

A Comparative Study of Rural and Urban Venda Males*

INTRODUCTION

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People who change their habitat without prolonged preparation, educational or otherwise, for such an event, may not be able to adapt themselves to new social and economic conditions or even to climate. This may especially be the case among those who, until shortly before moving, have lived relatively secluded lives along traditional lines and have been little influenced by contact with differing outside societies.

A change of environment, perhaps without the subject even being aware of it, often makes demands on physical performance to which the subject is not accustomed. This is particularly the case when the new conditions are completely different from the previous ones, e.g. where a subject has to submit himself, perhaps for the first time in his life, to continuous working hours for a strictly specified period every day. The inability of the employee to meet these demands or of the employer to understand the underlying reasons for the employee's apparent lack of interest, can lead to dissatisfaction on the part of both of them. This may occur particularly in the case of migrants who have hitherto been poorly informed of western routines and standards, and in the case of those employers who have not acquainted themselves beforehand with the background of the migrant. Such mutual dissatisfaction is apt to lead to frustration with adverse effects on physical and intellectual performance resulting in suboptimal productivity.

When the migrants have originated from areas where they have depended appreciably on specific indigenous

foods to which they are accustomed and which are not obtainable in their new habitat, a change in dietary customs is inevitable. In spite of the fact that nutritious substitutes may be available, some migrants are reluctant to accept new food items, or alternatively they cannot afford to buy them. They may thus voluntarily or involuntarily have to change their diets to cheaper and often less nutritious foods, or be compelled to omit some items which contain essential nutrients.

The implications described above gain practical significance when the population drift of the South African Bantu as a whole from rural to urban areas is considered. This drift has been greatly accelerated since World War II; it is not peculiar to South Africa, but is occurring in many of the emergent countries. In South Africa phenomenal industrial development has given impetus to this migration. The degree of the industrial development and of the migration can be judged from the figures presented in Table I.¹⁻³ Whereas the value of industrial production was 19.91% of the gross domestic product* at factor price in 1946, it increased consistently and reached 28.19% in 1965. The percentage of production from agriculture, forestry, hunting and fishing according to the corresponding census was 12.75 in 1964 and 10.16 in 1965, indicating a proportionate decline. When it is considered that the gross domestic product increased by approximately 350% (Table I) it is apparent that absolute production under these headings showed a considerable increase.

During the same period the urban population increased from 1 793 to 2 913 thousand Whites, i.e. by 64.46% and

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* The value of all the products (industrial and agricultural) of a nation produced for consumption by its members, together with services rendered.

TABLE I. INDUSTRIAL PRODUCTION, AGRICULTURAL PRODUCTION AND URBAN POPULATION IN SOUTH AFRICA

Year	A:	B:		C:	C/A x 100 (%)	Urban population x 10 ³		Rural population x 10 ³	
	Gross domestic product at factor price (million rand)	Industrial production (million rand)	B/A x 100 (%)			Agriculture, forestry, hunting and fishing (million rand)	Whites	Bantu	Whites
1946	1 599.6	318.5	19.91	204.0	12.75	1 793	1 902	579	5 928
1951	2 752.1	588.0	21.36	525.8	19.11	2 089	2 391	553	6 169
1960	4 812.6	1 160.0	24.10	587.7	12.21	2 575	3 471	506	7 457
1965	7 226.1	2 037.5	28.19	734.8	10.16	2 913	4 159	485	8 027

from 1 902 to 4 159 thousand Bantu, i.e. by 118.7% (Table I). In contrast to the degree of increase in the cities, the rural population decreased by 16.2% in the case of the Whites and increased by only 26.1% in the case of the Bantu. These figures effectively demonstrate the disproportionate increase of urban Bantu in relation to urban Whites and indicate a considerable drift of rural Bantu to the cities.

The South African Human Adaptability Section of the International Biological Programme aimed at investigating the effect, if any, of urbanization on a rural population. It was decided, therefore, to carry out multidisciplinary surveys of ethnically similar groups which are, as far as possible, representative of rural and urban areas. The task of assessing the *nutritional status* of these groups was delegated to the National Nutrition Research Institute (NNRI) of the South African Council for Scientific and Industrial Research (CSIR), Pretoria.†

The studies were carried out on urban and rural adult Venda males, and provided an opportunity of determining whether or not changes in dietary habits brought about an improvement in the nutrition status of the population groups examined. This survey included biochemical, anthropometrical, clinical, socio-economic, haematological and dietary studies. The rural survey was carried out during May - June 1968, and the urban survey during September - October 1968.

TEST SUBJECTS

The Venda homeland is an extensive area and the Venda nation numbers many thousands. It was, therefore, not the intention to study a representative sample of all Venda; for such a study considerably more time and resources would have been required than were at the disposal of the team of investigators. The results obtained on the rural Venda may therefore be biased if taken to represent all rural Venda.

