirty-seven per cent. of the men and 80 per cent. of the women in the sample claimed to be total abstainers.
25. It may well be that a number of the women claiming to be abstainers in fact drink, at least in small quantities.
26. Abstention is most evident at primary school level of education.
27. The proportion of male abstention falls up to 35 years of age but from there onwards remains relatively constant at about 35 per cent. of the sample.
28. The highest proportion of abstainers is found among the African sectarian churches and other non-conformist denominations.

**Heavy Drinkers**

29. Over one-quarter of the male sample had no hesitation in saying that they were drunk every weekend. Many saw no point in drinking except to get drunk.
30. Of the drinkers, 41·7 per cent. said that they were drunk every weekend or once a week.
31. However, Marconi's three criteria of Alcoholism were ill-adapted to the Highfield African male sample:

1. *Frequency of Drunkenness.* About 35 per cent. of the male sample said that they were drunk from at least once a month to at least two or more working days a week. In the absence of evidence of heavy and continuous drinking bouts and allowing for the permissiveness surrounding drinking in this African culture, we were unable to reach value conclusions on periodic excessive drinking.
2. *Frequency or Duration of Drinking Bouts.* It is questionable whether our figure of 2·2 per cent. of the male sample stated as having four or more drinking bouts a year has any meaning. It is almost within the sample error of  $\pm 2\cdot18$  per cent. for this part of the survey.
3. *Drinking before Breakfast.* Here it has to be noted that (a) African beer is traditionally regarded as a food, (b) Africans in the sample do not always have a steady conception of three meals a day, and (c) the notion of meal-substitution by drink is not meaningful to many of them. Against this background, while it was occasionally said that beer was kept in the house as a counter-hangover measure, we found only one man who habitually drank African beer in lieu of breakfast.
32. Our view is that it may be best to abandon Euro-American criteria of "abnormal" drinking and rather search for any pathological consequences which heavy drinking places upon the social, economic or physiological life of the African individual.
33. Whereas no stigma attaches among many of this sample to heavy drinking *per se*, there is a widespread community condemnation of neglect of the family or other anti-social results of excessive drinking.
34. It is therefore all the more remarkable that nearly 20 per cent. of the men and about 5 per cent. of the women showed some consequential problem connected with drinking—blackouts, ill health, loss of money or time on the job, fighting and quarreling or family difficulties.
35. Heavy drinkers tend to be older than the remainder of the sample. Income and education are not significantly related to heavy drinking. No professional people are included in this self-confessed group, but Methodists and persons of no religious affiliations are over-represented in it.

## Conclusions

36. The conclusions at the end of this study should be read in detail.



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## INTRODUCTION

As the basis for this study we have used the recommendations of the Alcoholism Sub-committee of the Expert Committee on Mental Health of the World Health Organization.<sup>1</sup> Thus the crude, age-corrected and effective *per capita* alcohol consumption rates will first be calculated, both for Rhodesia as a whole from official figures and for Highfield African township from the data of this survey. Then certain items recommended by the W.H.O. for a survey of drinking patterns will be analysed, also from the sample survey, together with other items which seem to be at least of local importance.

### Definitions

Alcoholic liquor is defined for these purposes as all beverages containing 2 per cent. or more of pure alcohol by volume. In Rhodesia this definition applies not only to the conventional European-type brewed beer and distilled spirits, but to African beer. The traditional beer of the African people is brewed from a fermentation of millet, maize or other cereals such as kaffir corn (*Sorghum vulgare*). The result is a cloudy or sediment-laden beer, typically containing between 2 and 4 per cent. of pure alcohol. In this study, most of the African beer referred to is that brewed by the Salisbury Municipal Liquor Undertaking, and in some instances by Heinrich's Chibuku Breweries (1968) Limited, a private enterprise. The Liquor Undertaking holds a monopoly in all municipal and government African townships around Salisbury. It provides both draught and packaged beer, which contains 2·5 per cent. and 4 per cent. alcohol by volume respectively. This difference will be taken into account in assessing over-all alcohol consumption.

*European beer* consumed in Rhodesia is a clear beer, normally sold bottled, containing from 4·5 to 5 per cent. pure alcohol by volume. It is comparable with bottled beer as sold in European countries.

*Distilled spirits* of all the main types are available, including whisky, gin and brandy. The last-named, comprising a flavoured, distilled cane spirit, is the type of spirit most commonly consumed.

For all these alcoholic liquor types, a *unit* may be stated as the quantity of each which in comparison with the others contains approximately the same

<sup>1</sup> World Health Organization 1951 *Report of a Working Group on the Statistics and the Surveying of Alcoholism and Alcohol Consumption*. Annexure 1, *Second Report on Alcoholism*. Geneva, pp. 18-25.

amount by volume of pure alcohol. The following is the broad comparison used in our survey in the second half of this report:

	One Unit	= Pure Alcohol <i>grams</i>
African beer . . . . .	One quart . . . . .	20·50
European beer . . . . .	One reputed pint (13 fluid ounces)	15·01
Spirits . . . . .	One tot . . . . .	15·24

It has further been assumed in the survey that one bottle of spirits contains 21 tots.

A *total abstainer* is firstly and obviously one who takes no alcoholic liquor. In addition, the consumption of liquor for sacramental purposes is not taken into account in assessing abstention. Moreover, those few who drink African beer only on ceremonial occasions when in the rural areas, but never on other occasions, have also been classed as abstainers.

A *drinker* is a person who drinks alcoholic liquor, regardless of the amount consumed by him, except in the above cases.

### The Crude Per Capita Rate

According to the Working Group on Alcoholism of the W.H.O., the crude per capita rate is "the total number of units of a type of alcoholic beverage divided by the number of *all* inhabitants of a given geographic region at a given time". This rate evidently includes a large number of persons who for age and other reasons do not consume alcoholic beverages in statistically significant quantities. All "official" statistics are nevertheless given in crude rates, and these have at least broad comparative value. It will be necessary to consider the crude rates by type of alcoholic unit.

*African Beer.* An initial difficulty occurs in the calculation of the crude per capita rate for African beer. This beverage is not only brewed in the principal urban centres by municipal liquor undertakings and for the smaller urban areas by Heinrich's Breweries; it is also brewed illicitly in the peri-urban areas and to a much lesser extent in the African townships themselves. More than this, large quantities are made legally in the tribal trust lands and other rural areas, mainly on a home-brew basis whose quantities are impossible to estimate without extensive rural fieldwork.

The only practical proposal, therefore, seems to offer a "corrected" crude per capita rate for African beer consumption, such as is calculated in

South Africa where the same type of beer is brewed.<sup>2</sup> This index is based on a numerator consisting of total production of beer for the urban townships by local municipal undertakings, with the official census figures for the populations of these townships as a denominator.

As with South Africa, these figures "are not very accurate because it is difficult to assess the actual population served by a particular municipality, all consumers not always residing within the municipal boundary".<sup>3</sup> In the provisional 1969 census figures it is estimated that 181 680 persons live in the African townships surrounding Salisbury which are supplied by the Municipal Liquor Undertaking with African beer. There are 280 090 African residents in the total urban area of Salisbury, leaving 98 410 people whose residential area is not officially served by beer-halls and other municipal outlets. Many of these are domestic servants whose normal working hours do not permit much time to be spent at the beer-halls, and who live too far away to go there very often.

The corrected crude per capita rate is now provided for the urban townships of Salisbury and four other urban centres in Rhodesia:

**TABLE I: Corrected Crude Per Capita Rates for African Beer drunk in the African Townships of Five Urban Centres in Rhodesia, 1969.**

<i>Townships in Urban Area</i>	<i>Population</i>	<i>Beer Produced (Imp. Gal.)</i>	<i>Corrected Crude Per Capita Consumption</i>	<i>Alcohol Intake per diem</i>
Salisbury . . . . .	181 680	14 338 265	79·00 gal.	19·5 g
Bulawayo . . . . .	141 570	14 190 399	100·23 gal.	24·7 g
Gwelo . . . . .	27 500	1 714 967	62·37 gal.	15·4 g
Umtali . . . . .	25 650	1 492 610	58·19 gal.	14·3 g
Wankie Colliery . . . . .	17 980	1 449 054	80·59 gal.	19·9 g
			<i>Mean</i>	<i>Mean</i>
	394 380	33 185 295	84·15 gal.	18·7 g

In our view, because of the special correction made and also the particular nature of the African beer, the only figures with which these are

<sup>2</sup> "Corrected" in the sense not that errors of measurement are being rectified but that a better approximation is being obtained through the use of selected known figures.

<sup>3</sup> NOVELLIE, L. 1968. Kaffir Beer Brewing: Ancient Art and Modern Industry. U.S.A., *Wallerstein Laboratories Communications*, 31, 104, p. 19.



at all comparable are the South African ones. Novellie reports figures for South African towns from the South African Council for Scientific and Industrial Research Bantu Beer Unit, 1966, showing a corrected crude per capita consumption range of 4 to 116 imperial gallons, with a mean of 40.3 imperial gallons.<sup>4</sup>

Lest our figures and those for South Africa give an undue impression of heavy drinking among the respective urban African populations, the question of the value of African beer as an integral part of African diet must be raised. That it is consumed as such is beyond doubt, and later in this report we shall be considering the extent to which it is substituted for solid meals. Novellie in an earlier paper<sup>5</sup> contended that Bantu beer as brewed in South Africa contains about 5 to 7 per cent. of total solids, approximately half of which are starch, as well as about 3 per cent. alcohol. These constituents together with small amounts of dextrans and sugars contribute to a calorific value of the beer which is about 500–520 calories per quart. This is roughly equivalent to the calorific value of half a pound of bread or two-thirds of a quart of milk.

In a later paper, however, Novellie modified his views by saying that the biological ennoblement of Bantu beer had been severely reduced by a gradual displacement of sorghum in the brewing process by maize grits.<sup>6</sup> Over the years 1954 to 1963 he quotes a ratio reduction of sorghum to maize from 4.9 : 1 to 1.2 : 1. The composition of African beer brewed by the Salisbury Municipality is actually more adverse than this, being made up of approximately one-third sorghum malt to two-thirds bulk maize grits including some Kaffir-corn meal.<sup>7</sup> However, a partial assay of this beer in the brewery's research laboratory has indicated traces of vitamin B<sub>1</sub>, 0.01 mg per 100 gm of vitamin C, 0.81 per cent. of protein, 3 per cent. alcohol content and, by independent government analysis, a calorific value of 448 calories per quart.

Our crude per capita consumption rate of 84.15 gallons of African beer for the year 1969 is roughly equivalent to one quart per day per person. Lacking a complete assay of the beer, we cannot determine its dietetic value. While not negligible, it is not likely to be as high as might be supposed.

