



PERS 302

THE MEASUREMENT OF MODERNIZATION AMONG
SOUTH AFRICAN BLACKS: A SECOND STUDY

NATIONAL INSTITUTE FOR PERSONNEL RESEARCH
COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH

CSIR SPECIAL REPORT PERS 302 (pp. i - vi; 1 - 57)
UDC 301.175:303.622] (680=693)

JOHANNESBURG, REPUBLIC OF SOUTH AFRICA, JANUARY 1980

CSIR SPECIAL REPORT PERS 302

HSRC Library and Information Service

HSRC
Private Bag X41
PRETORIA
0001

Tel.: (012) 202-2903
Fax: (012) 202-2933



RGN
Privaatsak X41
PRETORIA
0001

Tel.: (012) 202-2903
Faks: (012) 202-2933

RGN-Biblioteek en Inligtingsdiens

SPECIAL REPORT

20/3/80

00940



HSRC Library and Information Service

RGN-Biblioteek en Inligtingsdiens

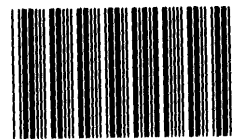
DATE DUE - VERVALDATUM

ERNIZATION AMONG
A SECOND STUDY

--	--

INDIVIDUAL MODERNITY

M IADANC



* 0 0 7 4 6 0 *

NATIONAL INSTITUTE FOR PERSONNEL RESEARCH
COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH

CSIR SPECIAL REPORT PERS 302 (pp. i - vi; 1 - 57)
UDC 301.175:303.622] (680=693)

JOHANNESBURG, REPUBLIC OF SOUTH AFRICA, JANUARY 1980

Barcode

00940

ISBN 0 7988 1734 8

CSIR SPECIAL REPORT PERS 302

Published by

National Institute for Personnel Research
Council for Scientific and Industrial Research
P O Box 32410
Braamfontein
2017 Republic of South Africa

January 1980

Printed in the Republic of South Africa by the
National Institute for Personnel Research

ACKNOWLEDGEMENTS

- DIRECTOR, NIPR : Dr G K Nelson
- PLANNING AND SUPERVISION : Mr R H Blake - Head, Personnel Adaptation
Division, NIPR
- ANALYSIS OF DATA : Mr M W Muller -Head, Computer Services
Division, NIPR
- COLLABORATION : Mr M Tabane - Personnel Adaptation
Mr M Matau - Personnel Adaptation
Mrs S Mokgethi- Personnel Adaptation
Mr E M Poee - Personnel Adaptation

SUMMARY

This report records the findings of the second study of the NIPR Modernization Project. The Modernity Scale developed and applied in the pilot (first) study was shortened and administered, during 1978, to 334 occupationally low-level Blacks on the Witwatersrand.

The data thus collected have been analysed and the results compared with those of the first study. The Shortened Modernity Scale appears to be a more suitable assessment device for application amongst occupationally low-level Blacks, and it discriminates amongst people with varying life histories.

OPSOMMING

Hierdie verslag omskryf die bevindings van die tweede studie van die NIPN se Modernisasieprojek. Die Moderniteitsskaal was in die loodsstudie ontwikkel en toegepas, is verkort en gedurende 1978 op 334 opvoedkundig laag-ontwikkelde Swartes aan die Witwatersrand uitgetoets.

Gegewens so ingewin is ontleed en die resultate met die van die loodsstudie vergelyk. Daar is aanduidings dat die verkorte Moderniteitsskaal 'n geskikter ramingshulpmiddel onder opvoedkundig laag-ontwikkelde Swartes is en dat dit tussen mense op verskillende lewensvlakke onderskei.

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
1. INTRODUCTION	1
2. THE AIMS OF THE PRESENT STUDY	1
3. METHOD	2
3.1 Construction of a shortened scale	2
3.1.1 Selection of items from the original scale	2
3.1.2 Presentation and scoring of scale items	3
3.1.3 Biographical items	3
3.2 Administration of the scale	4
3.3 The sample	4
3.4 Analyses performed	4
4. RESULTS	5
4.1 Characteristics of the sample	5
4.2 The distribution of modernity scores	8
4.3 Discriminant validity of the scale	11
4.3.1 Relation of scale scores to criterion variables	11
4.3.2 Comparison of an urban and a transitional group	12
4.4 Item analysis	14
4.5 Factor analysis	15
4.5.1 Selection of items for inclusion in analysis	15
4.5.2 Factors obtained	15
4.5.3 Discussion of factors obtained	17
4.5.4 Comparison of first and second study factor structures	18
4.6 Regression analysis	20
4.6.1 Description of independent variables	21
4.6.2 Discussion of regression results	23
5. CONCLUSIONS AND RECOMMENDATIONS	27
REFERENCES	28
APPENDIX A - EDUCATION AND INDIVIDUAL MODERNITY - M. TABANE	30 - 42
APPENDIX B - THE SHORTENED MODERNITY SCALE	43 - 50
APPENDIX C - TABLES 13 - 15 - REGRESSION DATA FOR 3,4 AND 16 VARIABLES	51 - 57

LIST OF TABLES

<u>TABLE</u>	<u>PAGE</u>
1. Distribution of subjects by educational level	5
2. Mean educational level of first and second study samples compared	6
3. Distribution of subjects by occupation	7
4. Distribution of subjects by % of total life spent in an urban area	8
5. Distribution of subjects by modernity score	9
6. Distribution of subjects by modernity score - first study sample	10
7. The varimax rotation, communalities and the sum of the squared loadings for four factors	16
8. First and second study factor solutions compared	19
9. Leaps and bounds regression analysis : 16 predictor variables against modernity	23
10. Leaps and bounds regression analysis : 3 predictor variables against modernity	25
11. Leaps and bounds regression analysis : 4 predictor variables against modernity	25
12. Proportion of life spent in a rural area : men and women compared	26
13-15. Regression data for 3,4 and 16 variables	51 - 57

1. INTRODUCTION

The investigation reported here is a continuation of work on the development of a scale to assess attitudinal modernity among Black South Africans. The construction of the original scale, the characteristics of the sample to which it was administered and the results of the statistical analyses performed on the data obtained are given in PERS 273 (Thompson, 1977)¹. Since the present document concerns the development and administration of a shortened version of the original scale it is recommended that the two reports be read in conjunction with each other.

The results of the initial investigation indicated that modernity is, as was hypothesized, a multi-dimensional construct, and that the scale developed appeared to be unsuitable for use with people with higher secondary education or those employed in non-manual occupations, such as clerks and sales assistants. Such people appear to be "too modern" for the scale, which failed to discriminate adequately among them. A second finding was that an acceptable level of scale reliability (internal consistency) could be obtained using far fewer than the 75 items comprising the original scale. This latter finding is important from the practical point of view, having implications for the time needed to administer the scale.

It was thus decided to construct a shortened version of the scale and to evaluate its suitability for use with relatively poorly educated people employed in occupations of low skill content.

2. THE AIMS OF THE PRESENT STUDY

The present investigation had four aims:

- 1) to construct a shortened version of the scale;

- 2) to assess the suitability, in terms of reliability (internal consistency) and discriminant validity, of this version for use with relatively poorly educated people in occupations having a low skill content;
- 3) to explore the factor structure of the scale following its administration to a sample of such people, and to compare this structure with that obtained in the first study;
- 4) to investigate, by means of regression analysis, the relative contributions of various life history variables to individuals' scores on the scale.

3. METHOD

3.1 CONSTRUCTION OF A SHORTENED SCALE

3.1.1 SELECTION OF ITEMS FROM THE ORIGINAL SCALE

The shortened scale consisted of 25 of the 75 items which comprised the original scale.

The 75 original items were obtained in the following way: a conceptual model of an "ideal-type modern man", based on a definition of Inkeles¹⁾ (1966)²⁾, was used to select items from the Overall Modernity (OM) scale developed by Inkeles and Smith (1974)³⁾ and to generate items based on the work of

- 1) Inkeles (1966) describes modern man as one who:
- (a) is open to new experience, innovation and change;
 - (b) holds opinions on a wide range of topics outside his immediate environment, but is democratic in his acceptance of the variety of opinion;
 - (c) is oriented toward the present and future rather than the past;
 - (d) values planning;
 - (e) believes that man is able to dominate his natural environment i.e. efficacy;
 - (f) believes in calculability i.e. that the world runs according to laws which are subject to human prediction and control;
 - (g) is aware of the dignity of others;
 - (h) has faith in science and technology;
 - (i) believes that status and rewards should be attributed according to achievement rather than ascription.

Lernex(1958)⁴ and Schnaiberg (1970)⁵. (For details see Thompson, 1977, pp.6-7).

This scale was administered to a sample of 201 Black South Africans employed in eight organizations on the Witwatersrand. The resultant data were subjected to various analyses including item analysis and factor analysis. The factor analysis was performed on 31 of the 80 items (the 5 mass-media items had been included) identified by the two criteria of subject-response variance and Kaiser's (1974)⁶ "Measure of sampling adequacy" (MSA). Eight factors emerged, six of which were interpreted and labelled . (Ibid, pp. 29-30).

