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PRESTIGE and SOCIO-ECONOMIC RANK ORDER OF OCCUPATIONS and OCCUPATIONAL GROUPINGS AMONG WHITES IN SOUTH AFRICA

P. STOPFORTH

L. SCHLEMMER

Centre for Applied Social Sciences
Sentrum vir Toegepaste Maatskaplike Wetenskappe

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PREFACE

The analysis presented in this report has been very largely a purely technical operation, and intentionally so. Very little attempt has been made to explore the social implications of the results in the light of the particular characteristics of South African society. This document is intended to be read mainly as a methodological contribution in the field of the empirical social sciences in South Africa.

Very many studies are undertaken in which socio-economic status, or occupational position, are basic variables incorporated in the analysis of results. Frequently variation in answers according to occupational position is taken as a fundamental index of the distribution of characteristics or attitudes within the population. Yet, no standard, empirically-based hierarchical grading or categorisation of occupations in terms of socio-economic status is available as a basic tool of analysis. It is this gap in our range of standard methodological aids that this report is intended to fill.

The study on which this report is based has a long history. A former Director of this Centre (formerly the Institute for Social Research), Professor L.T. Badenhorst, submitted an application during 1963 to the National Council for Social Research (the body which has subsequently become the Human Sciences Research Council) for a larger grant to cover the costs on a study entitled: "The Prestige of Occupations in South Africa". The application was favourably received and a Larger Grant of R18 000 was made to the University of Natal for a study to be conducted over a period of three years, commencing in the financial year of 1964/1965.

Shortly after the grant was approved, Professor Badenhorst left the services of the University of Natal to take up a position in the private sector. The study then proceeded under my immediate supervision, subject to the general direction of a steering committee appointed by the National Council for Social Research.

Nation-wide fieldwork among Whites in the major urban centres of the Republic was successfully completed by staff of this Centre by 1968. The size and scope of the project, however, had demanded much more time and expenditure than had been envisaged in the early project planning. Funds for the project proved inadequate, therefore, and additional assistance amounting to R5 170 was granted by the Research Committee of the University of Natal in 1971. This additional assistance made it possible to complete the coding of the results of the fieldwork.

Since this time, pressure of work in this Centre has delayed the completion of the project. Neither the first co-author, Mr. Stopforth nor I have been able to devote anywhere near full-time attention to the project.

Due to the lapse of time, certain additional fieldwork has been conducted more recently (in 1976) in order to provide fresh data for comparative purposes. Full details are provided in the report. It is our view, however, that the main subject matter of this investigation, the prestige of occupations and the relative positions of different occupations in terms of their associated income and educational levels, is not likely to have undergone marked changes with the passage of time. Certainly, minor shifts in the relative positions of particular occupations may have taken place, but, bearing in mind that the statistical exercise presented in this report is concerned with occupational groupings, the specific changes are not likely to have a meaningful effect on the validity of the results.

The research data cannot be regarded as having been exhausted by the analysis presented in this report. A great deal of further analysis of the material is possible and is in fact proceeding. An analysis of occupational mobility among Whites is currently being planned, utilising both the original survey data and the results obtained in 1976. The index of occupational status constructed for the present report will serve as a basic tool in the analysis of occupational mobility. Further analyses using this index, are also planned, including

investigations of attitudes toward social status among Whites, the effects of socio-economic status on friendship patterns, and an assessment of aspirations of high school youth as they relate to the socio-economic status of the parents.

In a large study such as the one reported here, very many people need to be thanked for their helpful participation in the project. In particular: Mrs. Ulla Bulteel, Miss Lorna Geils, Miss Lynnette Weber, Mr. L.C.G. Douwes Dekker, Miss Ann Morton and Mrs. Patsy Wickham. Thanks are also extended to the very large number of students who assisted in a temporary capacity on the project. Dr. L.T. Badenhorst deserves full credit for conceptualising the project in its initial stages and for the initiative he took in getting it launched. During the process of the fieldwork on the study, Prof. H.L. Watts, a former Director of this Centre, was a constant source of helpful information, advice and guidance.