*European Beer.* While African beer is consumed almost exclusively by Africans, it is very difficult to separate the sales of European beer to

<sup>4</sup> *Ibid.*, p. 19.

<sup>5</sup> NOVELLIE, L. 1963. Bantu Beer—Food or Beverage? *Food Industries of South Africa*, 16, 28.

<sup>6</sup> NOVELLIE, L. 1966. Biological Ennoblement and Kaffir Beer. *Food Technology*, 20, 101–102.

<sup>7</sup> Salisbury Municipal Liquor Undertaking. Inspection and personal communication.

Europeans and to Africans. Some 8 093 628 Imperial gallons of European beer were sold in Rhodesia during 1968-69. Rhodesian Breweries Ltd., who virtually have the monopoly, inform us that approximately 28·8 per cent. of these total sales went to African outlets; and they further estimate that 20 per cent. of the sales through European outlets are actually sold to Africans. Using these combined figures as the basis for calculation, we arrive at the following figures:

4 610 132 gallons European beer sold to Europeans

3 483 496 gallons European beer sold to Africans.

The crude per capita consumption rates, based on total European and African population estimates from the provisional 1969 census figures of 228 590 and 4 817 950 respectively, are 19·0 gallons per capita for Europeans and 0·7 gallons for Africans.

As may be seen from the following table, the European estimated crude consumption rate in Rhodesia is only a medium one when compared with certain other countries of the world:

**TABLE II: Crude Per Capita Rates for European Beer drunk by Rhodesian Europeans in 1968-69 compared with certain other Countries in 1966.<sup>a</sup>**

	1966	1968-69
Czechoslovakia . . . . .	29·0 gal.	
West Germany . . . . .	27·7	
New Zealand . . . . .	25·0	
Australia . . . . .	24·6	
United Kingdom . . . . .	20·3	
RHODESIA . . . . .		19·0 gal.
Switzerland . . . . .	17·4	
Canada . . . . .	14·6	
France . . . . .	8·9	
Norway . . . . .	6·3	
Italy . . . . .	2·2	

The meaning of the crude per capita consumption figures for Africans is obscured, both by the over-all preference of tribal Africans for African beer and by the large number of them in the rural areas who are not exposed to European beer. With these reservations, the African crude per capita consumption of European beer is as follows:

<sup>a</sup> Figures from *Australian Hotel Review*, February 1969. These cannot be claimed to be representative but were the only figures available at the time of the survey.

Total estimated sales of European beer to Africans in Rhodesia, 1969 . . . . .	3 483 496 <i>Imp. gal.</i>
1969 Census, estimated African population, Rhodesia	4 817 950
African crude per capita consumption, European beer	0·7 <i>gal. per annum</i>

*Spirits.* It will be shown in the section on effective per capita consumption rates, in which the sample survey is taken into account, that the African in Rhodesia drinks a small quantity of spirits. The bulk is consumed by the European population, who in terms of the crude rate appear to be heavy spirit drinkers:

Spirits passed through Customs and Excise, 1968-69	357 813 <i>Imp. gal.</i>
European population Rhodesia (estimated Census 1969) . . . . .	228 590
Crude per capita consumption rate . . . . .	1·6 <i>gal. or</i> 7·3 <i>litres</i>

The following table places this consumption among figures for certain other countries of the world:

**TABLE III: Crude Per Capita Rates for Spirits drunk by Rhodesian Europeans in 1968-69 compared with other Countries in 1960<sup>9</sup>.**

	1960	1968-69
Rhodesia . . . . .		7·3 <i>litres</i>
U.S.A. . . . .	5·0	
France . . . . .	4·8	
Sweden . . . . .	4·6	
Norway . . . . .	4·0	
Denmark . . . . .	1·5	
United Kingdom . . . . .	1·4	

Again, one comparable country seems to be South Africa, where spirits are even cheaper. The South African figures for 1967, which include Coloureds and Asians, are 1·9 gallons or 8·55 litres per capita per annum.<sup>10</sup> If Coloureds and Asians are included in the Rhodesian estimate, the per capita consumption becomes 1·4 gallons per annum, or 6·3 litres. This is equivalent to 2 184 grams of pure alcohol a year, or an average daily intake of 6·0 grams. It is closer in comparison to the United States figure of 5·0 litres per annum than to the South African figure of 8·6 litres.

<sup>9</sup> Economist Intelligence Unit and Brewers Society, 1960.

<sup>10</sup> *South African Year Book*, 1968.

**Age Corrected Per Capita Consumption**

The figures in this section have been corrected by reference to the 1969 Census of Rhodesia, of which only the preliminary figures in certain categories were available at the time of this report. These figures were issued in cohorts of 5 years, and it was decided to use the age of 15 years in the cohort 15-19 years as a starting point. To have begun at the next cohort, 20-24 years, would have excluded too many drinkers of African and of European beer. Accordingly, demographic adulthood for the following age-corrected calculations begins at 15 years.

*African Beer*

Rhodesia, African beer produced, 1969 (est.) . . . . .	52 155 581 <i>Imp. gal.</i>
Rhodesia, African population 15+ years (1969 Census est.) . . . . .	2 433 300
Age corrected per capita rate . . . . .	<u>21.4 gal. per annum</u>

However this age-corrected figure takes no account of rural drinking of home-brewed African beer, which is known to be extensive. Hence, as is the practice in South Africa, we take urban figures alone, in this case for Salisbury, as more realistic:

Salisbury African townships, African beer produced, 1969 . . . . .	14 338 265 <i>Imp. gal.</i>
Salisbury African townships, African population 15+ years (1969 Census est.) . . . . .	123 543
Age corrected per capita rate . . . . .	<u>116.1 gal. per annum</u>

*European Beer*

Estimated sales of European beer to African customers, 1969 . . . . .	3 483 496 <i>Imp. gal.</i>
Rhodesia, African population 15+ years (1969 Census est.) . . . . .	2 433 300
Age corrected per capita rate, Africans . . . . .	<u>1.4 gal. per annum</u>

We will have occasion later in the report to doubt the estimate made by Rhodesian Breweries of sales of European beer to Africans. In the meantime, comparable figures for consumption of European beer by Europeans, Asians

WORLD HEALTH ORGANIZATION Recommendations	Additional Areas covered in University of Rhodesia Survey	Deployment of Survey Categories
Determination by sex and age of frequency of alcohol use	Frequency of alcohol use by education, religion, etc. Characteristics of drinkers as against abstainers	2. Frequency of Alcohol Use
Locale of drinking Drinking of sexes together or separately		3. Drinking Habits
Substitution of alcohol for meals	Frequency of drunkenness, drinking bouts	7. Heavy Drinking
"Trouble" caused by excessive drinking	Characteristics of heavy drinkers by sex	6. Women Drinkers
Alcohol and income	Drinking preferences by beverage, age, education and reasons	5. Expenditure on Drinking
	Quantities drunk by beverage, income, occupation and ethnic origin	4. Drinking preferences
		1. Quantities drunk

CHART 1. Objectives: Combination of W.H.O. Recommendations and Additional Areas into the Categories of the Survey.



and Coloureds (taken together in the preliminary 1969 Census) may be of interest:

Rhodesia, est. sales of European beer to Europeans, Asians and Coloureds, 1968-69 . . . . .	4 610 132 <i>Imp. gal.</i>
Rhodesia, European, Asian and Coloured population 15 years + (1969 Census est.) . . . . .	174 130
Age corrected per capita rate, Europeans, Asians and Coloureds . . . . .	<hr/> 26.5 <i>gal. per annum</i> <hr/>

### *Spirits*

These figures are based on European, Coloured and Asian consumption only. African intake of spirits, as will be shown, is very small: the bulk of spirits is consumed by Europeans.

Spirits available for sale 1968-69 (Customs and Excise) . . . . .	357 813 <i>Imp. gal.</i>
Rhodesia, European, Asian and Coloured population 15 years + (1969 Census est.) . . . . .	174 130
Age corrected per capita rate, Europeans, Asians and Coloureds . . . . .	<hr/> 2.1 <i>gal. per annum</i> <hr/>

In order to arrive at the most accurate figure, the *Effective Per Capita Consumption*, it is now necessary to introduce the Survey.

## SURVEY OF DRINKING PATTERNS

### Method

*Object.* This first stage of the study of alcoholic drinking patterns among urban Africans in Rhodesia was planned to reach the more accessible characteristics of the drinkers, leaving deeper-level motivations and attitudes for later investigation. For this purpose we adopted suggestions by the Expert Committee on Mental Health of the W.H.O.,<sup>11</sup> but added to them other closely-related items which are at least of local importance. The combination of items was then deployed in a sequence of our own, as shown in Chart 1, which is as follows:

1. Quantities Drunk
2. Frequency of Alcohol Use
3. Drinking Habits
4. Drinking Preferences

<sup>11</sup> *Ibid.*, pp. 22-23.

5. Expenditure on Drinking
6. Women Drinkers
7. Heavy Drinking
8. Conclusions

and this will be the sequence of main sections in the remainder of the report.

*The Sample.* Highfield African township was selected for the survey for a number of reasons. It is one of the oldest African townships in Salisbury, has a wide variety of housing types, old and new, and hence is likely to present a wide socio-economic range. It had been chosen for similar reasons by the Urban Studies Research Unit of the Department of Sociology's Institute for Social Research, so that a quantity of supplementary material upon it would be available.

The sample taken here is a systematic random sample of households, every fortieth household having been totally enumerated with respect to persons of both sexes 17 years of age and over. To have randomly sampled specific individuals throughout the Highfield population would have been beyond our time and resources, and the limitations which result from not having done so must be accepted. These are commonly ignored in random sample surveys, and are as follows:

1. that we have introduced into the sample uncontrolled clustering of individuals within the households, and
2. that it is difficult to calculate the standard errors of cell figures for individuals within the survey tables.

In trying to overcome this problem the use of sample error as a conservative estimate of standard error seems justified. The senior author has accordingly calculated tables of sample errors (of percentages in this case) in relation to sample size (Tables 1 and 2, Appendix A of this report). These have been used throughout the survey with a correction of  $n = \frac{N}{2}$  for sample size,  $N$  being the number of households. This correction, suggested by Mr. A. A. le Roux, arises from the fact that in respect of African males over 15 years, in whom we are most interested, each household has an average of 2.0. In the few tables where African adult females are concerned, a correction of  $\frac{N}{1.3}$  has been applied in their case. It is contended that such a correction, in effect equating households with individual persons and eliminating cluster variance, gives a very conservative picture of significant differences between cells in the survey tables.