The shortened scale consisted of 25 of the 31 items which loaded 0,30 or higher on one of these eight factors. These items were considered suitable because they had elicited good subject-response variance and met the requirements of Kaiser's (1974)⁷ MSA.

3.1.2 PRESENTATION AND SCORING OF SCALE ITEMS

As in the first study, scale items were in a modified Likert-type format, verbally presented by the interviewers. The pre-coded response options presented to subjects occupied a four-point continuum in which 1 represented "highly traditional", 2 represented "fairly traditional, but with modern leanings", 3 was "fairly modern, but with traditional leanings", and 4 was "highly modern". The range of possible scores was thus 25 - 100.

3.1.3 BIOGRAPHICAL ITEMS

In the first study, contrary to expectations, modernity scores were poorly associated with the proportions of total life and of working life spent in an urban environment. A possible reason for this, it was argued, was that the allocation of people to "more" or "less" urbanized groups ("urbanized" here refers purely to the period spent living and working in an urban environment) may have been inaccurate because of a relative paucity of biographical data. Accordingly, in the

present study biographical data more detailed than in the first were collected so as to allow a more precise distinction between people who have spent unequal periods in an urban environment. This allowed the identification of an urban and a transitional group, and an exploration of the discriminant validity of the shortened scale.

3.2. ADMINISTRATION OF THE SCALE

The questionnaire, although written in English, was administered in the vernacular by Black research staff of the NIPR.

3.3. THE SAMPLE

The sample comprised 334 Black employees of one organization in Johannesburg, occupying low-level positions. There were 242 men and 92 women. The unequal ratio of men to women decided us against splitting the sample for purposes of analysis, except in the latter part of the report where we found male/female variation in response to the scale to be significant.

3.4 ANALYSES PERFORMED

The statistical procedures applied to the data to test the discriminant validity, reliability and factorial structure of the scale were:

- 1) the calculation of Pearson product-moment correlation coefficients between certain criterion variables and modernity;
- 2) item analysis, which assessed the overall reliability of the scale using KR-20;
- 3) an iterative principal factor analysis (Harris, 1962)⁸;
- 4) and a 'leaps and bounds' regression, which allowed us to isolate 'good' predictors of Modernity.

4. RESULTS4.1 CHARACTERISTICS OF THE SAMPLE

Tables 1-4 reflect the composition of the sample in demographic terms.

Table 1

Distribution of Subjects by Educational Level

Education Category	No. of Subjects	% of Sample
No Schooling	56	18
Sub A/1 year	2	1
Sub B/2 years	7	2
Std I/3 years	32	10
Std II/4 years	14	4
Std III/5 years	33	10
Std IV/6 years	29	9
Std V/7 years	47	15
Std VI/8 years	56	18
Form I/9 years	10	3
Form II/10 years	23	7
Form III/11 years	11	4
Form IV/12 years	3	1
Form V/13 years	0	0
	N= 323	100

Mean education in years = 5,45

SD of education in years = 3,33

Missing information = 11

Mean educational attainment is markedly similar to that of the first study sample, 5,60 years for men and 6,08 years for women. In fact, when the education mean for this study was compared, using the t-test, with those

of the men and the women in the first study there was no significant difference at the 99% level ($p < 0,01$). There was, however, a significant difference between the mean education of the first study women and that of the second study sample, but this was at the 95% level ($p < 0,05$).

Table 2

Mean Educational Level of First and Second Study Samples Compared

	Educational Means		t-test Results
	First Study	Second Study	
Males	5,60 years	5,45 years	$t = 0,5; df = 439 \quad p < 0,01$
Females	6,08 years		$t = 2,42; df = 404; p < 0,01$

The first clear difference between the previous and the present study samples relates to age. The present sample is considerably older than the other two, having a mean age of 42,22 years compared with 33,02 years for men and 24,85 for women in the first study.

The second difference between the first and second study samples relates to occupational level. Whereas 98% of the present sample (see Table 3) were classified as labourers, only 39,4% of men and 17,0% of women in the first study sample fell into this category. The remainder of the first study subjects were employed chiefly in operative or clerical posts.

Table 3Distribution of Subjects by Occupation

Occupational Category	No. of Subjects	% of Sample
<u>Manual</u>		
Labourer	329	98
Operative	2	1
Supervisor	0	0
<u>Non-Manual</u>		
Clerk	3	1
Salesman	0	0
	N= 334	100

The third difference between present and first study samples concerns proportion of life spent in an urban area. Only 15% of those in this sample had spent between 90% and 100% of their lives in an urban area compared with 29,2% of males and 61,4% of females in the first study. However, proportion of life spent working in an urban area comprises on average well over 90% of total working life, a picture similar to that presented in the first study.

Table 4

Distribution of Subjects by % of Total Life spent in an Urban Area

<u>% of life in an urban area</u>	<u>No. of Subjects</u>	<u>% of Sample</u>
0 - 10	0	0
11 - 20	4	1
21 - 30	19	6
31 - 40	39	12
41 - 50	73	22
51 - 60	85	26
61 - 70	38	11
71 - 80	10	4
81 - 90	9	3
91 - 100	47	15
	N= 334	100

Mean years in urban area = 24,68

SD = 10,41

In summary, the present sample differs from the first study sample in terms of age, level of occupation, and degree of urbanization, but is similar to it in educational level and in proportion of total working life spent in an urban area.

4.2

THE DISTRIBUTION OF MODERNITY SCORES

Table 5 presents the distribution of scale or modernity scores over the possible range of 25-100. The actual maximum score was 99, the actual minimum 34, giving an actual range of 65 points.

Table 5Distribution of Subjects by Modernity Score

Modernity score	No. of subjects	% of sample
25 - 30	0	0,0
31 - 35	3	0,8
36 - 40	5	1,5
41 - 45	11	3,3
46 - 50	17	5,0
51 - 55	18	5,4
56 - 60	38	11,4
61 - 65	48	14,4
66 - 70	57	17,1
71 - 75	40	12,0
76 - 80	34	10,2
81 - 85	33	9,9
86 - 90	18	5,4
91 - 95	10	3,0
96 - 100	2	0,6
	N= 334	100,0

Mean modernity score = 67,84

SD = 13,08

Skewness = -0,171

Kurtosis = -0,306

Scores are well distributed over the actual range, the distribution is desirably "flat" or platykurtic, whilst the slight degree of negative skewness indicates only a slight concentration of scores at the higher end of the distribution.

To allow comparison of this distribution of scores with that obtained in the previous study, scores on the 25 items comprising the shortened scale were summed for the first study subjects. These scores, for males and females combined, are presented in Table 6.

Table 6

Distribution of Subjects by Modernity Score - First Study Sample

Modernity score	No. of subjects	% of sample
25 - 30	0	0,0
31 - 35	1	0,5
36 - 40	3	1,0
41 - 45	4	2,0
46 - 50	7	3,5
51 - 55	9	4,5
56 - 60	15	7,1
61 - 65	25	12,1
66 - 70	28	14,2
71 - 75	35	17,7
76 - 80	22	11,1
81 - 85	21	10,6
86 - 90	18	9,1
91 - 95	11	5,6
96 - 100	2	1,0
	N= 201	100,0

Mean modernity score = 71,33

SD = 12,89

Skewness = -0,307

Kurtosis = -0,078

It is evident that this distribution is also platykurtic, although the comparatively greater negative skewness reflects a concentration of scores at the higher end of the distribution. In addition, the first study mean score is over 3 points higher than that of the present study, a difference which was found to be significant ($p < 0,01$) when the means were compared using the t-test.

These findings have considerable implications, particularly since the subjects in the present study are on the whole older, less urbanized and at an occupationally lower level than those of the first study. It is suggested that the variation in response to the items in our Shortened Modernity Scale is a reflection of these differences between the two samples and, therefore, that our Scale is more suitable for application to less urbanized labourers than, for example, to highly urbanized clerks.

4.3 DISCRIMINANT VALIDITY OF THE SCALE

4.3.1 RELATION OF SCALE SCORES TO CRITERION VARIABLES

The modernity-related criteria employed in the first study were again adopted in the present study: length of time spent in an urban area, length of time spent in an urban work environment, standard of education and degree of mass-media exposure. Six mass-media items were used to measure the extent of the subjects' exposure to newspapers, magazines, radio and television. Pearson product-moment correlation coefficients were calculated between these variables and total modernity scores; results are presented and discussed below.

The proportions of total working life and overall life of subjects spent in urban situations did not correlate with modernity scores in either the direction or strength anticipated, the coefficients being -0,30 and 0,11 respectively. The first study coefficients were 0,29 and 0,21 for the men, and -0,02 and -0,08 for the women.

