Table 2

No. of families	Parents		Children			
	Males	Females	Weak ♂	Weak ♀	Strong ♂	Strong ♀
10	Strong	Strong	2	2	9	10
9	Weak	Strong	4	4	5	6
14	Strong	Weak	9	10	9	6
12	Weak	Weak	11	11	4	5
Total 45			26	27	27	27

affect the degree of manifestation of the smeller characteristic. We have demonstrated that other factors are involved for people who are classified as smellers by grouping individuals into 'weak' and 'strong' categories. Table 2 gives the distribution of 'weak' and 'strong' smellers among the 45 families in group 1.

There is no difference between the sexes for the strength of response of individuals who are smellers; but there is a highly significant tendency for parents who are 'strong' smellers to have children who are 'strong' smellers, and parents who are 'weak' smellers to have children who are 'weak' smellers ($\chi^2 = 16{\cdot}173$ with 3 degrees of freedom; $0{\cdot}001 < P < 0{\cdot}01$).

Any hypothesis which seeks to explain the inability to smell solutions containing potassium cyanide in terms of a sex-linked recessive gene must take into account, therefore, the possibility that some smeller individuals may be wrongly classified because of the intervention of other genetic factors affecting the strength of the response.

A fuller account of this work will be published elsewhere.

R. L. Kirk
N. S. Stenhouse

Department of Zoology and
Section of Mathematical Statistics,
Commonwealth Scientific and
Industrial Research Organization,
University of Western Australia.
Jan. 9.

[1] Mourant, A. E., Cold Spring Harbor Symp. Quant. Biol., **15**, 242 (1950).
[2] Snyder, L. H., *Genetics*, **19**, 1 (1934).

Serum Iron and Iron-binding Capacity in the South African Bantu

Excessive amounts of iron are frequently present in various organs and tissues of adult South African Bantu[1]. Among these people, the iron intake is often high, as much as 200 mgm. per diem[2]. Further, occasional high values for serum iron have been reported among the Bantu of Bechuanaland[3]. In view of these facts, serum iron-levels, iron-binding capacity and other data have been determined in groups of adult Bantu from different regions of Southern Africa.

The Johannesburg group, of ages up to sixty years, were from a local non-European hospital; they were either on the staff or were suffering from complaints unlikely to influence levels of serum iron or iron-binding capacity. The Bantu males, 18–40 years, were workers from different territories, passed as medically fit for service in the gold mines. The European controls were members of the staff of this Institute.

Means, Standard Deviations and Ranges of Serum Iron and Total Iron-binding Capacity in Different Bantu Groups

	Remarks	Serum iron (γ per 100 ml.)	Total iron-binding capacity (γ per 100 ml.)
Bantu females	Johannesburg area	130 ± 40 (20)* (60–215)	335 ± 55 (17)* (240–435)
Bantu males	Johannesburg area	230 ± 75 (14) (110–380)	385 ± 50 (14) (320–475)
	Group *A*†	105 ± 45 (39) (15–225)	375 ± 70 (39) (225–590)
	Group *B*‡	285 ± 100 (68) (110–550)	520 ± 90 (42) (395–830)

* Number of subjects.
† Bantu with serum iron and total iron-binding capacity within normal range; Pondoland (13), N. Transvaal (Bapedi) (14), Tanganyika (12).
‡ Bantu with increased serum iron and total iron-binding capacity, significantly higher than those of group *A*; Mozambique (44), Angola (12), Nyasaland (12).

Samples were taken by venipuncture between 9.30 and 11.30 a.m., the usual precautions being taken to prevent contamination with iron. Serum iron was determined using the thioglycollic acid method. The iron-binding capacity was determined by the method of Rath and Finch[4]. The total iron-binding capacity was obtained by adding the value for serum iron to the iron-binding capacity. The difference between duplicates was never more than 10 per cent; all figures, therefore, including means and standard deviations, are given to the nearest 5 γ.

Our results for control groups of Europeans were in close agreement with values reported by other workers[4,5].

Several of the individual values obtained for serum iron and total iron-binding capacity were higher than any reported for such diseases as idiopathic hæmochromatosis or transfusional siderosis[4]. In no case has serum iron saturation been found. Further, among the Pondos and Bapedi examined, a few very low values for serum iron were obtained, which were, however, consistent with normal hæmoglobin levels.

Whether or not our groups with high serum iron and total iron-binding capacity values correspond with groups having high iron intakes, or displaying abnormal deposition of iron, is being investigated.

This communication is published by permission of the South African Council for Scientific and Industrial Research. For co-operation and help, we are grateful to Drs. R. C. Pearson and R. M. Yeo, and to Messrs. J. Lub and E. Rogers, of the Witwatersrand Native Labour Association Headquarters in Johannesburg; to Dr. F. Keen of the Johannesburg Non-European Hospital; and to Drs. I. Bersohn and M. L. Neser of this Institute.

Th. Gerritsen
A. R. P. Walker

Human Biochemistry Unit,
Council for Scientific and Industrial Research,
South African Institute for Medical Research,
Johannesburg.
Sept. 12.

[1] Strachan, A. S., "Haemosiderosis and Haemochromatosis in South African Natives, with a comment on the Aetiology of Haemochromatosis", M.D. thesis, Glasgow (1929). Gillman, J., and Gillman, T., *Arch. Path.*, **40**, 239 (1945).
[2] Walker, A. R. P., and Arvidsson, U. B., *Nature*, **166**, 438 (1950). Walker, A. R. P., *Brit. Med. J.*, **14**, 819 (1951).
[3] Squires, B. T., *S. Afr. J. Med. Sci.*, **17**, 1 (1952).
[4] Rath, C. E., and Finch, C. A., *J. Clin. Invest.*, **28**, 79 (1949).
[5] Cartwright, G. E., and Wintrobe, M. M., *J. Clin. Invest.*, **28**, 86 (1949). Ventura, S., and Klopper, A., *J. Obstet. Gynaec. Brit. Emp.*, **58**, 173 (1951).