Finally it should be mentioned in support of the probable representativeness of the sample that a profile of the sample population by age corresponds

closely with a profile of the total population by age taken from the Central Statistical Office census enumeration of 1969.

*Non-response rates.* Of 182 households selected, two were non-existent and one failed to respond, giving an effective  $N = 179$  households. Within the responding households, 4 males (1.1%) and 3 females (1.3%) failed to respond. Fieldworkers were repeatedly sent back to households with absent members until all the latter were interviewed.

*The Instrument.* A pre-coded schedule was drawn up for the question areas indicated above. The actual questions were based on a content analysis of 50 depth interviews previously undertaken in Highfield township. The schedule was administered by interview, using 4 African interviewers specially trained for the purpose. The fieldwork was closely supervised by the research fellow conducting the survey (the junior author), all schedules being checked immediately after completion.

The survey took place from September 1969 to January 1970.

After the survey, the data were transferred to punch cards and processed mechanically.

## Findings

The material will be deployed in the sequence mentioned above.

### 1. Quantities Drunk

The first measure, to compare with the Crude and Age-corrected per capita rates previously calculated, is the Effective Per Capita Consumption.

#### Effective Per Capita Consumption

This is an estimate taking into account the actual number of users and the amount of liquor stated as consumed by them, and is computed as follows:

##### *African Beer*

Of the male sample, 188 or 51.8 per cent. stated that they were users of African beer; of the female sample, 29 or 12.4 per cent. stated that they were users of African beer.

## DRINKING PATTERNS IN RHODESIA

i) Males	African beer stated as consumed per annum . . . . .	40 209 gal.
	Users, male sample . . . . .	188
	African beer, Effective Male per Capita Consumption . . . . .	213·9 gal.
ii) Females	African beer stated as consumed per annum . . . . .	3 692 gal.
	Users, female sample . . . . .	29
	African beer, Effective Female per Capita Consumption . . . . .	127·3 gal.
iii) Both Sexes	African beer stated as consumed per annum . . . . .	45 600 gal.
	Adult sample, users . . . . .	217
	African beer, Effective African per Capita Consumption, Highfield . . . . .	210·1 gal.

*European Beer*

Of the male sample, 124 or 34·3 per cent. stated that they were users of European beer; of the female sample, 32 or 13·7 per cent. stated that they were users of European beer.

Respondents gave their consumption in "reputed" pints, i.e. in standard bottles of 13 and not 20 fluid ounces per pint. In converting to Imperial gallons and from weekly to annual consumption, this has been taken into account.

i) Males	European beer stated as consumed per annum . . . . .	5 382·5 gal.
	Users, male sample . . . . .	124
	European beer, Effective Male Per Capita Consumption . . . . .	43·4 gal.
ii) Females	European beer stated as consumed per annum . . . . .	1 481·5 gal.
	Users, female sample . . . . .	32

	European beer, Effective Female per Capita Consumption . . . . .	46·3 gal.
iii) Both Sexes	European beer stated as consumed per annum . . . . .	6 864·0 gal.
	Adult sample, users . . . . .	156
	European beer, Effective African per Capita Consumption, Highfield . . . . .	44·0 gal.

### *Spirits*

Of the male sample, 22 or 6·06 per cent. stated that they were users of spirits; of the female sample, 3 or 1·29 per cent. stated that they were users of spirits.

i) Males	Spirits stated as consumed per annum . . . . .	208·0 litres
	Users, male sample . . . . .	22
	Spirits, Effective Male Per Capita Con- sumption . . . . .	9·4 litres
ii) Females	Spirits stated as consumed per annum . . . . .	20·8 litres
	Users, female sample . . . . .	3
	Spirits, Effective Female Per Capita Consumption . . . . .	6·9 litres
iii) Both Sexes	Spirits stated as consumed per annum . . . . .	228·8 litres
	Adult sample, users . . . . .	25
	Spirits, Effective African Per Capita Consumption, Highfield . . . . .	9·2 litres

We are now in a position to summarize in a table the consumption rates which are reflected in the various indices recommended by the W.H.O.:



**TABLE IV: Per Capita per Annum Consumption of Alcoholic Beverages by Africans, 1968-69, Rhodesia, Salisbury and Highfield Township.**

<i>Index</i>	<i>Type of Beverage</i>		<i>Spirits</i>
	<i>African Beer</i>	<i>European Beer</i>	
Crude Per Capita Rate	84.2 <i>Imp. gal.*</i> (382.7 litres)	0.7 <i>Imp. gal.</i> (3.2 litres)	— (Europeans, Asians and Coloureds: 6.3 litres)
Age-corrected Per Capita Rate	116.1 <i>Imp. gal.†</i> (527.7 litres)	1.5 <i>Imp. gal.</i> (6.8 litres)	— (Europeans, Asians and Coloureds: 9.5 litres)
Effective Per Capita Rate, Highfield	210.1 <i>Imp. gal.</i> (955.0 litres)	44.0 <i>Imp. gal.</i> (200.0 litres)	9.2 litres

\* 5 urban centres only.

† Salisbury African townships only.

### Findings, Quantities Drunk

1. The intake of African beer by Africans in Rhodesia must be regarded to some extent as a food supplement, although its nutrition value is not as high as might be supposed. The high figures stated for African beer intake should, however, be seen in this context.
2. Our calculations show how different as an absolute measure of alcohol consumption are all official figures, with the expectation that the effective per capita consumption derived from a sample survey will be the most efficient measure of actual consumption.
3. Because of the different bases on which official figures and the sample figures are calculated, no deduction can be made that the drinking of alcoholic liquor by Africans is any heavier in Highfield location, Salisbury, than in the remainder of Rhodesia.
4. The crude per capita index does, however, allow of some very broad comparisons within Rhodesia, and between Rhodesia and some other countries:

- 4.1. Crude per capita consumption of African beer by Africans appears from national figures to be higher in the Bulawayo than in the Salisbury townships.
- 4.2. Crude per capita consumption of African beer in Rhodesian African townships is comparable with and perhaps higher than in South African townships.
- 4.3. Crude per capita consumption of European beer by Rhodesian Europeans seems to occupy a middle position compared with other selected countries of the world for which figures are available.
- 4.4. Crude per capita consumption of spirits by Rhodesian Europeans suggests that they are heavy spirit drinkers by world standards, but not heavier than South African Europeans.
5. The age-corrected per capita consumption of African beer by Rhodesian Africans raises the annual consumption per head from the crude rate of 84·2 Imperial gallons to the corrected rate of 116·1 gallons. It has little other significance except for world comparative statistical purposes.
6. The effective per capita consumption rate of alcoholic beverages by Africans in Highfield township, corrected for users only, shows the following:
  - 6.1. Over half the males, but only one in eight of the females were users of African beer.
  - 6.2. The stated effective annual per capita consumption of African beer by men was 213·9 Imperial gallons, representing an average daily intake of pure alcohol of 52·7 grams.
  - 6.3. The stated effective annual per capita consumption of African beer by women was 127·3 gallons, representing an average daily intake of pure alcohol of 31·4 grams.
  - 6.4. Rather more than one in three of the men but rather less than one in eight of the women used European beer.
  - 6.5. But the women who drank were as heavy users of European beer as the men. Their stated effective annual per capita consumption was 46·3 gallons compared with 43·4 gallons for the men (sample

error  $\pm$  8.2 gallons). This represents an average daily intake of pure alcohol of approximately 10.9 grams for both sexes.

- 6.6. Only 6 per cent. of the drinking male sample and rather more than 1 per cent. of the female users stated that they drank spirits. The amount drunk per capita seemed comparable with European, Asiatic and Coloured users taken together.
7. The impressionistic total picture from fieldwork is one in which European beer is making gradual inroads on African beer as an effective, prestige drink, but that spirits have not yet been accepted except by the few, probably urbanized Africans who either drink them like Europeans or use spirits to "lace" their beer.

## 2. Frequency of Alcohol Use

*Abstainers.* Some 37 per cent. of the men and 80 per cent. of the women in the sample claimed that they were total abstainers. For the sample as a whole 46 per cent. said that they did not drink. This may be contrasted with Jellinek's estimate that in Anglo-Saxon countries about "one-third of the population rejects the use of alcohol completely".<sup>12</sup> In South Africa an urban sample yielded 35 per cent. of the population who did not drink.<sup>13</sup>

In the present Highfield sample special care was given to questions about the frequency of drinking. A number of respondents were particularly vehement about drinking among women being "undignified" and "not respectable". Particularly with regard to European beer, however, there may well have been a number of women who drank but denied it. We believe, nevertheless, that the amount and frequency of their drinking was low. So small a percentage of the women stated that they drank at all, that the following discussion will deal only with males, and a separate section will be devoted to women later.

*Use of Alcoholic Liquor by Age.* It appears from the following table that the percentage of male drinkers in the sample rises with age but not over the age of 35:

<sup>12</sup> JELLINEK, E. M. 1962. *Cultural Differences in the Meaning of Alcoholism, in Society, Culture and Drinking Patterns*, Pittman, C. and Snyder, C. R. eds. New York, John Wiley, p. 387.

<sup>13</sup> MILES, J. D. 1965 *The Drinking Pattern of the Bantu in South Africa*. Republic of South Africa. National Bureau of Educational and Social Research, Department of Education, Arts and Science.

**TABLE V: Percentages of African Male Drinkers compared with Male Abstainers by Age, Highfield Township Sample.**

Age Group	Drinkers		Abstainers		n
		%		%	
15-24	32	51.6	30	48.5	62
25-34	102	65.0	55	35.0	157
35+	92	65.7	48	34.3	140
Non-response					4
	226		133		363

n = 179 households.

A chi-squared significance test applied to the data of Table V gives  $\text{Chi}^2 = 2.82$ ,  $p > 0.20$ , which is not significant. But if the 25-34 and 35+ age categories are combined and a z test is applied, this is significant at the 1 per cent. level:

			n	
15-24	16	15	31	$z = 0.18$ n/s
25+	97	51	148	$z = 3.78$ $p < 0.01$
	113	66	179	

(N.B. The cells have been halved for n = 179.)

Thus there is a highly significant increase in the proportion of male drinkers over the age of 25 years but not over 35 years in the Highfield sample. Miles (1965) observed much the same phenomenon in his South African sample, but noted that the proportion of drinkers *dropped* as middle age was passed. In the present sample that proportion seems virutally to remain constant from middle age onwards.