Standard of education and degree of mass-media exposure did, however, co-vary with modernity scores, the coefficients being 0,34 and 0,38 respectively¹⁾. The first study coefficients were 0,51 and 0,60 for the men, and 0,34 and 0,41 for the women on these two variables.

The scales used in the two studies differed in length - 25 as opposed to 75 items - and it is therefore difficult to draw conclusions regarding the order or strength of correlation coefficients.

4.3.2 COMPARISON OF AN URBAN AND A TRANSITIONAL GROUP

The consistently low, and sometimes negative, correlations between modernity and extent of urban work and life experience merits further attention, particularly since Inkeles and Smith (1974)⁹ and other workers in the field have emphasized the importance of the urban environment as a "school in modernity". The collection of more detailed biographical information in the second study allowed us to test this conclusion by comparing two groups, one urban and the other transitional.

Criteria used to distinguish members of the two groups were:

- 1) place of birth - urban or rural;
- 2) place resident for first 15 years - urban or rural;
- 3) length of life spent in town - 100% of life or less than 100%;
- 4) legal status - the urban group would be permanent residents by birth, - the transitional group would be contract workers;
- 5) place identified as home - the urban group would see Johannesburg as home, the transitional group would not.

1) The question of 'education and individual modernity' is explored in Appendix A, pp. 30 - 42 prepared by M. Tabane.

On the basis of these criteria 33 cases were identified as members of the urban group, 97 as members of the transitional group. The mean modernity score of the urban group was 83,51 whilst that of the transitional group was 63,86, a 20 point difference which is significant at the 95% level when compared in a one-way analysis of variance.

Since education may have been an intervening (i.e. moderating) variable, the mean educational attainment level for the groups was compared. That of the urban group was 8 years, whilst that of the transitional group was 5 years, a difference which is significant at the 95% level on a one-way analysis of variance. Education can therefore be said to be a moderating variable, although it would appear that higher educational attainment is linked to permanent urban residence.

To illustrate the influence of varying life history on attitudinal modernity two examples are provided of subjects whose scores on the shortened Scale fall at the extremes of the distribution.

TWO CASE STUDIES

Case Study 1

A Zulu in his late forties, this man obtained a score of 34, the lowest in the present study. His early years were spent herding cattle in a rural area and he received no formal education. At the age of 20 he travelled to the city to seek employment, and and he now migrates between his urban and rural homes. However, he has no intention of legally qualifying to live permanently in town because, as he said, "I do not like this place, I am only here for the purpose of work".

This man has retained his rural ties through regular visits, and he spends his annual leave attending to his fields and livestock. Furthermore he demonstrates certain traditional behaviours in that he has two wives, whom he married by customary union, the lobola being paid in cattle. His wives are not gainfully employed as this is "against the custom".

This man's life history, it is argued, has contributed largely to his low degree of attitudinal modernity.

Case Study 2

This person, a young Sotho woman, obtained a score of 98, one of the highest in this study. Born and brought up in Soweto, she has no rural ties and expressed satisfaction with life in the city.

In contrast to our first example, she is monogamous, was married by Christian rites and her lobola was paid in cash, not cattle. She was educated to the level of standard 9 and reads widely and is, furthermore, a member of the Zion Apostolic Church, an independent church active in Soweto.

This woman's life history, it is argued, has contributed largely to her higher degree of attitudinal modernity.

4.4

ITEM ANALYSIS

The reliability of our Shortened Modernity Scale, calculated using the Kuder-Richardson Formula 20, was 0,780. The rejection of 4 items with Gulliksen's Indices (Gulliksen, 1950)¹⁰ of below 0,31 only marginally increased the overall reliability to 0,792, which suggests that the 25 item scale uniformly produces good subject response variance.

In the first study optimal reliability for the male sample, based on 44 items which remained at the final iteration, was 0,888, whilst that for the female sample (48 items at final iteration) was 0,855. An examination of the items rejected for both samples suggested that they were either inaccurately coded, poorly conceptualized or encouraged response set. These items were not used in the present study.

The different, and somewhat lower, overall reliability of the second study scale may be attributed to the fact that it is a shorter scale, which means that the KR-20 could not be increased by simply rejecting items.

4.5 FACTOR ANALYSIS

4.5.1 SELECTION OF ITEMS FOR INCLUSION IN ANALYSIS

Analysis of the responses of the 334 subjects to the 25 items provided a measure of sampling adequacy (MSA) coefficient of 0,747, which is described by Kaiser (1974)¹¹ as "middling". In an attempt to improve the overall MSA two items, S1 and S6, with MSA coefficients of less than 0,50 were rejected. The overall MSA now rose marginally to 0,761, still assessed by Kaiser (1974)¹² as "middling" but adequate for factor analysis. An iterative principal factor analysis was performed on the data. (Harris, 1962)¹³

4.5.2 FACTORS OBTAINED

The fact that six factors had been interpretable in the first study suggested that the six factor solution should be examined in this study. However, since two factors were not interpretable it was decided to concentrate on the four factor solution.

Table 7 presents the matrix of rotated factors, factor loadings, the sum of the squared loadings, and the communalities for the four factor solution. Factor loadings of 0,30 and above are considered significant and are asterisked.

Table 7

The Varimax Rotation, Communalities and the Sum of the Squared Loadings for four factors

Item No.	Factor 1	Factor 2	Factor 3	Factor 4	Communalities
S 2	0,29	0,06	0,04	0,02	0,09
S 3	-0,03	0,38*	0,01	0,09	0,16
S 4	0,30*	0,18	0,36*	-0,06	0,25
S 5	-0,00	0,12	0,46*	0,13	0,24
S 7	0,09	0,20	0,22	-0,06	0,10
S 8	0,45*	0,27	0,13	-0,11	0,30
S 9	0,13	0,44*	0,26	-0,02	0,28
S 10	0,34*	-0,03	0,13	0,15	0,16
S 11	0,42*	0,09	0,23	0,10	0,25
S 12	0,00	0,48*	0,07	0,17	0,26
S 13	0,14	0,21	0,33*	0,21	0,21
S 14	0,17	0,26	0,27	0,27	0,24
S 15	0,15	0,04	0,14	0,03	0,04
S 16	0,07	0,10	0,32*	0,18	0,15
S 17	0,25	0,35*	0,10	-0,01	0,19
S 18	0,08	0,52*	0,02	0,29	0,36
S 19	0,16	0,08	0,25	0,31*	0,19
S 20	0,15	-0,02	0,39*	0,01	0,17
S 21	0,50*	0,21	0,14	0,09	0,33
S 22	0,44*	0,10	0,35*	0,11	0,33
S 23	0,20	0,33*	0,23	-0,10	0,21
S 24	0,61*	0,03	-0,02	0,14	0,39
S 25	0,11	0,14	0,07	0,58*	0,37
	1,7	1,5	1,3	0,8	
	Sums of the Squared Loadings				

4.5.3 DISCUSSION OF FACTORS OBTAINED

Factor 1: Attitudes towards Women

Items which load significantly are: S24, S21, S8, S22, S11, S10 and S4. Item S4 loads more strongly on factor 3 and is not considered in the interpretation of this factor. The remaining items deal with the desirability of men and women working together, preferential educational opportunities for boys or girls, equality of pay for men and women, contraception, the role of the husband in the home, and reactions of men to a woman supervisor. These items are concerned with "attitudes towards women", and this is the designation used to describe factor 1.

Factor 2: Personal Efficacy

Items which load significantly are: S18, S12, S9, S3, S17 and S23. These items deal with personal efficacy, independent decision-making, reliability, opinion variation and obligations to assist kin. These items refer to "personal efficacy", and this is the designation used to describe this factor.

Factor 3: New Experience

Items which load significantly are: S5, S20, S4, S13, S16 and S22. Item S22 loads more strongly on factor 1 and is therefore not considered in the interpretation of this factor. The remaining items deal with individual status through birth or education, sources of information, rural-urban dwelling preference, and individual decision-making. Responses to such items would be influenced by "new experience", and this is the designation used to describe this factor.

Factor 4

Two items load significantly: S25 and S19. These items deal with attitudes to scientific explanation and whether or not the opinions of women should be considered in an interview situation. This factor is not interpretable because the two items which load on it refer to unrelated areas of experience.

4.5.4 COMPARISON OF FIRST AND SECOND STUDY FACTOR STRUCTURES

The results of the factor analysis confirm the hypothesis that Modernization is a multi-dimensional construct. Table 8 presents a comparison of the factor analytic structures revealed in the first and second studies, the 19 items considered being those which loaded significantly on the factors obtained in both studies.