Finally, very grateful acknowledgement must be made of the financial assistance granted by the forerunner to the Human Sciences Research Council, the National Council for Social Research. The Research Committee of the University of Natal is also thanked for the valuable additional assistance which it provided. The Human Sciences Research Council is thanked as well for granting permission in May of this year for the report to be published by this Centre.

Professor L. Schlemmer
Director,
Centre for Applied Social Sciences.

Durban,
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CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

A STUDY OF PRESTIGE OF OCCUPATIONS

At a time when Blau and Duncan (1967) had completed the analysis and published the results of a national survey of "Occupational Changes in a Generation" conducted on their behalf by the monthly "Current Population Survey" of the United States Bureau of the Census (March 1962), the Centre for Applied Social Sciences (CASS) - then the Institute for Social Research - at the University of Natal had just embarked on a study of social stratification in South Africa. The quintessential aspect of this study is an urban survey of Prestige of Occupations (CASS Survey 1966/67) with complementary sub-designs pertinent to stratification, one of which comprises data necessary for the measurement of occupational mobility, which is our own immediate concern in applying findings on prestige ratings of occupations. In this paper, therefore, we present for the first time in published form the CASS Survey ratings of occupational prestige (selected occupations); we construct an estimator of "prestige ratings" for all occupations; and we rank a classification of occupational groupings in anticipation of measuring occupational mobility in subsequent papers.

In the realm of applied sociological research where occupational prestige ratings can be utilised with efficacy we have the advantage, in many cases, of applying a research tool to information both of which arise from a common empirical bank. On the other hand, the sample design of the CASS Survey restricts the utility of the prestige ratings and circumscribes only one race group among the four "recognisable communities" in the population.* For example, in pursuing the measurement of occupational mobility among Whites we are able to measure intra and inter-generational mobility among CASS Survey respondents on the basis of a ranked occupational group classification (Chapters 4 and 5) derived from a scaled socio-economic

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* Due to limitations in funding the study had to be restricted to Whites who, by virtue of their position of socio-economic advantage in the society, manifest the most elaborate hierarchy of prestige.

index for all occupations (Chapter 2), which in itself is based on a selection of CASS Survey occupational titles rated by sample respondents (the substantive occupational scale of the socio-economic index as an estimator of occupational "prestige" can, of course, be used for purposes independent of the CASS Survey). The sample, or more correctly samples, of the CASS Survey represent White adults 18 years and over residing in the seven major metropolitan areas in the Republic with White populations exceeding 75 000 at 1967 as well as three smaller urban centres (samples discussed in detail below). This means that the ratings of occupations were made by Whites only and that other complementary data from the survey pertain to urban-dwelling Whites only. If we limit, as we do here, the analysis to the White group, then only the urban bias of the samples is at issue: the effects on prestige rating scores is likely to be minimal as ranks of occupational prestige ratings tend to be very stable even among populations at very different levels of development; for some other purposes the urban bias in the CASS Survey is likely to produce lacunae in analysis; for example, occupational mobility patterns among first generation White farmers (an unimportant group) will not be forthcoming, and if the mobility pattern within very small towns is markedly different from che rest of the country this will not be apprehended (it is, however, assumed that in general occupational mobility is largely co-incidental with rural to urban shifts). Analyses of social stratification directed at other race groups from the data of the CASS Survey will be largely inferential.

Although some of the results of the CASS Survey have appeared from time to time in papers emanating from the Centre, the rank order of the prestige of occupations selected for rating in the survey has never appeared in a formally published document. As ten years have elapsed since the fieldwork of the survey, and more work will have to be completed before major publications on the results appear, we take this opportunity of research on occupational prestige to determine the ranking of occupational groups as a facility in mobility studies to publish the rank order of the prestige of CASS occupational titles with the hope that the information will be useful to other applied researchers in the field. The rank order of the prestige of occupations and much of the content of

this first chapter appears in an unpublished manuscript at the Centre entitled "Study of the Prestige of Occupations in South Africa" prepared by L. Schlemmer. We intend to do no more in this paper, as regards prestige of occupations, than to present a rank order with sufficient supplementary information to make the results intelligible to the researcher who might wish to evaluate the findings and for the purposes of subsequent analyses of these data. The theoretical background and context of CASS prestige ratings as well as a complete analysis of their importance to South African studies is covered in the manuscript mentioned above which will appear as a separate publication.