*Use of Liquor by Educational Level.* Table VI shows that no significant difference can be demonstrated in the proportion of drinkers to abstainers among African males with no schooling or primary education as compared with those with secondary education ( $\text{X}^2 = 2.37$  with 2 d.f.,  $p > 0.30$ ):

**TABLE VI: Percentages of African Male Drinkers and Abstainers by Educational Level, Highfield Sample.**

<i>Educational Level</i>	<i>Drinkers</i>		<i>Abstainers</i>		<i>Non-response</i>	<i>Totals</i>
		%		%		
No schooling	25	75·7	8	24·3		33
Primary	153	61·2	97	38·8		250
Secondary	48	63·1	28	36·9		76
Non-response					4	4
	226		133		4	363

n = 179 households.

*Use of Liquor by Religious Affiliation.* The actual figures for various affiliations in order of increasing abstemiousness are as follows:

**TABLE VII: Percentages of African Male Drinkers and Abstainers by Religious Affiliation, Highfield Sample.**

<i>Religious Affiliation</i>	<i>Drinkers</i>		<i>Abstainers</i>	
		%		%
None	47	75·8	15	24·2
Roman Catholic	59	69·6	27	31·4
Anglican	29	64·4	16	35·5
Methodist	36	64·3	20	35·7
Other non-conformist	42	52·5	38	47·5
African sects	13	43·3	17	56·7
	226		133	

A chi-squared test applied to these figures shows no significance ( $X^2 = 6·65$  with 5 d.f.,  $p > 0·10$ ). However, if the denominations are combined in pairs to strengthen the statistical base (no affiliation with Roman Catholic, Anglican with Methodist, etc.<sup>14</sup>), then  $X^2 = 5·34$  with 2 d.f. which approaches significance at the 5 per cent. level ( $X^2 = 5·99$ ). It would perhaps be agreed that as far as Africans are concerned the Roman Catholic persuasion and non-affiliation are both compatible with the use of liquor. Many African sectarian churches at the opposite extreme are strongly opposed to it. An interesting factor is the proportion of African Methodists in this sample who use alcohol despite the well-known opposition of their church.

<sup>14</sup> The basis of combination here is that neither unaffiliated persons nor Roman Catholics have ostensible religious restrictions placed on their drinking, whereas the other religious groups in pairs do have greater or lesser religious restraints in this regard.



*Frequency of African Male Drinking.* An important pattern in Highfield, apart from the substantial proportion of the sample who claim that they seldom if ever drink, is the practice of weekend drinking which is discernible throughout the present study. Many of our respondents have a long journey to work and back again, so that they rise early and return late. Apart from the financial problem of affording drink, little time is available during the week for the employed to drink regularly at home. The weekend is accordingly for them the most practicable time to consume liquor:

**TABLE VIII: Frequency of African Male Drinking by Type of Beverage, Highfield Sample.**

<i>Frequency of Drinking</i>	<i>African Beer</i>		<i>European Beer</i>		<i>Spirits</i>	
		%		%		%
Never to less than once a week . . . . .	178	49·0	261	71·8	348	95·8
Weekends only . . . . .	99	27·3	62	17·1	7	1·9
1-3 times a week . . . . .	34	9·3	17	4·7	2	0·6
4-6 times a week . . . . .	16	4·2	8	2·2	2	0·6
Every day . . . . .	32	8·8	11	3·0	0	
Non-response . . . . .	4	1·1	4	1·1	4	1·1
	363	99·7	363	99·9	363	100·0

In general terms, half of the male sample drink, and half of the drinkers drink only at weekends.<sup>15</sup> The lack of a taste for spirits among the sample is clearly apparent here, as is the continuing (if diminishing) preference for African over European beer. A core of regular drinking among a minority may also be deduced.

*Findings, Use of Liquor by Other Factors.* We have already inferred that age over 25 years and education above no schooling make little difference to the basic pattern of drinking and abstinence. The same was found to be true when use of liquor was cross-tabulated with marital status and income: these factors did not significantly affect drinking patterns. The main demographic item influencing use of liquor in this sample seems to have been religious affiliation, and then not always precisely in the manner expected.

<sup>15</sup> The small figures in this and a number of the following tables are included only for completeness. For all figures under at least 16 per cent. here the sample error is so large (Appendix A) as to approach half the size of the percentage itself and hence to be statistically meaningless.

### 3. Drinking Habits

*Where African Males Drink.* When respondents were asked for their first and second choices of drinking locality, all but four could give a first choice but 28·4 per cent. were unable to name a second choice:

**TABLE IX: Preferred Locality of African Male Drinking by First and Second Choice, Highfield Sample**

Locality	First Choice		Second Choice	
		%		%
Beerhall . . . . .	182	50·1	14	3·9
At home . . . . .	23	6·3	68	18·7
Cocktail lounge . . . . .	10	2·8	6	1·7
Other places (shebeen, bottle store, nightclub, etc.) . . . . .	5	1·4	29	8·0
Seldom or never drink — no preference . . . . .	139	38·3	139	38·3
Could not give second choice . . . . .	—	—	103	28·4
Non-response . . . . .	4	1·1	4	1·1
	363	100·0	363	100·1

These choices amount to a substantial vindication of the beerhalls in the eyes of African male drinkers in Highfield, and a non-adoption of the white Rhodesian pattern of home-drinking except when beerhall facilities are denied. In the light of our belief that European beer is gradually becoming more popular, it is interesting that the cocktail lounge, which might be assumed to go with the status image of European beer, is not yet accepted.<sup>16</sup> The ascendancy which the beerhall has now gained over other places as a first choice for drinking is striking. A further in-depth study might show that this is partly due to the unattractiveness of drinking at home.

*With whom African Males drink.* Highfield residents not only prefer to drink in beerhalls, but generally like to do so with friends and acquaintances met there:

<sup>16</sup> The percentage preference here is virtually within the sample error of  $\pm 2·5$  per cent.

**TABLE X: Choice of Companionship for Drinking, Highfield African Male Sample.**

With friends in public places . . . . .	150	41·3
With friends at home, or those staying with one . . . . .	27	7·4
Alone . . . . .	26	7·2
With others, related and unrelated . . . . .	16	4·4
With anyone met . . . . .	10	2·8
Do not know or do not drink . . . . .	129	35·5
Non-response . . . . .	5	1·4
	<hr/> 363	<hr/> 100·0

Table X virtually confirms the first choice of beerhalls, with drinking at home a much lower preference. For those drinking alone the sample error of  $\pm 3\cdot8$  per cent. in a percentage of 7·2 per cent. is too great for us to accept the percentage as significant, but it may represent a tendency in impoverished or hard-core drinkers. The table only shows significantly that people either drink with friends in public places or not at all.

*Preference for Drinking Locality by Income.* A cross-tabulation by income was not statistically significant, but it was noted and expected that none of those without income at all drank at home. These people go to the beerhall, where in a relaxed community atmosphere they are "treated" to beer or given small amounts to spend on it by relatives or friends:

**TABLE XI: Choice of Locality in which to drink by Income, Highfield African Male Sample.**

<i>Weekly income group</i>	<i>Beerhalls</i>	<i>At own or friends' houses</i>	<i>Cocktail bar or nightclub</i>
None . . . . .	15	0	0
R. \$0·01-\$7·99 . . . . .	75	8	3
R. \$8·00-\$15·99 . . . . .	77	14	4
R. \$16·00+ . . . . .	13	3	5

This sample contained few of the higher-educated or higher-earning group, so that a tendency for these people to prefer cocktail lounges and to a lesser extent nightclubs to beerhalls is difficult to demonstrate.<sup>17</sup> The cocktail

<sup>17</sup> Even when combined into a  $2 \times 2$  table with halved cells the figures are not significant ( $X^2 = 2\cdot170$ , 2 d.f.,  $p > 0\cdot30$ ).

lounges are indoors, more comfortable, include a status-elevating cover charge, and there are usually certain requirements regarding dress.

All these factors might be expected to suit the African elite. A number of elite members were seen in the first 50 interviews which constituted a pilot study to this survey. They tended to prefer the drinking bars and multi-racial hotels in the city of Salisbury, though in several instances shebeens were selected because clients in them are given special treatment and do not have to "stand" others to drinks. Thus despite the fact that prices are higher in shebeens, less money is spent in them; and this is consonant with a new-found individualism among the elite.

#### 4. Drinking Preferences

*Preference for Beerhalls.* Respondents of both sexes were asked their first, second and third choices of reasons for liking beerhalls:

**TABLE XII: First, Second and Third Choices of Reasons for liking Beerhalls, Both Sexes, Highfield Sample.**

<i>Reasons for liking Beerhalls</i>	<i>First Choice</i>		<i>Second Choice</i>		<i>Third Choice</i>	
	<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>
Beer drinking . . . . .	124	12	25	2	12	5
Companionship, discussion, home news, etc. . . . .	53	9	118	16	86	7
Entertainment, music, dancing, women . . . . .	46	7	44	6	29	1
Other . . . . .	2	2	10	—	16	3
Do not go . . . . .	134	200	134	200	134	200
Non-response . . . . .	4	3	32	9	86	17
	<u>363</u>	<u>233</u>	<u>363</u>	<u>233</u>	<u>363</u>	<u>233</u>

Table XII shows that beerhalls are liked for beer, companionship and to a lesser extent entertainment. Nevertheless, in spite of the popularity of beerhalls, a substantial number of both sexes, especially women, do not use them. Factors such as warmth and comfort are mentioned sufficiently often, however, to suggest that the beerhall is at least sometimes a substitute for uncomfortable accommodation. To find women, presumably for sexual purposes, was mentioned in 18 cases as a third choice. In general, respondents had progressively greater difficulty in making second and third choices: they were quite definite about their over-all preference.

*Preference for Different Kinds of Beverage.* The combined totals of those men preferring European beer only and those preferring it as well as African beer would appear to be as high as those preferring to drink African beer alone:

**TABLE XIII: Preference for Different Kinds of Beverage by Average Stated Weekly per Capita Consumption, Highfield African Male Sample.**

<i>Preference</i>	<i>Respondents</i>		<i>Average Stated Weekly per Capita Consumption</i>
		<i>%</i>	<i>units*</i>
African beer only . . . . .	103	28·4	18·5
European beer only . . . . .	26	7·1	14·7
African and European beer . . . . .	77	21·2	21·1
African and/or European beer with spirits . . . . .	20	5·7	40·0
Stated Abstainers . . . . .	133	36·6	—
Non-response . . . . .	4	1·1	—
	<u>363</u>	<u>100·1</u>	

\* 1 unit = 1 quart African beer = 1 reputed pint European beer = 1 tot of spirits,

Taking the figures at face value, it seems that those wishing for European beer alone have the lowest intake of alcohol, followed by those desiring African beer alone. Then come those who want both, followed by the heavy drinkers who wish to consume any combination of drinks.