FIRST STUDY			
Factor 1	Factor 2	Factor 3	Factor 4
New Experience	Efficacy	Kinship Orientation	Individual Autonomy
S4	S3	S9	S13
5	12	17	16
10	18	23	24
11			
19			
20			
21			
22			
Factor 5	Factor 6	Factor 7	Factor 8
Rationality	Depend-ability	Not Interpreted	Not Interpreted
S25	0	S8	0

SECOND STUDY			
Factor 1	Factor 2	Factor 3	Factor 4
Attitudes towards Women	Personal Efficacy	New Experience	Not Interpreted
S8	S3	S4	S19
10	9	5	25
11	12	13	
21	17	16	
22	18	20	
24	23		

Table 8

First and Second Study Factor Solutions Compared

An examination of items which load on interpretable factors in both studies illustrates some interesting points. First, we found that items which load on factors 2 and 3 in the first study load only on factor 2 in the second study. The element of efficacy seems predominant, although independence from kin is included, hence the designation "personal efficacy" in the present study.

Second, we find that items which loaded on factor 1 in the first study are now split between factors 1 and 3. Those which load on factor 1 in the present study (i.e. S10, 11, 21 and 22) deal with attitudes towards women, whilst those which load on factor 3 (i.e. S4, 5 and 20) relate to the reactions of people to new experience. In other words, it would appear that 'attitudes towards women' has emerged as a clear and important dimension, although 'new experience' remains an important factor.

This conclusion is supported by the finding that items which loaded on factor 4 in the first study are now split between factors 1 and 3. Item S24, which concerns itself with attitudes towards men and women working together, now loads on factor 1, whilst items S13 and 16, dealing with changing attitudes towards parents, now load on factor 3.

In conclusion, therefore, the structures revealed by the two sets of factor analytic data are comparable. 'New experience' remains a key dimension, whilst 'attitudes towards women' emerges as a clear dimension and the aspect of 'personal efficacy' is emphasized.

4.6 REGRESSION ANALYSIS

Finally, the extent to which certain independent biographical variables contributed towards attitudinal modernity was explored, by means of regression analysis. The method used was a 'leaps and bounds' regression (Furnival and Wilson, 1974)¹⁴ which finds the best subsets of the independent, or predictor, variables and regresses these against the dependent variable. The dependent variable, modernity, excluded scores on items S4 and S20 since

they related closely to two of the independent variables.

Eighteen independent variables were used, 9 of which identified tribal affiliation, while the remainder related to education, sex, occupation, stabilization, age, literacy and legal status.

4.6.1 DESCRIPTION OF INDEPENDENT VARIABLES

Education

Level of education consistently correlates with the modernity score. Educational level ranged from no schooling to twelve years in the present study.

Sex

The first and second study data suggest that women are more urbanized than men and it is possible that women are therefore more modern than men.

Tribe

The sample was divided into 9 groups according to tribal affiliation (e.g. Southern Sotho, Northern Nguni or Venda) and these variables were treated discretely in the regression.

Occupation

The majority of our subjects (98%) were employed as labourers.

Stability 1

This is an index of the proportion of life spent in an urban area after the age of 15¹⁾, weighted by the age of the subject²⁾.
(Alverson, 1967)¹⁵

1) The use of age 15 as a cut-off point before the calculation of a stability index was recommended by Mitchell (1956)¹⁷, who felt that this was the approximate age at which people made the decision to leave a rural area to seek work in town. Stabilization is described by Mitchell (1956)¹⁸ as, "... the change over from the circulation of people between town and country to the settlement of people in town". (p.697)

Stability 2

This is an index of the proportion of life spent in an urban area after the age of 15, not weighted by age³⁾. (Mitchell, 1956)¹⁶

Age

The age range of the sample was 19 to 65.

Literacy

This variable concerns the number of languages the subject claims to be able to read and write. The possible languages were home language, English, and Afrikaans, whilst some subjects (14) claimed another Bantu language other than their home language as a fourth.

Legal Status

The sample was divided into two broad groups dependent on the status of subjects under section 10 (1) of the Urban Areas Consolidation Act. The first group was urban born and bred, whilst the second included migrants and those people who had qualified to live permanently in the urban area through 15 years residence or 10 years continuous employment with one employer.

Residence before age 15

The stability indices take no account of the first 15 years of our subjects' lives, but since these may be socially and attitudinally formative this variable was included. A distinction was made between those born in town and who had spent all of their first 15 years there, and those born in the country and who had spent all their first 15 years there. A large proportion (94%) of our sample belonged to the second group.

$$2) \text{ Stability 1} = \frac{\text{Length of residence in town since age 15}}{\text{Number of years lived since age 15}} \times \text{Age} \times 100$$

$$3) \text{ Stability 2} = \frac{\text{Length of residence in town since age 15}}{\text{Number of years lived since age 15}} \times 100$$

4.6.2

DISCUSSION OF REGRESSION RESULTS

The 16 variable subset produced the best multiple r of 0,570, and although this solution explained only 32,46% (r^2) of the variance it merits attention.

Table 9

Leaps and Bounds Regression Analysis: 16 Predictor Variables
Against Modernity

Variable	Beta Weight	N
1. Education	0,158	323
2. Sex	0,173	334
3. South Sotho	0,522	334 (20)*
4. West Sotho	0,722	334 (88)
5. East and North Sotho	0,580	334 (52)
6. North Nguni	0,555	334 (57)
7. South Nguni	0,388	334 (19)
8. Venda	0,553	334 (58)
9. Republic Shangaan	0,417	334 (25)
10. Ndebele	0,313	334 (14)
11. Stability 1	-0,337	334
12. Stability 2	0,344	334
13. Age	0,080	334
14. Literacy	0,114	286
15. Legal Status	0,045	334
16. Childhood - First 15 years	-0,107	334

Multiple $r = 0,570$

$r^2 = 32,46$

*Actual N belonging to each group

Two variables are excluded from this subset, one being occupation and the other a tribe variable. Since 80% of our subjects were unskilled it was not anticipated that occupation would be a predictor of modernity. The tribe variable excluded was one in which subjects not falling into the groups mentioned above had to state their tribal affiliation. This involved only one of our subjects, hence the exclusion of this variable.

The tribe variable is difficult to interpret since the beta weight appears to be a function of the actual number of subjects which fall into each group. The value of tribal affiliation as a predictor of modernity is not therefore considered.

In general, it is interesting to note that education and sex are 'good' predictors of modernity, and this emerged as a consistent pattern in the regression analysis. The negative beta weight on Stability 1 suggests that, since this index was weighted by age, older subjects who have spent long periods in the urban area after the age of 15 are not necessarily highly modern. This index may not be a good predictor of modernity. Stability 2, on the other hand, may be a useful predictor of modernity.

Age and modernity do not co-vary, whilst the beta weights on legal status and childhood reflect the rural origin of our sample.

In an attempt to obtain a more parsimonious solution to the regression equation, the regression analysis was repeated, first using three and then four independent variables. Tables 10 and 11 present the solutions that were considered interpretable for first three and then four variables. (The complete regression solutions for 3, 4 and 16 predictor variables are presented in Tables 13-15, Appendix C, pp. 51 - 57).

Table 10Leaps and Bounds Regression Analysis: 3 Predictor Variables against Modernity

Variable	Beta Weight	N
1. Education	0,28	323
2. Sex	0,17	334
3. Childhood - First 15 years	-0,18	334

Multiple $r = 0,50$
 $r^2 = 25,11$

Table 11Leaps and Bounds Regression Analysis: 4 Predictor Variables against Modernity

Variable	Beta Weight	N
1. Education	0,23	323
2. Sex	0,22	334
3. Stability 1	-0,26	334
4. Stability 2	0,33	334

Multiple $r = 0,52$
 $r^2 = 27,86$

The merits of education, childhood and stability 1 and 2 as predictors of modernity have been discussed, the role of sex has not. This variable was coded 1 for men and 2 for women, and the positive beta weight suggests that women are more modern than men.

In the present study this was in fact the case, the women (92 cases) having a mean modernity of 76,43, whilst that of the men (242 cases) was 64,70, a difference found to be significant at the 99% level. ($t = 8,06; df = 332; p < 0,01$).

An examination of the biographical data for men and women demonstrates that women have spent longer periods, particularly before age 15, in the urban areas, many of them having been born there. The men, on the other hand, were largely rural born, and consequently spent greater proportions of their lives in rural areas, as demonstrated in Table 12.

Table 12

Proportion of Life spent in a Rural Area: Men and Women Compared

Proportion (%)	% Men	% Women	% Of total Sample
0 - 29	13	60	25
30 - 59	67	35	58
60 - 89	20	5	17
90 - 100	0	0	0
Totals	100	100	100

The question of male /female variation in response to the modernity scale was explored by Thompson (1977,pp. 18, 19 and 20)¹⁹ and the conclusion drawn was that the scale was an insensitive assessment device. The present findings suggest that the Shortened scale is more sensitive to variation, and that the variation may, in turn be linked to the life histories of the people concerned. (cf Gilbert, 1979)²⁰. Black women in South Africa are thus possibly using the urban environment as a means of establishing a new identity, which is reflected in greater attitudinal modernity.