The empirical study of occupational prestige has a history of something just over fifty years going back to an account of the ranking of 45 different occupations by school students, college students and high school teachers published by Counts (1925) in the United States. The studies of ranking and rating of occupational prestige which followed Counts' study up till the period of the Second World War were for the most part investigations among limited or unrepresentative samples of people, students being a favourite choice as respondents. In addition, the range of occupations submitted to respondents was very often limited or unrepresentative of the distribution of occupations in general. However, in 1945, North and Hatt designed a study in the United States which has come to be regarded as a benchmark in the study of occupational prestige. The investigation was carried out among a nationwide quota sample of 2 920 respondents. Altogether 90 occupational titles were included in the stimuli presented to those interviewed. The study was initially reported by the organization which carried out the survey, the National Opinion Research Centre (NORC, 1947). The full report on this study only appeared fourteen years after the NORC publication (Reiss, 1961).

This study has come to be regarded as a methodological model for a large number of subsequent studies, including the CASS Survey, all over the world. The procedure used was a simple five-point rating scale enabling a prestige ranking to be made of occupations ranging from the highest ranking occupations through to the most menial. The weaknesses

of this method are discussed in detail in Reiss (1961: Chapter III) and will not be paraphrased here. Nevertheless, despite all these shortcomings both Reiss and Duncan (Reiss, 1961: Chapters III and VII) have demonstrated that the NORC prestige scores relate closely to levels of education and income associated with occupations in the United States. We show the same effect for CASS prestige ratings in Chapter 2. The comparability of "White" South African society with American society can be broadly hypothesised on the evidence below (but should not be taken for granted, however, given the substantial differentiation in socio-economic development). We turn to a report by Hodge, Treiman and Rossi (1967: 309-322) in which they compare the results of occupational prestige studies obtained in 24 different countries. They include a number of less-developed countries like Ivory Coast, Indonesia, Guam, Ghana and Congo in this comparative report and the results of the analysis reveal that the NORC model for the rating of occupational prestige has a favourable prognosis for Third World as well as more developed countries - South Africa probably falling in the interstice.

When the results of this comparative study were correlated with results for the United States, the similarity of findings was striking. The average co-efficient of correlation was only slightly lower than that observed by Inkeles and Rossi (1956) in comparing prestige rankings in six developed societies. The authors concluded that most countries have in common major government institutional complexes and bureaucratic hierarchies leading to similarity in the ranking of administrative positions. Less agreement appears to exist in the ranking of blue-collar occupations; differences which are concealed by the overall similarity of the findings. Analysing the results according to the GNP of the various countries suggested that level of industrialisation as such is not likely to be significantly associated with the pattern of occupational prestige. Although the authors do show some sizable differences in some comparisons with the United States, which they attribute to the influence of former colonial governments, in general it seems safe to proceed on the basis of a proven method.

This ready acceptance of the reliability of the NORC model does not mean that we are naive about the final validity of the method. We are fully aware of the competing theoretical perspectives which emphasise to a greater or lesser extent - depending on their bent - problems encountered in this type of research. Very briefly these are: representativeness of occupational title stimuli; a tendency for high and low polar extremes among occupations to be more definitely perceived and rated; white-collar occupations are more consistently rated than blue-collar occupations; internal differentiations in a population determines propensities to rate some occupations differentially and distinctions in social perception lead to group effects in rating, differences in indicators used for evaluating prestige and differences in perceptions of opportunities for vertical mobility, all of which distort to some extent the pure response sought in this type of rating. We will take up some of these points below but, as was stated above, the questions of the total validity and social meaning of the rated values associated with occupational prestige are reserved for separate treatment elsewhere.

The Samples

The samples on which the results of the CASS Survey of the prestige of occupations are based are multi-stage stratified random samples of White adults, 18 years and older drawn to represent:

(a) The seven major metropolitan areas in the Republic with White populations exceeding 75 000 at 1967. These are Johannesburg, Cape Town, Pretoria, Durban, Bloemfontein, East London and Germiston. Sub-samples were drawn in the first six of these cities and sampling results from certain areas of Johannesburg which closely resemble the abutting Germiston suburbs in important respects were weighted in such a way as to represent Germiston. Total sample units drawn : 1566.