However, it is questionable whether all the figures can be taken at face value. The weekly per capita consumption of African beer only, not including that consumed by those who also desire European beer, is 18·5 units. Multiplied by 52, this gives 962·0 units per annum, which may be regarded as roughly comparable with 210·1 gallons or 840·4 units of African beer per capita per annum as arrived at in the sales figures of Table IV. The stated weekly figure is nevertheless too high.

The discrepancy regarding consumption of European beer is much more serious.

For European beer only, the stated weekly *per capita* consumption is given as 14·7 units. Multiplied by 52 this would yield 764·4 units per annum in comparison with 44·0 gallons or 352·0 units (Table IV) which is the figure arrived at from the known distribution of European beer. The conclusion to be drawn is surely that while sales to them may be under-

estimated, our African male respondents are heavily exaggerating their actual consumption of European beer. The main reason, judging by a number of comments during fieldwork, is *status*: "I don't really like it but feel I ought to drink it"; "I wish I could afford a lot more (of European beer) than I can". This beer, although socially desired, is in fact too expensive for a predominantly unskilled labour population.

*Beverage Preference by Age.* While these figures are unreliable as absolutes, they may still be useful for comparative purposes:

**TABLE XIV: Beverage Preferences by Age and Stated Weekly per Capita Consumption, Highfield African Male Sample.**

Age Group (years)	African Beer	Percent- age of cohort %	Stated Weekly p.c. Con- sumption (units)		Stated Weekly p.c. Con- sumption (units)		Abstainers percent- age of cohort %	
			European Beer	European Beer	European Beer	European Beer		
15-34	82	38.3	13.8	52	24.3	9.2	80	37.4
35 +	84	56.4	19.5	20	13.4	7.5	45	30.1

The figures in Table XIV are significant at the 5 per cent. level of confidence ( $X^2 = 6.648$ , 2 d.f.). As might be expected, the older group drink proportionately more African beer in relation to European beer or abstinence than the younger group. The younger group show what we believe to be a gradually increasing preference for European beer, but as indicated elsewhere in this report, they probably cannot afford it. There is not a marked difference in the proportion of abstainers by age, which suggests that the habit of drinking may be fairly deep-seated in this urban African male sample.

A  $\chi^2$  test applied in Table XV gives  $X^2 = 12.68$  with 4 d.f., and is significant at the 2 per cent. level. With regard to African beer, there is generally a fall in weekly *per capita* consumption together with a drop in the proportion of each group drinking this beverage as education increases. This is true of all except the highest education group, where consumption tends to rise.

With European beer on the contrary there is a rise in consumption above primary school level accompanied by an increase in the proportion of each cohort drinking this beer as general educational level rises.

*Beverage Preference by Education.* There appear to be substantial differences in this area:

**TABLE XV: Beverage Preference by Education Level by Average Stated Weekly per Capita Consumption, Highfield African Male Sample.**

Educa- tional Level	Percent- age of African Beer	Percent- age of cohort	Average Stated Weekly p.c. Con- sumption	Euro- pean Beer	Percent- age of cohort	Average Stated Weekly p.c. Con- sumption	Abstainers percent- age of cohort
			(units)			(units)	
No schooling	22	66.7	19.2	3	9.1	10.3	8 24.3
Primary to Std. VI	119	47.6	18.8	43	17.2	8.4	97 38.8
Secondary to J.C.	21	27.6	15.4	26	34.2	10.6	28 36.9
Further			16.7*			19.3	

\* Estimate of the standard error of the mean here is  $\pm 0.12$  units, based on the formula  
estimated S.E. ( $\bar{X}$ ) =  $\frac{\text{Range}}{6n}$

Finally, abstinence is most evident at primary school level, while heaviest drinking seems to occur at the highest level of education.

*Stated Beverage Consumption by Income.* The last point is borne out to some extent by the following table:

**TABLE XVI: Stated Weekly per Capita Consumption of Beverages by Income of Users, Highfield African Male Sample.**

Weekly Income	African Beer Average Stated Weekly p.c. Con- sumption	Estimated s.e. ( $\bar{x}$ ) (units)	European Beer Average Stated Weekly p.c. Con- sumption	Estimated s.e. ( $\bar{x}$ )* (units)
	(units)		(units)	
None	15.7	$\pm 0.30$	7.1	$\pm 0.12$
R. \$0.01-7.99	15.6	0.05	6.6	0.04
R. \$8.00-15.99	17.6	0.05	10.9	0.05
R. \$16.00 +	19.7	0.14	17.9	0.21

\* Estimated s.e. ( $\bar{x}$ ) =  $\frac{\text{Range}}{6n}$



The total profile is one of a change from African beer to European beer and towards heavier drinking as educational level goes up. There may be other hidden independent variables such as higher income present here.

With rise in income, beverage consumption does appear to increase, and in favour of European rather than African beer, although the consumption of both increases. The relatively high stated consumption of both low and nil income groups is, however, particularly noteworthy. This suggests, if true, the continuance of the high social as opposed to economic significance which Central and Southern Africans are held to ascribe to beer-drinking.

*Reasons for Drinking Different Beverages.* Status has already been suggested as a major factor influencing the consumption of European beer. The following table gives a breakdown of all the reasons advanced by African men and women in the sample for drinking different beverages:

**TABLE XVII: Reasons for Drinking Different Beverages, by Sex, Highfield Sample.**

Reasons	African Beer				European Beer				Spirits			
	Men	%	Women	%	Men	%	Women	%	Men	%	Women	%
Price . . . . .	104	28·6	8	3·4	—	—	—	—	—	—	—	—
Food . . . . .	34	9·3	8	3·4	—	—	—	—	—	—	—	—
Custom . . . . .	31	8·5	6	2·6	—	—	—	—	—	—	—	—
Status . . . . .	4	1·1	—	—	53	14·6	8	3·4	3	0·8	—	—
Taste . . . . .	12	3·3	3	1·3	34	9·3	12	5·2	2	0·6	—	—
Strength . . . . .	9	2·5	1	0·4	24	6·6	6	2·6	12	3·3	1	0·4
Other reasons . . . . .	—	—	—	—	3	0·8	3	1·3	—	—	—	—
Do not drink the beverage	163	44·9	204	87·6	236	65·0	201	86·3	338	93·1	229	98·3
Non-response . . . . .	6	1·7	3	1·3	13	3·6	3	1·3	8	2·2	3	1·3
	<u>363</u>	<u>99·9</u>	<u>233</u>	<u>100·0</u>	<u>363</u>	<u>99·9</u>	<u>233</u>	<u>100·1</u>	<u>363</u>	<u>100·0</u>	<u>233</u>	<u>100·0</u>

(Sample errors in this table are of the order of  $\pm 3$  to 7 per cent., so that the smaller percentages are not meaningful taken by themselves.)

The table is so divided that the reasons for preferring African beer and European beer stand out separately: price, food and custom in favour of African beer and status, taste and strength for European beer. Women follow the male preferences in African beer but do not do so with European beer. Status in drinking seems an unimportant factor to the African women of this sample; indeed most of them claim to be non-drinkers. The figures for spirit drinking are so small as to be within sampling error, but fieldwork impressions suggest that this beverage might be the choice of African males who are hard drinkers and want rapid intoxicating effects.

*Findings, Drinking Preferences.* Other possible independent variables, such as occupation and origin, did not yield significant results when cross-tabulated against beverage preference and stated weekly *per capita* consump-

tion. Among seven Census occupational groups only "Professional and Technical" seemed to have a smaller stated weekly *per capita* consumption of African beer than the rest. However, the figures were small ( $n = 10$ ) and the difference may have been due to chance or sampling error. In terms of origins, only the Korekore had a lower stated consumption, but against the cells were small and within the range of sample error. The Korekore in the township are, however, stereotyped by informants as particularly poor and ill-educated.

Age, education and income seem to be the main variables affecting drinking preferences. The findings of this section can be summarized as follows:

1. Beerhalls fulfil among African drinkers in Highfield location a profound social need in terms of providing a milieu for companionship, conversation, entertainment and perhaps, as the fieldwork suggests, tranquilization.
2. European beer has made substantial inroads in terms of preference and status-value among African male drinkers in Highfield, but its consumption falls short of its desirability, perhaps largely because of a retail price beyond the means of the African worker.
3. The profile of beverage preference by African males in Highfield is one of a change from African beer to European beer as educational level rises and as age falls to 25 years.
4. Stated alcohol intake by Highfield African males on the whole increases with age and education, but falls away as age advances over 55 years. There is some indication that income is the hidden independent variable here.

## 5. Expenditure on Drinking

It was hoped that in this section we would have a valuable check on the quantities of beverages consumed:

**TABLE XVIII: Stated Weekly Average per Capita Expenditure by Users on Self and Others, by Type of Beverage, Highfield African Male Sample.**

<i>Average Spending</i>	<i>African Beer</i>	<i>European Beer</i>
On self . . .	79 cents	R. \$1.66 weekly
On others. . .	31 cents	R. \$1.05 weekly

The stated per capita expenditure per week by users of African beer in this sample is equivalent to approximately 8 units (quarts) per week at 10c per quart. Allowing that a user is bought African beer as much as he buys it for others, his consumption is then increased to 11 units a week. This produces an annual per capita African beer consumption of 527 units, which is considerably lower than the 840 units suggested by the effective annual per capita consumption in Table IV (210·1 gallons) and even lower than the stated annual per capita consumption of 962 units inferred from Table XIII. The conclusion, perhaps not unexpected, is that the African male in this sample may well underestimate his expenditure on African beer just as he overestimates his consumption of it.

Expenditure on European beer at 18 cents per pint bottle amounts to 9 units per week for the user and a further 5 units if he is bought beer as much as he buys for others. This weekly consumption of 14 units is close to the stated consumption of 14·7 units for European beer only (Table XIII), but again greatly in excess of the effective annual per capita consumption (Table IV), which would be the equivalent of 6·8 units per week. It may be that more of the European beer output is reaching African consumers than the Breweries realise.

The buying of beer for others is quite well institutionalized in Highfield. In addition to casual "treating" there are drinking "clubs" in which friends contribute equal amounts to a pool. Successive mugs of beer are passed round the circle until the fund is spent. Again, in the pilot interviews done prior to this survey, elite informants stated that they spent a considerable amount on buying drinks for others. An African politician said that this was how he had built up his following. Furthermore, a number of non-drinking respondents in the survey were found to be buying beer for others. One man felt that he had a mission in life to do so, and said that he regularly spent R. \$2·00 or more a week for this purpose.

Although most people spend in the lower categories, the modal expenditure on liquor is surprisingly high for a population known to be poor. It is approximately R. \$1·00 per week whether the main drink is European or African beer. Larger amounts can naturally be spent on European than on African beer. The other new item of information is the small sums spent on spirits, even by those who drink them.