5. CONCLUSIONS AND RECOMMENDATIONS

The present study suggests that we have produced a Short Modernity Scale of reasonable overall reliability which discriminates amongst individuals with varying life histories. The importance of education as a predictor of attitudinal modernity was confirmed and urban life experience was found to be an important "school in modernity". An interesting finding, which requires further attention, is that the women in both this and the first study were generally more modern than men.

Turning to the modernity construct we find, as anticipated, that it is multi-dimensional. However, the nature and content of the dimensions which we found appear to depend on the sample under consideration. In the present study, for example, "attitudes towards women" emerged as an important dimension, whereas in the first study this was not the case.

In conclusion, our Shortened Modernity Scale is best suited to application amongst occupationally low-level Blacks who are primarily rural in origin. The present report marks the completion of work on Scale development, although it is possible that the Short Scale will be applied to different samples, in terms of demographic variables such as education and occupation, to further test its discriminant validity.

<u>REFERENCES</u>	<u>ORDER OF APPEARANCE</u>
Alverson, Hoyt S (1967) Time Series Analysis of Migratory Stabilization. <u>African Studies</u> , 26(3),pp.139-144.	15
Furnival, George M and Wilson, Robert W (1974) Regression by Leaps and Bounds. <u>Technometrics</u> , Vol.16, No.4, November. pp. 499-511.	14
Gilbert, A J (1979) <u>Determinants of the Progress of Black Workers in the Work Situation: An Exploratory Study of a Theoretical Model</u> . CSIR Special Report PERS. 293, Johannesburg.	20
Gulliksen, H (1950) <u>Theory of Mental Tests</u> . John Wiley and Sons Inc., New York.	10
Hall, S K P (1976) <u>The Development of a Scale to Assess Modernization Among South African Blacks</u> . CSIR PERS. Report No. 251, Johannesburg.	
Harris, C W (1962) Some Rao-Guttman Relationships. <u>Psychometrika</u> , 27, pp. 247-263.	8, 13
Inkeles, Alex (1966) <u>The Modernization of Man in Modernization: The Dynamics of Growth</u> . ed. Myron Weiner, Basic Books Inc., New York.	2
Inkeles, A (1966) <u>Project on Social and Cultural Aspects of Development, Standard English Version of the Questionnaire</u> . Unpublished Document, March.	

REFERENCESORDER OF APPEARANCE

- Inkeles, A
and Smith D H (1974) 3, 9
Becoming Modern: Individual Change in Six Developing Countries. Heinemann, London.
- Kaiser, H F (1974) 6, 7, 11, 12
Little Jiffy, Mark IV. Educational and Psychological Measurement, 34, p.112.
- Lerner, Daniel (1958) 4
The Passing of Traditional Society. The Free Press of Glencoe.
- Mitchell, J C (1956) 16, 17, 18
Urbanization, Detribalization and Stabilization in Southern Africa : A Problem of Definition and Measurement in Social Implications of Industrialization and Urbanization in Africa South of the Sahara: Prepared under the Auspices of Unesco by the International African Institute, London.
- Schnaiberg, Allan (1970) 5
Measuring Modernism: Theoretical and Empirical Explorations. American Journal of Sociology, Vol.76, pp. 399-425.
- Thompson, J C (1977) 1, 19
The Measurement of Modernization among South African Blacks: A Pilot Study. CSIR PERS. Report No. 273, Johannesburg.

APPENDIX A - EDUCATION AND INDIVIDUAL MODERNITY

M TABANE

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
1. INTRODUCTION	33
2. AIM OF THE INVESTIGATION	35
3. ANALYSIS OF THE DATA	36
3.1 Modernity and the Level of Education	36
3.2 The Urban and Transitional Groups Compared	39
3.3 Two Case Studies	39
4. GENERAL CONCLUSIONS	41
REFERENCES	41
STUDIES REFERRED TO BY HOLZINGER AND THEISEN (1977)	42

LIST OF TABLES

<u>TABLE</u>	<u>PAGE</u>
1. SIMPLE CORRELATIONS BETWEEN EDUCATION AND INDIVIDUAL MODERNITY IN 12 NATIONS	33
2. MEAN MODERNITY OF SUBJECTS ACCORDING TO EDUCATIONAL LEVEL	36
3. MEAN MODERNITY SCORES ACCORDING TO COMBINED EDUCATIONAL LEVELS	38

FIGURE

1. MEAN MODERNITY SCORES ACCORDING TO YEARS OF SCHOOLING	37
--	----

1. INTRODUCTION

Several studies have provided convincing empirical evidence of the strong association between formal education and individual modernity. The school, it was observed, has a modernising impact upon individuals. This is well illustrated by the following table, taken from Holsinger and Theisen (1977)¹⁾, which shows the correlation between education and modernity in several studies in different parts of the world.

Table 1Simple Correlations Between Education and Individual Modernity in 12 Nations

	A	B	C	D	E	F	G	H	I
Argentina	-	-	-	0,60	-	-	-	-	-
Brazil	-	-	0,43	-	-	0,57	-	-	-
Chile	-	-	-	0,51	-	-	-	-	-
East Pakistan	-	-	-	0,41	-	-	-	-	-
Guatemala	-	-	-	-	-	-	0,52	-	-
India	-	-	-	0,71	-	-	-	-	-
Israel	-	-	-	0,44	-	-	-	-	-
Mexico	-	-	-	-	-	0,55	-	-	-
Nigeria	0,50 ²	-	-	0,52	-	-	-	-	-
Puerto Rico	-	0,15	-	-	-	-	-	-	-
Tunisia	-	-	-	-	0,53 ³	-	-	0,26	-
United States	-	-	-	-	-	-	-	-	0,41

1. Mean correlation = 0,47.

2. Mean for both Moslem and Christian schools.

3. Mean for both boys' and girls' scores.

Project Code:

A. Armer and Youtz, 1971; N= 591; 17-year old schoolboys.

B. Cunningham, 1974; N= 1,339; grades 10,11,12, male and female.

C. Holsinger, 1974; N= 2,531; grades 3,4,5, male and female.

D. Inkeles and Smith, 1974; N= 6,000; adult male factory workers, 18 - 32 years old.

E. Klineberg, Stephen, 1974; N=526; family groups with children aged 13 - 19.

F. Kahl, 1968; N= 627 for Brazil; N= 740 for Mexico; adult male factory workers, 25-49 years old.

G. Portes, 1973; N= 1,060; adult married couples.

H. Sack, 1974; N= 1,106; predominantly male workers, 17-70 years old; mean age of 27,9 years.

I. Suzman, 1974; N= 502; Black males and females 25-45 years old.

1) See 'studies referred to by Holsinger and Theisen' p. 42.

Formal curricula of many schools have been examined and found to have as their stated objectives the teaching of certain kinds of knowledge. The typical formal school curriculum does not explicitly make provision for instruction in modernity (Holsinger, 1973; Inkeles and Smith, 1974)^{1,2}. However, since better educated people have consistently been observed to obtain higher modernity scores this led to a suggestion that the school, at a subconscious and informal level, also helps to equip individuals with modern attitudes and values (Holsinger, 1973; Inkeles and Smith, 1974)^{3,4}.

Studies by Holsinger (1973)⁵, Armer and Youtz (1970)⁶, and Inkeles and Smith (1974)⁷ have addressed themselves to the question: through what means does formal schooling allow the acquisition of modern attitudes and values? Some consensus on this point is that the school has peculiar organizational properties that provide opportunities for learning modern values, (Holsinger, 1973; Dreeben, 1968; and Inkeles and Smith, 1974)^{8,9,10}. Dreeben noted that the classroom exposes the individual to a situation where he is expected to be rational, objective, and to aspire for "universal standards of performance and competence" (Holsinger and Theisen, 1977)¹¹. Such expectations are not commonly encountered in other social settings.

Inkeles and Smith (1974)¹² have identified "mechanisms of learning" by which the school teaches attitudes and values that characterize a modern man. Through processes of reward and punishment, modelling, exemplification and generalization, individuals are unwittingly taught to be modern. However, these authors point out that such processes are not unique to the classroom.

In their Brazilian project Holsinger and Theisen (1977)¹³ constructed an index that measured the quality of the school setting. Five dimensions were adopted for this purpose, viz. teacher modernity, physical environment, teacher negativism, sociometric structure and classroom climate. When these dimensions were combined into an overall measure of school quality, they offered a good predictor of modernity.

Attempts to establish whether a positive relationship exists between formal schooling and individual modernity has led various researchers to postulate that:

1. individuals who have been to school score higher on modernity than those who have not and,
2. the longer individuals have been to school, the higher their modernity scores will be.

The findings of studies by Holsinger and Theisen (1977)¹⁴, Inkeles and Smith (1974)¹⁵, and Ineke Cunningham (1973)¹⁶ have supported these postulates.