(b) Two smaller urban centres, Pietermaritzburg and Benoni.

The former being a medium-sized provincial capital with primarily administrative and educational functions and possessing (at the stage of interviewing) a relatively slight degree of industrial development. Benoni, of roughly similar size, is an important East Rand industrial and commercial centre. Total sample units drawn: Pietermaritzburg 124; Benoni 79.

(c) One small country town, Newcastle, which has a relatively equitable ratio of English to Afrikaans-speaking Whites, and is very varied in its functions, being both an embryo industrial area as well as being a small agricultural and commercial centre (at 1967). Total sample units drawn: 126.

The coverage of the survey is, therefore, exclusively urban, and the main sample is fully representative of the large metropolitan areas. The additional samples were drawn to give some comparative material for medium-sized and smaller centres, although they obviously cannot be regarded as representative of a full range of smaller urban centres in the Republic. The limitations on sample coverage were an unavoidable consequence of restrictions on funds for the project.

In all the centres, the sample design used was broadly similar. First of all the residential areas of the town were classified into three broad grades of housing quality and socio-economic status, designated A, B and C areas from highest to lowest. This was done on the basis of detailed observation utilising additional information wherever possible. The classification was checked with an experienced urban geographer, Prof. R.J. Davies, then of the Department of Geography of the University of Natal. Each stratum was then divided into clusters of city street blocks of equal size, as far as could be determined. The size of clusters was usually roughly six city blocks. The stage of cluster-selection was necessary for two reasons. Firstly, the costs of interviewer travelling made it necessary to have the sample addresses as close to one another as possible without seriously reducing the within-cluster variance. Secondly, where one adult in such a household is selected randomly for interviewing,

as was the case in this study, the large number of repeated calls necessary at each sampling address makes it imperative that sample addresses are not too widely dispersed. From the population of clusters, samples of clusters were selected randomly; the same sampling fraction being used in each stratum. An exception here was the sample in Newcastle, where a systematic sample with random starting point was drawn from a population of all dwellings in each stratum. The small geographic spread of the town made such a sample design feasible. Then within each selected cluster, every nth address was selected using a random starting point. The selection of addresses was made utilising city street directories where those were available. In some instances where street directory information was not available, addresses were selected by a field supervisor who enumerated all addresses in a particular cluster. The sampling fraction employed in selecting households was in all cases one in twenty-five or more. It was considered unadvisable to employ larger sampling fractions since this would have seriously reduced the variance within clusters. At the selected addresses, one adult was chosen for interviewing by the well-known method proposed by Kish (1949).

In the case of apartment and flat dwellers, the first stage of sampling consisted of a random selection of buildings (only in Johannesburg were flat buildings selected within the strata of building quality), and in the second stage a systematic sample of dwelling units within buildings. Interviewees were selected by using Kish's tables. Samples of those living in hotels and boarding houses were drawn by first selecting buildings and then selecting residents from alphabetical lists of residents.

The method of stratification ensured that with regard to the residents of houses in all the centres, the samples would be roughly representative of socio-economic differences in the communities. The samples drawn from single and collective dwellings, and the samples for the different cities were not drawn in proportion to one another.

Proportionate representation was achieved by weighting each sample result at the stage of computer analysis. The raising factors

were calculated on the basis of population estimates and estimates of different types of dwellings obtained from official and municipal sources.

The results of the fieldwork are given in Table 1.1 below.

From Table 1.1 it will be noticed that certain respondents had to be excluded. Obviously, in any survey certain respondents are drawn who are not capable of understanding the interviewers' requests or who have to be excluded by a prior definition, as in the case of Blacks. In the case of people excluded by virtue of language difficulty, it is felt that only a very tiny minority of very recent immigrants were omitted. In conducting a nation-wide survey it is virtually impossible to arrange foreign language interviews whenever they are required.