Unfortunately, the results of the 1969 Budget Survey of Salisbury done by the Department of Census and Statistics were not available at the time of writing this report. The following outlays only assume their full significance against other items of expenditure in an African household budget.

*Weekly Range of Expenditure by Sex.* Table XIX gives categories of stated expenditure on the different beverages:

**TABLE XIX: Categories of Stated Weekly Expenditure on Beverages by Sex, Highfield Sample.**

<i>Expenditure</i>	<i>African Beer</i>		<i>European Beer</i>		<i>Spirits</i>	
	<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>
	%	%	%	%	%	%
None . . . . .	46·0	88·0	66·4	87·1	94·5	99·1
R. \$0·05-0·99 . . .	38·0	9·2	11·8	5·2	4·7	0·4
R. \$1·00-1·99 . . .	12·4	2·6	10·2	4·7	0·6	0·4
R. \$2·00 + . . . . .	2·0	—	10·0	2·5	0·3	—
Non-response . . .	1·7	0·4	1·7	0·4	1·7	0·4

*Substitution of Drinks for Meals.* This section was included for its budgetary and dietary implications, and also to provide some pointer to individual habitual excessive drinking. In the last-named matter the situation is obscure, because Africans in this sample do not have a steady conception of 3 meals a day, neither is the notion of meal substitution meaningful to many of them. Table XX should be read with these reservations in mind:

**TABLE XX: Substitution of Drinks for Meals, by Sex, Highfield Sample.**

<i>Meals Substituted</i>	<i>Men</i>		<i>Women</i>	
		%		%
No substitution . . .	190	52·3	163	70·0
One meal—				
by soft drinks . . .	148	40·8	42	18·0
by African beer . . .	15	4·2	24	10·3
by European beer . .	1	0·3	1	0·4
Two meals—				
by soft drinks . . .	5	1·4	—	—
Non-response . . . . .	4	1·1	3	1·3
	<hr/>	<hr/>	<hr/>	<hr/>
	363	100·1	233	100·0
	<hr/>	<hr/>	<hr/>	<hr/>

The most salient feature here is that even if African beer has nutritional value, it is not much used for meal substitution by this African sample. Although 9.3 per cent. of the men and 3.4 per cent. of the women mentioned its food value (Table XVII), it was only 4.2 per cent. of the men and 10.3 per cent. of the women who put it to practical effect in substitution for a meal. The observable fact that Salisbury African workers tend to take soft drinks in lieu of a luncheon meal is well demonstrated here.

The meal most frequently "substituted for" by males was the midday meal (57 cases) followed by breakfast (31 cases). The majority of men (226) habitually had two meals a day, so that substitution by an alcoholic beverage of one "meal" out of a hypothetical three meals would have no meaning in their case.

## 6. Women Drinkers

We have already shown that a high proportion of women abstain, at least visibly, from drinking (Tables XII, XVII). In fact of the female sample 80.3 per cent. (187 cases) were or claimed to be total abstainers.

The consequence is that with an N of 233 women (179 households) little can safely be deduced about the 19.7 per cent. of cases who drink except when cells are combined and differences thereby blurred. We accordingly give a somewhat impressionistic account of the female drinking sub-sample.

Whether Highfield African women drink or abstain from drinking is not affected significantly by age or education. However, in respect of religion, if the Roman Catholic women and those with no religious affiliation are combined, they are found to be highly significantly *less* abstinent than all other denominations (including African sects) taken together ( $X^2 = 12.89$ , 1 d.f.,  $P < 0.01$ ).

The African women drinkers as a whole seem to divide approximately into two equal groups: light drinkers (1-10 units per week) and heavy drinkers (21+ units per week). A significantly much higher proportion of women (17/46 cases) than men (23/226 cases) drink European beer only ( $X^2 = 16.75$ , 1 d.f.,  $P < 0.01$ ). They drink mainly at home, to a lesser extent at beerhalls, and usually with friends or with their husbands.

From fieldwork the impression is gained that African women who drink in public in Highfield township are those who feel to some extent emancipated from traditional practices, and thus they tend to drink European liquor. Among them are the prostitutes seeking custom among male drinkers at shebeens or beerhalls. Our male informants stated that only an inferior

prostitute would accept African beer, since her image requires more sophisticated liquor. Some of these women, while not entirely prostitutes have "benefactors" whom they use to support families of illegitimate children.

Of the seven heaviest drinkers among the African female sample in Highfield (28 units + per week), three are prostitutes who have never married, two are divorcees, one a shebeen owner, one has children apparently of different fathers and one is a married woman living with her husband. Both the last two cases seemed to be drunk on every occasion when they were seen, but the married woman is "respectable", strongly disapproves of beerhalls and drinks only at home with her husband.

## 7. Heavy Drinking

*Estimation of Alcoholism.* In their survey of a suburb of Santiago in Chile, Marconi *et al*<sup>18</sup> selected three measurable criteria of alcoholism. These will be considered in turn in relation to the present survey.

1. *Frequency of Drunkenness.* In the Santiago survey the working class sample was classified into four distinct groups:

	<i>Santiago, Chile</i>	
	<i>Men</i>	<i>Women</i>
	%	%
1. Those who never became drunk . . . . .	28·5	94·3
2. Drunk less than 12 times a year . . . . .	34·9	4·6
3. Drunk at least once a month to once every weekend (periodic excessive drinkers) . . . . .	28·3	0·5
4. Drunk every day or two or more working days each week* (alcoholics) . . . . .	8·3	0·6
	<hr/>	
	N = 905	1071

\* Or significant drinking bouts (see below).

The corresponding figures from the present survey are as follows:

<sup>18</sup> MARCONI, J. *et al.* 1955. A Survey on the Prevalence of Alcoholism among the Adult Population of a Suburb of Santiago. *Quart. J. Stud. Alc.*, 16, 438-446.

**TABLE XXI: Stated Frequency of Drunkenness, Highfield African Sample.**

<i>Frequency</i>	<i>Males</i>		<i>Females</i>	
		<i>%</i>		<i>%</i>
1. Never drunk . . . . .	223	61·4	208	89·3
2. Drunk less than 12 times a year	9	2·5	6	2·6
3. Drunk at least once a month to once every weekend . . . . .	119	32·8	15	6·4
4. Drunk at least 2 or more working days a week . . . . .	8	2·2	4	1·7
Non-response . . . . .	4	1·1	—	—
	<hr/>	<hr/>	<hr/>	<hr/>
N	363	100·0	233	100·0
	<hr/>	<hr/>	<hr/>	<hr/>

A difference between the urbanized South American peasant population of Santiago and the urbanized African peasant population of Highfield in their drinking patterns is that the former have more pervasive drinking habits throughout the year, whereas Highfield Africans are essentially weekend opportunity drinkers.

Drunkenness was carefully defined to the Highfield sample in terms of loss of motor control. There was no hesitation in response to this question such as might have been expected, say, in European cultural groups. Indeed many of our respondents seemed to consider that there was no point in drinking at all unless one drank to get drunk. If only drinkers are considered, 41·7 per cent. stated that they were drunk every weekend or once a week.

Marconi *et al.* regarded their near 30 per cent. incidence of weekend drunkenness as a cultural and not a pathological phenomenon, and we also regard the Highfield incidence in this way. It seems quite useless with a population whose rural origins dictate an accepted pattern of sporadic but heavy social drinking to impose the label "periodic excessive drinkers" dictated by European norms, and then to consider 35 per cent. of the sample as alcoholic or proto-alcoholic. Other and more realistic measures must be found.

2. *Frequency or Duration of Drinking Bouts.* In the Santiago study "significant bouts of drinking" were classified as those with a frequency higher than four times a year and producing absenteeism from work of more



than a sixth of the working days during the year. A "bout of drinking" was defined as any state of continuous drunkenness, maintained by repeated ingestion of alcoholic beverages, which lasted 2 days or more.

The author themselves say that "In order to interpret the significance of bouts of drinking as a symptom of Alcoholism, it is necessary to bear in mind that in Chile the excessive use of alcohol for social celebrations is so prevalent that it is not unusual to observe persons who cannot be considered as alcoholics indulging in a bout of drinking during family or popular festivities." (p. 441). On the criterion of 4 or more bouts a year they added 18 men (2.0 per cent.) but no women to the category of Alcoholic.

Our own figures produce the following situation:

**TABLE XXII: Stated Frequency of Drinking Bouts, Highfield African Sample.**

<i>Frequency of Drinking Bouts</i>	<i>Males</i>		<i>Females</i>	
	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
Less than 4 a year . . . . .	8	2.2	5	2.1
Once every 3 months . . . . .	2	2.2	—	—
Once a month . . . . .	4		1	0.4
Twice a month . . . . .	1		—	—
Weekly . . . . .	1		—	—

These figures are not dissimilar from those of the Santiago study, but it is questionable whether they have any meaning. Marconi's criterion of absenteeism from work is virtually impossible to operate in surveys of the present kind. The reservation about drinking bouts during social celebrations, especially at Christmas, applies here as in Chile. Finally, the figure of 2.2 per cent. is subject to a sample error of  $\pm 2.18$  per cent. when  $n = 179$  households.

3. *Drinking before Breakfast.* This was difficult to establish even in the Santiago study, where it was not unknown for beer to be mixed with toasted whole wheat flour and eaten as a breakfast food, especially by nursing mothers. It has already emerged in the present study that (a) African beer is traditionally regarded as a food, even though not necessarily consumed as such, (b) Africans in the sample do not always have a steady conception of 3 meals a day, and (c) the notion of meal substitution is not meaningful to many of them. Against this background, we could find only one man in the Highfield sample who habitually drank African beer not before, but for breakfast. He

was a very heavy drinker, drunk every weekend, who might have been classified as an alcoholic on other grounds.

4. *Other Factors in Alcoholism.* Our view on the foregoing material is that the Marconi criteria cannot be used in the Highfield sample to estimate the incidence of alcoholism. It may therefore be best in non-western situations of this kind to abandon Euro-American criteria of "abnormal" drinking and rather to search for any pathological consequences which heavy drinking places upon the social, economic or physiological life of the individual.