Support for the first postulate is found in two studies. Holsinger's Brazilian study demonstrated the powerful impact of education on modernity. Holding the socio-economic (SES) variable constant, he discovered that the difference between a non-school and school group on modernity was wide, and the school group was found to be more modern. Further, Armer and Youtz (1971)¹⁷ found that 83,3% of those individuals in their sample with some secondary education scored high on individual modernity, whilst 62,2% of those with no education scored low.

Support for the second postulate emerged from several studies. Inkeles and Smith (1974)¹⁸ noted an improvement in the individual's overall modernity score of approximately two points for each year of schooling. Holsinger (1973)¹⁹ observed a five point per year increase, while Cunningham's (1973)²⁰ data revealed a two to three point increase per school grade.

These data demonstrate a positive relationship between formal schooling and individual modernity.

2. AIM OF THE INVESTIGATION

The investigation was undertaken to demonstrate more clearly the relationship between education and individual modernity in this, the second study of the NIPR Modernization project.

3. ANALYSIS OF THE DATA

The mean modernity score in the present study was 67,84 whilst the mean educational attainment was 5,45 years.

3.1 MODERNITY AND THE LEVEL OF EDUCATION

Table 2 shows the mean modernity scores of subjects at different educational levels.

Table 2

Mean Modernity of Subjects according to Educational Level

Education Category	No. of Subjects	Mean Mod. Score	Standard Deviation
No Schooling	56	59,35	14,10
Sub A/1 year	2	64,50	14,09
Sub B/2 years	7	64,57	8,01
Std 1/3 years	32	63,31	11,31
Std 2/4 years	14	71,14	12,88
Std 3/5 years	33	66,08	13,75
Std 4/6 years	29	68,89	11,34
Std 5/7 years	47	67,08	11,35
Std 6/8 years	56	71,33	11,61
Form I/9 years	10	73,90	12,36
Form II/10 years	23	78,95	9,71
Form III/11 years	11	77,80	10,70
Form IV/12 years	3	91,66	6,50
Form V/13 years	0	-	-

Overall mean education = 5,45 years Overall mod. score = 67,84

SD = 3,33

SD = 13,08

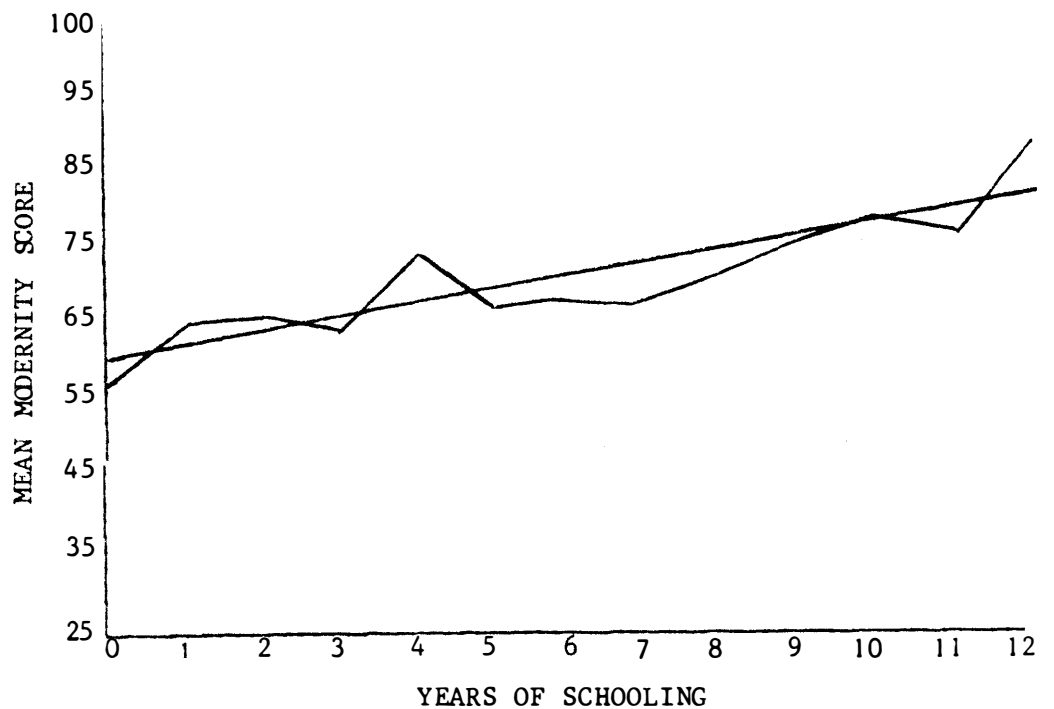
Missing information = 11

The table demonstrates that, in general, higher mean modernity scores are linked to greater scholastic attainment. Figure 1 graphically illustrates this relationship.

The correlation between education and individual modernity was 0,34 which is both positive and relatively strong.

Figure 1

Mean modernity scores according to years of schooling



This graph illustrates the general increment in mean modernity scores for most of the steps up the educational hierarchy. However, some fluctuations are apparent and a closer examination

of our data showed that some subjects at lower educational levels scored high on modernity, whilst others at higher educational levels scored unexpectedly low on modernity.

Despite these inconsistencies, the mean modernity scores of subjects at different educational levels differ significantly when compared in a one-way analysis of variance, ($F = 7,03$; $df = 12$; $p < 0,001$).

However, since the number of subjects at different educational levels varied from 2 to 56, it was decided to combine levels and thus increase the numbers for purposes of comparison. The result was four groups of subjects at the following levels - no schooling, lower primary, higher primary and secondary.

Table 3

Mean modernity scores according to combined educational levels

Combined Educational Level	No. of Subjects	Mean Mod. Score	Standard Deviation
No schooling	56	59,35	12,69
Lower primary/1-4 yrs.	55	65,50	11,52
Higher primary/5-8 yrs.	165	68,86	12,14
Secondary/9-13 years	47	78,61	10,87
	N=323		

Missing information = 11

The application of a one-way analysis of variance to the above data demonstrates a significant difference in the mean modernity scores for the 4 groups. ($F = 23,16$; $df = 3$; $p < 0,001$)

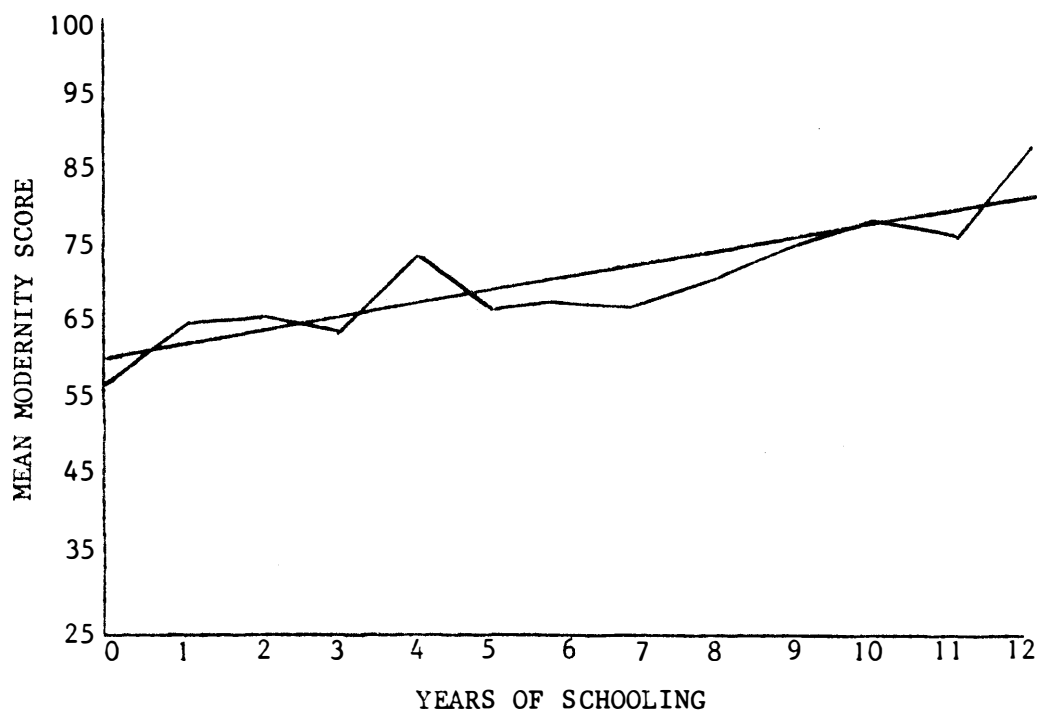
These results support the findings and conclusions reflected in the introduction. It has, however, been demonstrated that

The table demonstrates that, in general, higher mean modernity scores are linked to greater scholastic attainment. Figure 1 graphically illustrates this relationship.

The correlation between education and individual modernity was 0,34 which is both positive and relatively strong.

Figure 1.