It will be noted that the proportions of respondents who refused or who were not available to be interviewed ranged between roughly 7% and 9%. Refusal rates can contribute to serious bias, since usually a selected type of person is either unco-operative, otherwise unwilling, or too busy to be interviewed. It is the authors' experience that this type of non-response can be limited to 4%-5% in normal surveys in a single city by dint of repeated calls on reluctant respondents. However, where interviewing is spread over virtually an entire national area, the refusal rate is understandably higher since time and cost factors prevent intensive follow-up of hesitant respondents. In the present study the refusal rate was high but, it is felt, not higher than was to be expected under the circumstances.

In weighting the sample cases to obtain representativeness, a procedure was followed which corrected for disproportional non-response in the different sample strata.

TABLE 1.1

BREAKDOWN OF THE RESULTS OF FIELDWORK IN THE METROPOLITAN AREA SAMPLE AND IN THE SAMPLES OF INDIVIDUAL SMALLER TOWNS

Fieldwork Process	Sample Areas									
	Seven Metropolitan Areas		Pietermaritzburg		Benoni		Newcastle		Total Samples	
	n	%	n	%	n	%	n	%	n	%
Number of Households Drawn	1566	100,0	124	100,0	79	100,0	126	100,0	1895	100,0
Invalid Sample Address (vacant houses, buildings, etc.)	59	3,8	19	15,3	1	1,3	0	0,0	79	4,2
Total Valid Sample	1507	100,0	105	100,0	78	100,0	126	100,0	1816	100,0
Completed Interviews (Effective Sample)	1309	86,9	97	92,4	65	83,3	109	86,5	1580	87,0
Respondents Not Available, Refusals, Seldom Home	134	8,9	7	6,7	6	7,7	12	9,5	159	8,8
Respondents Excluded (Illness, Psychological or Other Deficiency, Advanced Age, Blacks, Insoluable Language Problem)	64	4,2	1	0,9	7	9,0	5	4,0	77	4,2

The Survey

Two research assistants were engaged at the commencement of the project and became thoroughly acquainted with the research design though after completion of roughly half of the interviewing one left the service of the University. Both experienced interviewers, they were given additional training in conducting the type of interview required. They were also instructed in sampling techniques so that any necessary adjustments to a design could be made in the field. The project director accompanied them to four of the towns but for the rest they were responsible for supervising the fieldwork.

Additional suitable interviewers were recruited and trained locally in each centre, except in the case of Newcastle, where all interviews were conducted by members of the project team. They were regularly briefed throughout the fieldwork and all work was rigorously checked. Altogether well over 150 interviewers were engaged throughout the duration of the project. In attempting to secure as many completed interviews as possible, numerous repeat visits were made to sample addresses. The average number of calls per address was between two and three, but as many as seven and eight calls were needed in certain cases. Fieldwork briefing and interviewing instructions were detailed.

In the original NORC study the question relating to the prestige of occupations was framed as follows:

> "Now I am going to ask you how you would judge a number of occupations. For example, a Railroad Brakeman - which statement on this card best gives your own personal opinion of the general standing of a railroad brakeman? (Pause) What number on the card would you pick out for him?"

The rating handed to the respondent read as follows:

> "For each job mentioned please pick out the statement which best gives your own personal opinion of the general standing that such a job has.

(1) Excellent standing.
(2) Good standing.
(3) Average standing.
(4) Somewhat below average standing.
(5) Poor standing.
(X) I don't know where to place that one.

Try not to judge a job according to your opinion of some one person you know who has such a job. Now how would you judge a .....?"

The interviewer then read out the list of occupations in rotation.

Reiss (1961: 22) points out that the context of questions preceeding the item on occupational prestige was one of occupational choice rather than occupational standing. In the present study it was decided that certain modifications were necessary, even at the cost of losing total comparability. The concept of standing, it was felt, had to be retained, since many of the studies in this field have utilised this concept in inquiring into the prestige of occupations,[1)] and the two very important American studies conducted in 1947 and 1963 also employed this stimulis. This extent of comparability had to be retained.