The rural sample was drawn from the chieftaincy of Lwamondo, approximately 65 km east of Louis Trichardt. It was originally intended to draw the urban sample only from Venda who had migrated from Lwamondo, but there were not sufficient numbers of such Venda males in the urban area chosen for the survey. Consequently the test subjects included in the urban sample were migrants from different areas of Vendaland. This should be borne in mind when the *reason* for any differences found between the urban and rural groups are considered. Certain differences could be due to the more heterogeneous nature of the urban group and not necessarily to urbanization.

The greater part of Chief Lwamondo's area lies in the foothills of the Soutpansberg,* where the annual rainfall is high and the population relatively dense. Higher in the mountains the communities are more isolated. Another

part of the Chief's area lies in the plains, where it is more arid and where the population is less dense. The larger portion of the test subjects was drawn from the high rainfall area, and this may mean that the nutrition status of the people of the Lwamondo area as a whole is less favourable than that reflected by the survey.

The area of Chief Lwamondo is divided into 5 regions containing a total of some 2 186 households. It was originally intended to draw samples from each of these regions proportionate in size to the number of households in each region. The number of households and an estimated count of the male population, according to age, had been obtained in a previous demographic survey.⁴ When, however, the main survey was commenced, it was found by Laubscher and Potgieter⁵ that the estimates obtained in the demographic survey were not reliable: for example, in the demographic survey it had been estimated that one eligible person would be found in every two selected households, whereas actually only one eligible subject could be found in every 10 selected households! On the first day of the survey it took 10 trained Venda field-workers almost 5 hours to persuade a total of 6 randomly selected subjects to accompany them to the hospital for participation in the project, and it became clear that a random sampling scheme could not be implemented.

It was then decided by Laubscher and Potgieter⁵ to use volunteers for the sample. Certain strategic spots in the area, such as clinics, schools and the Agricultural Officer's office were chosen. All apparently eligible persons passing these spots were invited to participate and promised a nominal payment as reward. Those who appeared eligible were then transported to the hospital for participation. In their report on the sampling, Laubscher and Potgieter state 'we are, however, confident that the area was covered fairly uniformly on a geographical basis and that a reasonably representative sample was obtained . . . To have obtained a random sample under the constraints of the survey would have been an extremely costly and time-consuming task'.⁵

The urban sample was drawn from the Rand township of Chiawelo. The population consisted of some 1 595 Venda households. It was known that each of the *house owners* had resided for at least 10 years under urban conditions. Here the Urban Bantu Council Voters List was used as a basis for sampling. A sample of 300 house owners was drawn, together with an additional sample of 100 which served as replacements (in the order in which they were drawn) for cases of non-response. If more than one eligible person were resident in the household of the selected house owner, one of these was selected by a random procedure.⁵

Ideally, the subjects surveyed in the urban and the rural samples should have had a similar age distribution. However, it soon became clear that few men remained in the rural areas when they reached the age of 25 - 30 years but moved to the towns in search of work. Thus there was a preponderance of men in the 30 - 50 year age-group in the towns, and a lack of these age-groups in the rural area. When both the rural and urban samples were drawn

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* Literally translated: Saltriver mountain — Editor.

TABLE II. NUMBERS OF RURAL AND URBAN SUBJECTS INVESTIGATED

Locality	Socio-economic	Dietary	Somato-metrical	Clinical	Bio-chemical	Haemato-logical
Rural	260	266	260	257	253	251
Urban	248	241	247	248	247	243

the number of subjects younger than 20 years or older than 50 years was limited as much as possible. Each sample was divided into 5 age-groups viz. < 19, 20-29, 30-39, 40-49, and 50 years and above. For some of the disciplines the youngest age-group was eliminated. The mean age of the rural sample was 32.6 (range 17-68 years) and that of the urban sample 40.7 (range 17-56 years).

In order to be included in the rural sample a test subject was required to have been continuously resident in his immediate locality for at least 3 months. This condition was imposed so that the effect of diet and social environment on the subject's nutritional status could be reflected. During the survey it appeared that the majority of the rural Venda had been resident in that area for considerably longer periods. Most of the urban subjects had lived in the city for at least 10 years. In both areas a further restriction was imposed in that no person with more than 8 years of formal primary education was eligible for selection.⁴

It will be clear that the disparity between the age distribution of the urban and rural samples poses considerable problems when comparisons between the two groups are made. Many of the variables observed and reported in this paper are dependent on age. In certain cases where the relationship between the variable and age was approximately linear it was possible to eliminate the effect of age by applying an appropriate statistical test. In

other cases this was not possible. Thus, the value of the survey is in some measure reduced by the disparity in the age distribution, and also by the possible bias in the rural sample since the subjects were drawn from only one chieftancy.

Due to technical difficulties every investigator from this Institute did not examine the same number of people in each locality. Only subjects for whom full sets of biological specimens could be obtained were included in the clinical samples. Some subjects refused to have biological specimens taken but were still included in the other investigations. After the specimens had already been obtained, a few containers were broken in transport, thus the biochemical and haematological sections included fewer test subjects than the clinical section. The number eventually examined for each discipline are given in Table II.

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