Mean modernity scores according to years of schooling



This graph illustrates the general increment in mean modernity scores for most of the steps up the educational hierarchy. However, some fluctuations are apparent and a closer examination

of our data showed that some subjects at lower educational levels scored high on modernity, whilst others at higher educational levels scored unexpectedly low on modernity.

Despite these inconsistencies, the mean modernity scores of subjects at different educational levels differ significantly when compared in a one-way analysis of variance, ($F= 7,03$; $df = 12$; $p < 0,001$).

However, since the number of subjects at different educational levels varied from 2 to 56, it was decided to combine levels and thus increase the numbers for purposes of comparison. The result was four groups of subjects at the following levels - no schooling, lower primary, higher primary and secondary.

Table 3

Mean modernity scores according to combined educational levels

Combined Educational Level	No. of Subjects	Mean Mod. Score	Standard Deviation
No schooling	56	59,35	12,69
Lower primary/1-4 yrs.	55	65,50	11,52
Higher primary/5-8 yrs.	165	68,86	12,14
Secondary/9-13 years	47	78,61	10,87
	N=323		

Missing information = 11

The application of a one-way analysis of variance to the above data demonstrates a significant difference in the mean modernity scores for the 4 groups. ($F= 23,16$; $df= 3$; $p < 0,001$)

These results support the findings and conclusions reflected in the introduction. It has, however, been demonstrated that

attitudinal modernity is influenced by variables other than education. This possibility was explored in the main body of this report in the comparison of the urban and transitional groups, and this comparison is considered briefly here.

3.2 THE URBAN AND TRANSITIONAL GROUPS COMPARED

Despite the consistent increment of modernity scores associated with higher educational levels, the appearance of low modernity scores amongst subjects with high levels of education, and vice versa, raises an important question: is education the only variable at work? The division of the sample into these two groups introduced another important variable - urban life experience.

The mean modernity scores for the two groups differed significantly ($p < 0,05$) that for the urban group being 83,51, whilst that for the transitional group was 63,86. Furthermore, the mean educational attainment level for the urban group was 8 years and of the transitional group 5 years, a difference which is significant at the 95% level.

It would appear, therefore, that both education and urban life experience influence attitudinal modernity, and that higher levels of education are associated with urban life experience.

3.3 Two Case Studies

The following two case studies illustrate factors other than formal education that might influence modernity.

Case Number 1 : No Schooling, "High" Modernity

This 57-year old Tswana man was born and bred in a rural area, which he left in his twenties to seek work in town. He is employed as a semi-skilled labourer and has lived and worked in the urban area for 31 years. However, he does not see Johannesburg as a permanent home, and he plans to retire to his rural home, with which he has retained close ties.

This man never attended school, and amongst his brothers standard 3 was the highest standard reached. Both his parents were illiterate. However, his wife has had six years of schooling, and all his children have attended school, one having completed form IV.

Although uneducated and rural in origin, this subject obtained a "high" modernity score of 81. This might be explained by his long association with, and experience of, the urban way of life. It is also possible that his attitudes have been influenced by those of his children, who are relatively well educated.

This case illustrates the point that more than one variable is at work in determining attitudinal modernity.

Case Number 2: High education, "Low" Modernity

This 34-year old Ndebele man was born and bred in a rural area and now migrates between his rural home and urban place of work. He is a semi-skilled labourer who has spent fourteen years of his life in town between visits to his wife and family at his rural home.

This man, with 11 years of schooling, ranks among the most highly educated in our sample and his wife attended school for 7 years. Furthermore, he values education highly and would wish any children he has to complete a University degree.

Despite the above we find that he obtained a relatively "low" modernity score of 67. One would have anticipated a score above the sample mean of 67,84. However, his early socialization (20 years) in a rural area and the fact that he is a migrant worker with strong rural ties, would seem to explain his "low" modernity score.

4. GENERAL CONCLUSIONS

The findings described in the introduction are supported by those of this investigation. Clearly, education and individual modernity are positively related, although urban life experience and other variables contribute toward attitudinal modernity.

<u>REFERENCES</u>	<u>ORDER OF APPEARANCE</u>
ARMER, M and YOUTZ, R (1971) Formal Education and Individual Modernity in an African Society. <u>American Journal of Sociology</u> , Vol. 76, pp. 604-626.	6, 17
CUNNINGHAM, INEKE (1973) The Relationship between Modernity of Students in a Puerto Rican High School and their Academic Performance, Peers and Parents. <u>International Journal of Comparative Sociology</u> , Vol. XIV, Number 3-4, September-December.	16, 20
DREEBEN, ROBERT (1968) <u>On what is learned in School</u> . Addison-Wesley Publishing Company, Reading, Massachusetts.	9
HOLSINGER, DONALD B (1973) The Elementary School as Modernizer: a Brazilian Study. <u>International Journal of Comparative Sociology</u> , Vol. XIV, Number 3-4, September-December.	1, 3, 5, 8, 19
HOLSINGER, DONALD B and THEISEN, GARY L (1977) Education, Individual Modernity, and National Development: A Critical Appraisal. <u>The Journal of Developing Areas</u> , 11, April, pp. 315-334.	11, 13, 14

INKELES, ALEX

2,4,7,10,12,15,18

and SMITH, D H (1974)

Becoming Modern: Individual Change in Six
Developing Countries. Heinemann, London.

STUDIES REFERRED TO BY HOLSINGER AND THEISEN (1977)

ARMER, M and

YOUTZ, R (1971)

Formal Education and Individual Modernity in an African Society.
American Journal of Sociology, 76, pp. 604-626.

CUNNINGHAM, INEKE (1974)

The Relationship between the Modernity of Students in a Puerto
Rican High School, and their Academic Performance, Peers and Parents,
in Education and Individual Modernity in Developing Countries, ed.
Inkeles, A and Holsinger D B, Brill, Leiden, pp. 47-64.

HOLSINGER, DONALD B (1974)

The Elementary School as Modernizer: A Brazilian Study, in Education
and Individual Modernity in Developing Countries, pp. 24-46.

INKELES, A and

SMITH, D H (1974)

Becoming Modern: Individual Change in Six Developing Countries.
Heinemann, London.

KLINEBERG, STEPHEN L (1974)

Parents, Schools and Modernity: An Exploratory Investigation of Sex
Differences in the Attitudinal Development of Tunisian Adolescents,
in Education and Individual Modernity in Developing Countries, pp. 66-88.

KAHL, J A (1968)

The Measurement of Modernism. Latin American Monograph No. 12, Austin,
University of Texas Press.

PORTES, ALEXANDRO (1973)

The Factorial Structure of Modernity - Empirical Replications and a
Critique. American Journal of Sociology, 79, pp. 15-44

SACK, R (1974)

The Impact of Education on Individual Modernity in Tunisia, in
Education and Individual Modernity in Developing Countries, pp.89-116.

SUZMAN, R M (1974)

Psychological Modernity, in Education and Individual Modernity in
Developing Countries, pp. 117-131.

APPENDIX B - THE SHORTENED MODERNITY SCALE 1)

Interviewer note: Briefly explain the modernization project and tell the interviewee that you wish to discuss his/her ideas about certain subjects. The interviewee must not feel obliged to answer these questions.

- S 1 You must have known people who promised to do certain things (e.g. come and help you repair a fence) and then failed to keep those promises. How do you react to such people?

They do not worry me at all	1
I find them a little annoying	2
I get very angry with them	4

- S 2 How do you feel about the freedom of women to do things like working outside the home? Is that changing in any way?

Change not perceived	1
Yes - faster than it should be	2
Yes - slower than it should be	3
Just right	4

- S 3 A person cannot be responsible and reliable all the time. Some people say that an unreliable person should learn to be reliable and responsible at all times. Should one excuse a person who is not reliable at all times?

Always	1
Often	2
Sometimes	3
Never	4

1) This Scale has been developed by the National Institute for Personnel Research and is based on the work of Inkeles and Smith (1974). It is therefore subject to copyright regulations and enquiries regarding its use should be made to:
The Director, NIPR, P O Box 32410, Braamfontein, 2017.

S 4 Which of the following is more true of you?

I would prefer to live my life in the country (i.e. rural area)	1
I would prefer to spend half my time in the country and half in the city	2
I would prefer to live my life in the big city	4

S 5 Who do you think is entitled to more status in the community?

A man of royal birth but with little schooling	1
A man of ordinary family background, but who is well educated	4

S 6 Some people when holding a function (e.g. a party) get very annoyed when their guests are late. Others do not seem to worry about late arrivals. If you were holding a party or reception would you -

Not be worried by people who arrive late?	1
Get annoyed with people who arrive late?	4

S 7 Some say that accidents are due mainly to bad luck or witchcraft. Others say accidents can be prevented by proper care. Do you think accidents happen -

Because of bad luck/witchcraft	1
Because of lack of care	4

S 8 Suppose that in a factory or office both men and women did exactly the same work, do you feel they should be paid exactly the same wage?

No	1
Yes, it should be equal	4

Why do you feel this way?