The way the stimulis was presented in the CASS Survey was as follows:

"Now I want you to judge a list of different occupations. (Hand Card 'C'). Look at the categories on the card and keep them in mind while I read out occupations to you one by one. I would like you to think of the people doing the jobs, and tell

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1) See Hodge, Treiman and Rossi (1967: 314-315). Out of the twenty-eight studies listed by them, eight used "standing" as a stimulis, and most of the rest used the term "prestige" which probably means very much the same thing to an average respondent.

me whether in your opinion the people have excellent standing, good standing, average, somewhat below average or poor standing. (Interviewer: Try to obtain a response to all occupations). (Give example of Blacksmith) - what standing has a man who is a blacksmith got in your eyes, in your personal opinion?"

In the NORC investigation the concept "general standing" was used. In asking respondents for their personal opinions of the general standing of occupations an element of contradiction and ambiguity was introduced. A personal opinion on the topic of general standing might be contradictory. Furthermore, what do the words "general standing" connote? It is possible that some respondents understood them to mean the community consensus in regard to an occupation, while others might have understood them to mean standing divorced from the reputation of any single incumbant they might have known. In the present study, therefore, the word "general" was omitted in an attempt to tap the personal attitudes of respondents and to avoid attempting to use the respondent as a rational sociologist.

In the NORC investigation, the cautionary phrase "try not to judge a job according to your opinion of some one person you know who has such a job" might have discouraged respondents from thinking of the social status of incumbents of occupations. In view of our fundamental interest in social status, in the present study respondents were deliberately encouraged to consider the standing of incumbants of occupations rather than the occupations themselves with the phrase: "I would like you to think of the people doing the jobs ...". So, in the present study the emphasis was completely on personal values in regard to the standing of men and women holding particular occupations. The questions immediately preceeding the item on occupational prestige were not concerned with occupational choice or job desirability as in the NORC investigation. In these ways an attempt was made to keep the stimulis free of any suggestion that our concern was with the desirability of occupations in a vocational sense.

Forty-two occupations were submitted to respondents for rating. Three different lists of occupations were randomly dispersed throughout the sample, each list having 19 occupations in common with the other lists. In this way results were obtained for 101 occupations based on the answers of random sub-samples of the total group; an additional 13 occupational titles were included in the samples of Cape Town, Bloemfontein and Port Elizabeth when it became evident that the interview length could be slightly increased without negative effects. The cities mentioned would appear to be sufficiently varied in their composition as regards language and cultural group as to allow the results to be taken as broadly representative of South African cities making results available for 114 occupations.

In presenting the stimuli to respondents, interviewers rotated the order of presentation. Criticisms have been levelled against the choice of occupational titles used in this type of research. Hodge, *et al.* claim that no single study of occupational prestige has been based on a sample of occupations which is representative of the universe of occupations existing in the country where the study was conducted. The same criticism can be made of the present study. There is a reason for the unrepresentativeness of occupations in prestige research. Interviewer fatigue makes it unadvisable to submit more than 30 or 40 occupations for ranking in a single interview. Costs usually prohibit double interviewing sessions. Occupations, therefore, have to be carefully chosen and the number used rigidly limited. It should be noted, however, that far more occupations were included in the present study than in most other similar studies that have been conducted. Even the major American projects included some 24 fewer occupations than the 114 in this project. Furthermore, it should be noted that the middle ranges of occupations, ranging from junior executives and administrative officials to routine white-collar workers, probably are more adequately represented in the present study than they are in even the important American projects.

The occupations selected in the present study can be found at Table 2.1 on pages 16 through 20 of this chapter. The middle range of white-collar occupations is quite clearly under-represented

whereas the professions are vastly over-represented. This is because the occupations included were chosed for analytical purposes rather than to enable a complete description to be made of the distribution of occupational prestige in the society. The occupations were selected originally in order to make it possible to relate occupational prestige to social status and to enable differences in values between groups in South Africa to be most easily determined.

It will be noticed that the race of incumbent has been specified in a number of occupations (Bantu carpenter, Indian lawyer, etc.). This was done in order to make it possible to assess to what extent the social status of non-Whites, which is generally low, influences the standing of an occupation.

Finally, it should be noted that whereas in the NORC studies the respondent was allowed five response alternatives in responding to an occupation, in the present study a sixth was added, this being "above average". This was done after the initial fieldwork in Newcastle indicated that respondents were sometimes hard put to decide whether they considered the standing of some occupations as being good or average.