Differing from their response to the section on drunkenness, informants were far more reticent in their replies to questions on "troubles" proceeding from heavy drinking. Whereas no stigma attaches among many of this sample to heavy drinking *per se*, there is widespread African condemnation of neglect of the family or other anti-social results of excessive drinking. It is therefore all the more remarkable that in the end nearly 20 per cent. of the men and about 5 per cent. of the women showed some consequential problem connected with drinking:

**TABLE XXIII: Stated "Troubles" caused by Drinking, Highfield African Sample.**

Trouble	Men		Women	
		%		%
"Blackouts" . . . . .	18	5.0	2	0.9
Hospitalization and ill health . . . . .	16	4.4	1	0.4
Loss of money and loss of time on job . . . . .	14	3.9	4	1.8
Fighting and quarrelling . . . . .	14	3.9	2	0.9
Family difficulties . . . . .	8	2.2	3	1.3
No troubles, do not drink etc. . . . .	289	79.5	221	94.8
Non-response . . . . .	4	1.1	—	—
	363	100.0	233	100.1

The community still appears little concerned with consequences of drinking which affect only the drinker himself. Hangovers and hangover "cures" were mentioned fairly frequently in the interviews, and a number of respondents regularly ensured that there was beer in the house to drink on the morning after a heavy drinking session. Some people thought that drinking had a bad effect on them ("I get very excited and people think I

am insane”; “It drives me into a sex maniac”). Two women, on the contrary, considered that it did them nothing but good; one because “it clears my mind of dirty thoughts”.

*Drinkers of 28 Units or more per week compared with the General Sample*

- Age. The heavier drinkers tend to be older than the remainder of the sample. 52·5 per cent. of this group is over 35 years of age compared with 38·4 per cent. in the sample as a whole ( $t = 2·70$  with 178 d.f., significant at 5 per cent. level).<sup>19</sup>
- Education. No significance can be attached to educational differences between the heavy drinkers and the sample.
- Origin. The Karanga people, who tend to be poor and rural, are more heavily represented in the heavier drinkers (27·5%) than in the sample (12·2%) ( $t = 4·30$  with 178 d.f.,  $P < 0·001$ ).
- Income. This variable does not appear to be related to heavy drinking.
- Occupation. No professional and technical people are included in the group of (self-confessed) heavier drinkers; but there were few in the sample.
- Religion. This again is by far the most significant variable:

**TABLE XXIV: Heavier Drinkers compared with the Sample of Drinkers, Highfield, by Religious Affiliation.<sup>20</sup>**

Religious Affiliation	Heavier Drinkers	Percentage of		Significance
		Sample of Drinkers	Sample of Drinkers %	
Methodist . . . . .	17	36	32·1	$t = 2·53^*$
No religious affiliation . . . . .	20	47	29·9	$t = 2·40^*$
Catholic . . . . .	10	59	14·5	$t = 1·62$
Anglican . . . . .	3	29	9·4	$t = 1·94$
Other denominations . . . . .	9	55	14·1	$t = 1·66$

\* Significant at the 5 per cent. level ( $n = \frac{17 \times 20}{2} = 113$ ).

Those with no religious affiliation are obviously over-represented among the heavier drinkers, but the African Methodists are even more so. Some 64

<sup>19</sup> The formula used here for interdependent sub-samples is  $t = \frac{p_1 - p_2}{\sqrt{2(\frac{pq}{n})}}$

<sup>20</sup> Some students may wish to calculate heavy drinking by religious affiliation against the General Sample rather than the Sample of Drinkers. This may be done by adding in the Abstainers shown in Table VII.

per cent. of the Methodists drink (Table VII) and of those who do 32 per cent. are heavy drinkers. The African Catholics, although they number a high percentage of drinkers (Table VII) tend to be under-represented among the heavier drinkers, as do the Anglicans.

## 8. Conclusions

The findings of this study are drawn together at the beginning of the report. The purpose of this final section is not to reiterate them but to outline the profile which they seem at this stage to represent and to suggest any possible action that arises. A number of points may be made:

1. The survey indicates a persistent, well-established pattern of drinking in Highfield location, evidently fulfilling some profound social function and important enough in the people's lives to warrant a substantial expenditure from relatively meagre incomes.
2. This drinking pattern exists unopposed in a social climate of relatively cheap liquor and relatively heavy drinking by all races in Rhodesia and South Africa.
3. If this pattern were forcibly changed or suppressed, another pattern could be expected to take its place, utilising concealable narcotics such as illegal hard liquor or drugs.
4. Since African beer is still regarded as "part of the diet" by Africans and is so utilised to some extent, it should be nutritionally enriched and made more of a food. In particular it could be used to help rectify vitamin deficiency among the African population and thus contribute to health services.
5. If, as we believe, the ingestion of African beer has to reach certain levels for tranquilizing and social reasons, there is little point in attempting to change the pattern of "weekend opportunism" found in the survey. In any event, recent findings at the Alcohol Research Centre at Toronto suggest that not the pattern of drinking but the average quantity of pure alcohol ingested per diem over a period of time determines the probability of organic damage and of alcoholism.
6. An average of one Rhodesian dollar per week is apparently the value which Highfield Africans place upon the ingestion of alcohol as against other demands made upon their limited budget. Any attempt to make African beer cheaper would probably result in increased consumption in many cases. Any move to make it dearer might produce the re-emergence of illicit brews.

7. The best guarantee of abstinence at the moment seems to be primary school education and readiness to join the less sophisticated African sectarian churches. It follows that the emerging African population is not likely to tend towards increasing abstinence.
  8. Heavy drinking by the higher educated needs investigation, as does stated heavy drinking by African Methodists in the face of their church's injunction against the practice.
  9. While European beer is as dear as it is, African beer in effect undercuts it and limits its consumption, even though European beer is becoming increasingly desirable as a status symbol.
  10. Although accepted international criteria do not prove it, Highfield has what seems to be a severe drinking problem in terms of blackouts, ill health, loss of time and money on the job, fighting and family difficulties.
- A further study should investigate this situation in depth with special reference to the part which social work might play in rectifying the position.

## Appendix A

## I. SAMPLE ERROR IN PAIRS OF PERCENTAGES

Sample Size	PERCENTAGES									
	95 5	90 10	85 15	80 20	75 25	70 30	65 35	60 40	55 45	50 50
25	±8·7	12·0	14·3	16·0	17·3	18·3	19·1	19·6	19·9	20·0
50	6·2	8·5	10·1	11·3	12·3	13·0	13·5	13·9	14·1	14·1
75	5·0	6·9	8·2	9·2	10·0	10·6	11·0	11·3	11·5	11·5
100	4·4	6·0	7·2	8·0	8·6	9·2	9·6	9·8	10·0	10·0
125	3·9	5·3	6·3	7·2	7·7	8·2	8·5	8·8	8·9	8·9
150	3·6	5·0	5·8	6·5	7·1	7·6	7·8	8·0	8·1	8·2
175	3·3	4·5	5·4	6·0	6·5	6·9	7·2	7·4	7·5	7·6
200	3·0	4·2	5·0	5·6	6·2	6·4	6·8	6·9	7·0	7·0
225	2·9	4·0	4·8	5·3	5·8	6·1	6·4	6·5	6·6	6·7
250	2·8	3·8	4·5	5·1	5·5	5·8	6·0	6·2	6·3	6·3
275	2·7	3·6	4·3	4·8	5·2	5·5	5·8	5·9	6·0	6·0
300	2·6	3·4	4·2	4·6	5·0	5·2	5·4	5·6	5·8	5·8
325	2·5	3·3	4·0	4·4	4·8	5·1	5·3	5·4	5·5	5·6
350	2·4	3·2	3·8	4·3	4·6	5·0	5·1	5·2	5·3	5·3
375	2·3	3·1	3·7	4·1	4·5	4·7	4·9	5·1	5·2	5·2
400	2·2	3·0	3·6	4·0	4·4	4·6	4·8	4·8	5·0	5·0
425	2·1	2·9	3·5	3·9	4·2	4·4	4·6	4·7	4·8	4·8
450	2·0	2·8	3·4	3·8	4·1	4·3	4·5	4·6	4·7	4·7
475	2·0	2·7	3·3	3·7	4·0	4·2	4·4	4·5	4·6	4·6
500	2·0	2·7	3·2	3·6	3·9	4·1	4·3	4·4	4·4	4·5

This table gives the sample error of sample sizes between 25 and 500 to be expected in any given pair of percentages in a table totalling 100 per cent. Thus in a sample of  $n = 375$ , percentages of 80% and 20% can be expected to have a range of inaccuracy due to sampling of 4·1% on either side: that is, 75·9–84·1% and 15·9–24·1% respectively. Interpolations can be made according to the formula —

$$\text{Sample Error} = \frac{\%}{\sqrt{\frac{p \cdot q}{n}}}$$

where  $p, q$  are the two percentages and  $n$  is the sample size.

## 2. SIGNIFICANCE OF PERCENTAGES IN TERMS OF SAMPLE ERROR AND SAMPLE SIZE

Sample Size	PERCENTAGES																		
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95
25	17.4%							49.0	44.2	40.0	36.2	32.7	29.4	26.1	23.1	20.0	16.8	13.3	9.2
50		NOT			49.2	43.3	38.6	34.8	31.3	28.2	25.6	23.2	20.8	18.6	16.4	14.1	11.9	9.4	6.5
75		SIGNIFICANT	46.0	40.0	35.3	31.4	28.3	25.6	23.0	20.9	18.8	16.9	15.1	13.3	11.5	9.6	7.7	5.3	
100			48.0	40.0	34.4	30.7	27.4	24.5	22.2	20.0	18.2	16.3	14.8	13.1	11.5	10.0	8.5	6.7	4.6
125			42.0	36.0	30.8	27.3	24.3	22.0	19.8	17.8	16.2	14.7	13.1	11.7	10.3	9.0	7.4	5.9	4.1
150			38.7	32.5	28.4	25.3	22.3	20.0	18.0	16.4	14.7	13.3	12.0	10.9	9.5	8.1	6.8	5.6	3.8
175		45.0	36.0	30.0	26.0	23.0	20.6	18.5	16.7	15.2	13.6	12.3	11.1	9.9	8.7	7.5	6.4	5.0	3.5
200		42.0	33.3	28.0	24.8	21.3	19.4	17.3	15.6	14.0	12.7	11.5	10.5	9.1	8.3	7.0	5.9	4.7	3.2
225		40.0	32.0	26.5	23.2	20.3	18.3	16.3	14.7	13.4	12.0	10.8	9.8	8.7	7.7	6.6	5.6	4.4	3.1
250		38.0	30.0	25.5	22.0	19.3	17.1	15.5	14.0	12.6	11.5	10.3	9.2	8.3	7.3	6.4	5.3	4.2	2.9
275		36.0	28.6	24.0	20.8	18.3	16.6	14.8	13.3	12.0	10.9	9.8	8.9	7.9	6.9	6.0	5.1	4.0	2.8
300		34.0	28.0	23.0	20.0	17.3	15.4	14.0	12.9	11.6	10.5	9.3	8.3	7.4	6.6	5.8	4.9	3.8	2.7
325		33.0	26.7	22.0	19.2	17.0	15.1	13.5	12.2	11.2	10.0	9.0	8.2	7.3	6.4	5.5	4.7	3.7	2.6
350	48.0	32.0	25.3	21.5	18.4	16.6	14.6	13.0	11.8	10.6	9.6	8.7	7.8	7.1	6.1	5.4	4.5	3.6	2.5
375	46.0	31.0	24.7	20.5	18.0	15.7	14.0	12.8	11.6	10.4	9.5	8.5	7.5	6.7	6.0	5.1	4.4	3.4	2.4
400	44.0	30.0	24.0	20.0	17.6	15.3	13.7	12.0	11.1	10.0	9.1	8.0	7.4	6.6	5.9	5.0	4.2	3.3	2.3
425	42.0	29.0	23.3	19.5	16.8	14.7	13.1	11.8	10.7	9.6	8.7	7.8	7.1	6.3	5.6	4.9	4.1	3.2	2.2
450	40.0	28.0	22.7	19.0	16.4	14.3	12.9	11.5	10.4	9.4	8.5	7.7	6.9	6.1	5.5	4.8	4.0	3.1	2.1
475	40.0	27.0	22.0	18.5	16.0	14.0	12.6	11.3	10.2	9.2	8.4	7.5	6.8	6.0	5.3	4.6	3.9	3.0	2.1
500	40.0	27.0	21.3	18.0	15.6	13.7	12.3	11.0	9.8	9.0	8.0	7.3	6.6	5.9	5.2	4.5	3.8	3.0	2.1

Sample errors as a percentage of the value of percentages 5 to 95 per cent. (above).