- S 9 Do you think that a person, before making a major decision, should first discuss the matter with his senior kinsmen?

Yes, always	1
Yes, but only sometimes	3
No	4

Why do you feel like this?

- S 10 A man working in a factory one day found that his supervisor had been promoted to a higher position and had been replaced by a woman. She was just as competent as her predecessor, but the man did not like working under a woman, so he asked for a transfer to another department of the factory where there were men in supervisory positions.
What would you have done had you been in the same position as this man?

The same as he did, i.e. asked for a transfer so as to be under male supervision	1
Would have stayed in the same job, but would not have been happy working under a woman	2
Stayed in the same job and not have worried whether the supervisor was a man or a woman	4

- S 11
1. Some people say it is the duty of the wife to keep the house clean and look after the children.
 4. Others say that a husband should help his wife by doing things around the house, such as occasionally caring for the children, doing some heavier cleaning, etc.
- With which point of view do you agree?

Wife must keep the house clean	1
Husband should help	4

- S 12
1. Some say that getting ahead in life depends entirely on destiny.
 4. Others say it depends on a person's own efforts.
- What is your opinion?

Destiny	1
Own efforts	4

- S 13
- Do you think it is necessary for a young man/woman to have the same ideas and opinions as his/her parents?

In all important matters	1
In the majority of matters	2
In certain matters	3
In nothing	4

Why do you feel this way?

S 14 Here are two points of view -

1. Man will never fully understand what causes things like droughts, diseases.
2. Man will some day fully understand what causes things like droughts, diseases.

Which one do you agree with most?

Never fully understand causes	1
Will understand causes	4

S 15 Assuming there were no influx control obstacles, would you be prepared to move to a distant city such as (Durban/Cape Town/Johannesburg)* in order to live twice as well there as you do here?

No	1
Yes	4

(* Use furthest city from interview place)

Why?

S 16 If a person must choose between a job he likes, and a job his parents prefer for him, which should he choose?

Job his parents prefer	1
Job he prefers	4

Why?

- S 17 Do you think it is a bad thing if people who are related (e.g. uncles/nephews/cousins) hold different views on important subjects like politics or religion?

Yes	1
No	4

Why do you feel this way?

- S 18 Do you think that in order to be successful in life, it is -

Much more important to have good luck?	1
Much more important to make plans?	4

- S 19 When we interview, do you think we should:

Let the husband (family head) speak for the whole family, OR	1
Should we also be sure to obtain the wife's opinions?	4

- S 20 Which sources of information do you trust most in finding out news about what goes on in the world?

Local leaders of the community (chiefs)	1
Friends	2
Radio	3
Newspapers	4

Why would you trust this source most?

- S 21 If a married couple have one son and one daughter, do you think -

The son should be given more educational opportunities than his sister?	1
The son and daughter should be given the same educational opportunities?	4

- S 22 In this question I want you once again to tell me what you think should be done.

A man and his wife have several children. This is as many as they can afford. They do not want any more. Suppose a doctor could give the wife a new kind of pill/medicine, which would prevent the wife having more children for as long as she took the pill/medicine, but would not otherwise change her in any way. Would it be right for her to take such a pill/medicine?

No	1
Yes	4

- S 23 Suppose a young working man has, with difficulty, managed to save R20 or R30. Now his first cousin comes to him and tells him that he needs money badly as he is unemployed. How much obligation do you think the working man has to share his savings with this first cousin?

A strong obligation/duty	1
Only a little obligation	2
No obligation	4

S 24 Do you think it objectionable/incorrect for men and women to work together (e.g. in same factory, office, house, side by side in the field) ?

Yes	1
No	4

S 25 Learned men at universities are studying such things as what determines whether a baby is a boy or a girl, and how it is that a seed turns into a plant.

1. Some say that man should not inquire into such things as they are the work of God.

4. Others say that these studies will benefit man greatly.
Which opinion do you agree with more?

Man should not inquire into such things	1
These studies will benefit man	4

APPENDIX C - TABLES 13 - 15 : REGRESSION DATA FOR 3,6 and 16 VARIABLES

Table 13

Leaps and Bounds Regression Analysis : 3 Predictor Variables
against Modernity

$r = 0,506$

$r^2 = 25,62$

Variable	Beta Weight	N
1. Education	0,305	323
2. South Sotho	0,165	334 (20)*
3. Childhood First 15 years	-0,242	334

$r = 0,504$

$r^2 = 25,41$

Variable	Beta Weight	N
1. Education	0,220	323
2. Sex	0,279	334
3. Age	-0,185	334

$r = 0,502$

$r^2 = 25,22$

Variable	Beta Weight	N
1. Education	0,294	323
2. Sex	0,238	334
3. South Sotho	0,162	334 (20)

* Actual N belonging to this Group.

$$r = 0,501 \quad r^2 = 25,11$$

Variable	Beta Weight	N
1. Education	0,281	323
2. Sex	0,176	334
3. Childhood First 15 years	-0,185	334

Table 14

Leaps and Bounds Regression Analysis : 4 Predictor Variables
against Modernity

$$r = 0,528 \quad r^2 = 27,86$$

Variable	Beta Weight	N
1. Education	0,235	323
2. Sex	0,226	334
3. Stability 1	-0,262	334
4. Stability 2	0,338	334

$$r = 0,527 \quad r^2 = 27,81$$

Variable	Beta Weight	N
1. Education	0,233	323
2. Sex	0,226	334
3. Stability 2	0,162	334
4. Age	-0,189	334

$$r = 0,527 \quad r^2 = 27,81$$

Variable	Beta Weight	N
1. Education	0,207	323
2. Sex	0,256	334
3. South Sotho	0,158	334 (20)*
4. Age	-0,180	334

$$r = 0,526 \quad r^2 = 27,67$$

Variable	Beta Weight	N
1. Sex	0,294	334
2. South Sotho	0,170	334 (20)*
3. Age	-0,216	334
4. Literacy	0,177	286

* Actual N Belonging to this Group.

Table 15Leaps and Bounds Regression Analysis : 16 Predictor Variables
against Modernity

$r = 0,570$

$r^2 = 32,46$

Variable	Beta Weight	N
1. Education	0,158	323
2. Sex	0,173	334
3. South Sotho	0,522	334(20)*
4. West Sotho	0,722	334(88)
5. East and North Sotho	0,580	334(52)
6. North Nguni	0,555	334(57)
7. South Nguni	0,388	334(19)
8. Venda	0,553	334(58)
9. Republic Shangaan	0,417	334(25)
10. Ndebele	0,313	334(14)
11. Stability 1	-0,337	334
12. Stability 2	0,344	334
13. Age	0,080	334
14. Literacy	0,114	286
15. Legal Status	0,045	334
16. Childhood/First 15 years	-0,107	334

* Actual N belonging to this Group.

$r = 0,569$ $r^2 = 32,43$

Variable	Beta Weight	N
1. Educational	0,154	323
2. Sex	0,172	334
3. South Sotho	0,482	334(20)
4. West Sotho	0,648	334(88)
5. East and North Sotho	0,519	334(52)
6. North Nguni	0,496	334(57)
7. South Nguni	0,350	334(19)
8. Venda	0,489	334(58)
9. Republic Shangaan	0,374	334(25)
10. Ndebele	0,277	334(14)
11. Occupation	-0,008	333
12. Stability 1	-0,230	334
13. Stability 2	0,271	334
14. Literacy	0,115	286
15. Legal Status	0,042	334
16. Childhood/First 15 years	-0,106	334

$$r = 0,569 \quad r^2 = 32,35$$

Variable	Beta Weight	N
1. Education	0,158	323
2. Sex	0,169	334
3. South Sotho	0,507	334(20)
4. West Sotho	0,698	334(88)
5. East and North Sotho	0,559	334(52)
6. North Nguni	0,536	334(57)
7. South Nguni	0,372	334(19)
8. Venda	0,529	334(58)
9. Republic Shangaan	0,402	334(25)
10. Ndebele	0,298	334(14)
11. Occupation	0,005	333
12. Stability 1	-0,302	334
13. Stability 2	0,319	334
14. Age	0,059	334
15. Literacy	0,113	286
16. Childhood/First 15 years	-0,079	334

$$r = 0,567 \quad r^2 = 32,17$$

Variable	Beta Weight	N
1. Education	0,154	323
2. Sex	0,167	334
3. South Sotho	0,410	334(20)
4. West Sotho	0,512	334(88)
5. East and North Sotho	0,404	334(52)
6. North Nguni	0,387	334(57)
7. South Nguni	0,275	334(19)
8. Venda	0,370	334(58)
9. Republic Shangaan	0,294	334(25)
10. Ndebele	0,207	334(14)
11. Occupation	-0,009	333
12. Stability 2	0,111	334
13. Age	-0,153	334
14. Literacy	0,119	286
15. Legal Status	0,032	334
16. Childhood/First 15 years	-0,108	334

1944
MAY 15
1944