These refinements were considered necessary in order to remove some doubts about the procedure followed in the major American investigations. Undoubtedly, strict comparability has been lost. However, the reliability of the method in general suggests that the results obtained are comparable even where procedures differ in precise detail. Hodge, *et al.* (p.316) say that: "The preceding evidence indicates that no gross errors should arise from incomparability in the several studies (28) to be compared". For this reason it is expected that fruitful comparisons with the American data can be made despite the detailed differences in methods adopted.

Rank-order of Occupational Prestige

The CASS Survey results were processed on the University of

Natal computer. Ratings of occupations have been cross-tabulated by city, income, home language and education. From the cross-tabulated results the mean ratings of occupations for the total sample and for groups in the sample were able to be calculated. It is with the ratings of occupations over the total sample that we are principally concerned in this paper, and as will soon become apparent with the particular 97 occupational titles that describe "White male" occupations from the original 114 titles. Although our immediate interest is closely focused on values derived from the rating scale for occupations and not on the value of the rank order of occupational prestige as a diagnostic instrument in the study of social status and prestige (to appear in a separate publication) we nevertheless include a full account of the results of the prestige of occupations survey for general consumption before making a selection of occupational titles for the purpose at hand (construction of an index). It has become customary for the results of studies of the prestige of occupations to be presented in the form of a rank-ordering of the occupations in terms of some measure of central tendency in the ratings of each occupational title. To comply with this convention we present a rank-ordering based on the mean ratings of 114 occupations in South Africa in Table 1.2, using the mean rather than the median in order to make the results as closely comparable as possible to those obtained in the United States. In addition we show, for the ranked occupations the values of a "prestige score" and the proportions "percentage rated 'excellent' and 'good'". Small differences in rank-order between mean rating value and weighted prestige score are due to rounding of the latter values.

The use of mean rating values to rank occupations means that the range within which values can vary is very narrow (in the present case 5,63 and 1,73) and detailed positions of occupations become interchangeable due to the low magnitude of difference in the mean ratings. This method is probably sufficient if the aim of research is merely to obtain a rank order of the prestige of occupations in order to analyse the relationship of independent variables to an ordinal scale of measurement (and to compare with other ranked scales); it is, however,

only one use of the information which can, *inter alia*, be expressed either as a weighted, mean "prestige score" or as some proportion of the results on the rating scale. These further values in themselves are not of particular diagnostic use, apart from spreading the range of the rank-ordered scale, but they do allow manipulations for applied research which will be pursued in the following chapter.

TABLE 1.2

RANK ORDER OF OCCUPATIONS IN TERMS OF PERSONAL OPINIONS OF THEIR STANDING GIVEN BY A SAMPLE OF WHITE ADULTS LIVING IN THE URBAN AREAS OF SOUTH AFRICA

Rank	CASS Survey Occupational Titles	Mean Rating	Scale % = 100						Residual Category	Percentage Rated 'Excellent' and 'Good'	Prestige Score
			Excellent	Good	Above Average	Average	Below Average	Poor			
			%	%	%	%	%	%	%	%	
1	Judge	5,63	73	20	6	1	0	0	4	93	94
2	Surgeon*	5,60	67	29	3	1	0	0	7	96	94
3	University Professor	5,49	60	31	7	2	0	0	3	91	92
4	Doctor	5,45	56	36	7	1	0	0	5	92	91
5	Cabinet Minister	5,43	61	26	9	3	1	0	5	87	90
6	Mayor of Large City	5,28	51	35	8	6	0	0	6	86	89
7	Magistrate	5,27	46	39	13	2	0	0	4	85	88
8	Chairman of Bank	5,24	40	48	10	2	0	0	7	88	88
10	Psychologist	5,14	41	42	12	4	0	1	8	83	86
10	Architect	5,14	32	52	13	3	0	0	6	84	86
10	Lawyer*	5,14	33	53	10	4	0	0	6	86	86
12	University Lecturer	5,13	37	46	13	4	0	0	4	83	86
13	Member of Parliament	5,11	40	42	10	6	1	1	5	82	85
14	Matron of Hospital	5,05	34	43	17	5	0	1	4	77	84
15	Engineer	5,02	27	54	15	4	0	0	6	81	84
16	Dentist	4,99	24	58	11	7	0	0	5	82	83
17	Chartered Accountant	4,95	27	52	14	7	0	0	6	79	83