Table 2 shows in the light of sample error and sample size how significant a given percentage from 5% to 95% is likely to be. In the table the sample error for each percentage for a given sample size is expressed as a per cent. of the numerical value of the percentage itself. It is generally agreed that percentages which have a sample error of 50 per cent. or more are not likely to be significant, and that those with a sample error of 25 per cent. or less are very likely to be significant. Accordingly percentages which obtain in the top left-hand corner of the table, having per cent. sample errors of 50 per cent. or more, are not recorded in detail and are considered not significant. Percentages read off between this blank space and the stepped line have a sample error of between 50 and 25 per cent. and may be described as probably significant. Percentages which apply to the right of the stepped line have sample errors of less than 25 per cent. and are very likely to be significant. Where the sample error is shown in the table as less than 10 per cent. of the percentage, the latter may be described as highly significant.



**Appendix B**

**STRICTLY CONFIDENTIAL**

FORM No. \_\_\_\_\_

UNIVERSITY COLLEGE OF RHODESIA  
 DEPARTMENT OF SOCIOLOGY  
 INSTITUTE FOR SOCIAL RESEARCH  
 (ALCOHOLISM RESEARCH UNIT)

**SURVEY OF URBAN AFRICAN DRINKING PATTERNS**

Field worker \_\_\_\_\_

Date of interview \_\_\_\_\_

Duration of interview \_\_\_\_\_ to \_\_\_\_\_

Stand number \_\_\_\_\_

Field worker's notes:

IDENTIFICATION 1, 2, 3, 4, 5

**A. PERSONAL DATA**

**6. HOUSEHOLD STATUS**

0	1	2	3	4	5	6
Head of household (M. or F.)	Wife of head of household	Relation: child (17 yrs. +) Son      Daughter		(specify) Other relation	Unrelated	N/R

Specify status

**7. AGE**

y	x	o	1	2	3	4	5	6	7	8	9
15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	Over 65	N/R

Actual age

**8. SEX**

0	1
M.	F.



15. WOMEN: Have you a husband? If so, where?

0	1	2	3	4	5
Living with husband	"Town" wife	Living together but not married	Never married	Divorced, widowed or separated	N/R

16. TOTAL NUMBER OF DEPENDANTS

How many people do you support—including children in the country for whose school fees you are responsible?

y	x	0	1	2	3	4	5	6	7	8	9
None	1	2	3	4	5	6	7	8	9	10 or more	N/R

17. EDUCATION LEVEL

What standard or grade did you reach?

y	x	0	1	2	3
No schooling	Sub A and B Grade 1 and 2	Std. 1-3 Grade 3 and 5	Std. 4-6 Grade 6-7	Form 1-2 (J.C.)	Form 3-4 ("O")

4	5	6	7	8	9
Form 5-6 ("A")	P.T.H.	T.I.	Graduate	Others (specify)	N/R

18. RELIGION

To which church do you belong? (specify here)

	y	x	0	1	2	3	4	5	6
OFFICE USE ONLY	None	R.C.	Meth.	Salv. Army	Reformed	Presby.	Congregat.	Anglican	Afr. Indep.

7	8	9
Afr. Pentecost	Others	N/R





34. FREQUENCY AND DURATION OF DRINKING BOUTS (continuous intoxication lasting 2 days or more)

	0	1	2	3	4	5	6	7	8
Never	Less than once a year	Once a year	Less than 4 times a year	Once every 3 months	Once a month	Twice a month	Weekly	N/R	

35. How long do the bouts last ?

days

36. Has drinking ever caused you trouble ?

	0	1	2	3	4	5	6	7
Loss of time on job	Loss of job	Difficulty with family	Neglect of children	Arrest for drunkenness	Hospitalization	Occurrence of black-outs	N/R	

Any other trouble.....

37. Number of meals a day (*exclude tea breaks*)

0	1	2	3
1	2	3	N/R

(a meal is a real intake of food as seen by the respondent—not a "snack")

SUBSTITUTION

Do you substitute any kind of drink for any of your meals ?

	0	1	2	3
	1 meal	2 meals	3 meals	N/R
38. Afr. beer				
39. Eur. beer				
40. Spirits				
41. Soft drinks				
42. Heinrichs Mukoyo				

43. Which meal(s) is usually substituted for ?

## 44. PREFERENCE

Which drink do you prefer? Give choices 1, 2, 3

	0	1	2	3	4
African beer					
European beer					
Spirits					
Do not drink					
N/R					

## REASONS FOR PREFERENCE IN BEERS

	0	1	2	3	4	5	6	7
	N/A	Price	Taste	Status	Strength	Food	Custom	N/R
45. Afr. beer								
46. Eur. beer								
47. Spirits								

Or any other reason .....  
 (specify preference) .....

## WHAT IS YOUR MOST IMPORTANT REASON FOR DRINKING AFRICAN BEER?

(do not quote reasons below)

48.1	(a) Do not drink beer	
48.2	(b) Because it is food Because it makes one strong Because it tastes nice Because it quenches your thirst	
48.3	(c) Because it is customary on occasions like marriages, tribal ceremonies, funerals etc. Because your parents drink it Because you drink for the spirits of your forefathers	
48.4	(d) Because you want to forget your troubles Because you want to be more cheerful Because you want to obtain more courage Because you want to get rid of a feeling of inferiority	
48.5	(e) Because there is nothing else to do	
48.6	(f) No particular reason, you just drink	
48.7	(g) To be sociable with your friends	
48.8	(h) Any other reason (specify) .....	
	.....	
	.....	
	.....	



49. What is your most important reason for drinking European liquor ?

0	1	2	3	4	5
Do not drink Alc. liquor	Do not drink Eur. liquor	European liquor tastes better	It makes you happier because it is stronger	Because it gives you a higher status	Easier transportation and storage

6	7	8
It is more hygienic	You get drunk quicker	N/R

Any other reason (specify) .....

**C. EXPENDITURE**

How much do you spend per week on drink ? (personal consumption only)

	y	x	0	1	2	3	4	5	6
	None	0-5/-	5/- 10/-	10/- 15/-	15/- £1	£1- £1.10	£1.10- £2	£2- £2.10	£2.10- £3
50. Afr. beer									
51. Eur. beer									
52. Spirits									

	7	8	9
	£3- £4	If more specify	N/R
Afr. beer			
Eur. beer			
Spirits			

Actual estimate of amount spent

## DRINKING PATTERNS IN RHODESIA

How much do you spend per week on buying liquor for others?

	y	x	0	1	2	3	4	5	6
	None	0-5/-	5/- 10/-	10/- 15/-	15/- £1	£1- £1.10	£1.10- £2	£2- £2.10	£2.10- £3
53. Afr. beer									
54. Eur. beer									
55. Spirits									

	7	8	9
	£3- £4	If more specify	N/R
Afr. beer			
Eur. beer			
Spirits			

Actual estimate  
of amount spent

What is the value of the amount of drink you are given free of charge in one week?

	y	x	0	1	2	3	4	5	6
	None	0-5/-	5/- 10/-	10/- 15/-	15/- £1	£1- £1.10	£1.10- £2	£2- £2.10	£2.10- £3
56. Afr. beer									
57. Eur. beer									
58. Spirits									

	7	8	9
	£3- £4	If more specify	N/R
Afr. beer			
Eur. beer			
Spirits			

Afr. beer

Eur. beer

Spirits

Actual estimate

--	--	--

59. OFFICE ONLY

Total amount spent (43+44+45+46+47+48)

D. LOCALITY

Where do you usually drink ?

	x	o	1	2	3	4	5	6	
	Do not drink	At own house	Free at other houses	Pay at other houses	Work place	Beer-hall	Cocktail lounge	She-been	Fill in bottom column, too, if two equal ← responses
60.									
61.									

7	8	9
Bottle store	Night club	N/R

Any other place? Specify

SOCIAL/SOLITARY

With whom do you usually have your drinks ?

	o	1	2	3	4	5	6	7	8	9
	Do not drink	Alone	People staying in your house	With friends at home	Friends in public places	With anyone you meet	With husband or wife	With same sex	In mixed company	N/R
62.										

Others: specify

E. LEISURE

How do you most like to spend your leisure ?

	y	x	o	1	2	3
	Home pursuits	Sport (play)	Sport (watch)	Inter-visiting	Church groups	Other organized groups
63.						
64. How often per week						

## DRINKING PATTERNS IN RHODESIA

	4	5	6	7	8	9
	Beer-halls	Night clubs	Cinema	Listening to radio	Women's clubs	N/R
How often per week						

## 65. ATTRACTION OF BEERHALLS

In what order would you list the attractions of the beerhall?

y	x	o	1	2	3	4	5
Companion-ship	Beer	Music and dancing	Discus-sion	Home news and contacts	Warmth and comfort	Meeting places for reg. groups	Place to lose identity

  

6	7	8	9
Women	Means of showing status	No other place to go	N/R

Any other reason? (specify) .....

HOW GOOD IS THIS HOUSE?

66. To sit in in the evening

o	1	2
Good	Indifferent	Bad

Why? .....

67. To entertain your friends in

o	1	2
Good	Indifferent	Bad

Why? .....

68. To drink in

o	1	2
Good	Indifferent	Bad

Why? .....