TABLE 1.2 Continued

Rank	CASS Survey Occupational Titles	Mean Rating	Scale % = 100						Residual Category	Percentage Rated 'Excellent' and 'Good'	Prestige Score
			Excellent	Good	Above Average	Average	Below Average	Poor			
			%	%	%	%	%	%	%	%	
18.5	Dominee	4,94	35	42	12	8	1	2	7	77	83
18.5	Headmaster, Boys' High School	4,94	23	55	17	5	0	0	5	78	83
20	Minister of Religion	4,93	32	45	11	10	0	2	5	77	82
21	Airline Pilot	4,89	29	45	17	8	0	1	7	74	82
22	Headmaster, Primary School	4,86	21	53	19	7	0	0	4	74	81
23	Owner of Big Factory	4,85	24	47	20	8	1	0	5	71	81
24	Headmistress, Girls' High School	4,84	19	56	19	6	0	0	6	75	81
25	Chemist	4,81	17	57	18	8	0	0	6	74	81
26.5	Owner of Big Department Store	4,80	25	44	17	13	1	0	5	69	80
26.5	Physiotherapist	4,80	22	49	18	11	0	0	6	71	80
28.5	City Treasurer, Big City	4,75	16	53	21	9	0	1	5	69	79
28.5	Industrial Chemist*	4,75	12	59	21	7	1	0	5	71	79
30.5	Captain in Air Force	4,74	19	50	20	11	0	0	6	69	80
30.5	Secretary, Head of Government Dept.	4,74	21	47	20	12	0	0	4	68	80
32	High School Teacher	4,72	22	44	19	14	1	0	5	66	79
33	Senior Admin. Officer, Municipal*	4,71	19	50	17	14	0	0	5	69	79
34	Manager Farm Co-op.	4,62	13	51	23	12	1	0	7	64	77
35	Manager Large Factory	4,61	11	51	26	12	0	0	5	62	77
36	Farmer Big Farm	4,57	14	49	18	18	1	0	5	63	76
37.5	Indian Lawyer	4,52	15	48	18	15	2	2	6	63	76
37.5	Town Clerk Big City	4,52	12	52	17	18	1	0	7	64	76
39	Manager, Big Department Store	4,51	10	49	25	15	1	0	5	59	75

TABLE 1.2 continued

Rank	CASS Survey Occupational Titles	Mean Rating	Scale % = 100						Residual Category	Percentage Rated 'Excellent' and 'Good'	Prestige Score
			Excellent	Good	Above Average	Average	Below Average	Poor			
			%	%	%	%	%	%	%	%	
40	City Councillor	4,50	15	44	21	16	2	2	4	59	75
41	Radio Announcer	4,49	14	43	22	20	1	0	5	57	75
42	Social Worker	4,46	14	45	19	21	1	0	4	59	75
43	Opera Singer	4,44	18	40	19	19	2	2	7	58	75
44	Captain in Army	4,43	10	47	22	20	1	0	8	57	74
45	Professional Golfer	4,42	23	29	20	24	3	1	6	52	74
46	Nurse	4,37	20	34	14	30	2	0	5	54	73
47	Successful Actor	4,35	13	39	24	22	1	1	5	52	73
48.5	Health Inspector*	4,28	10	41	21	26	2	0	7	51	72
48.5	Sales Manager in a Business*	4,28	9	43	22	25	1	0	7	52	72
50	Stockbroker	4,27	10	36	28	24	1	1	7	46	71
51	Bantu Minister	4,26	11	41	18	22	5	3	7	52	70
52.5	Primary School Teacher	4,21	7	40	22	29	2	0	6	47	70
52.5	Diamond Cutter*	4,21	12	33	29	21	2	3	6	45	71
54.5	Coloured Headmaster High School	4,20	8	39	23	26	3	1	6	47	70
54.5	Draughtsman*	4,20	12	34	22	31	1	0	7	46	71
56	Building Contractor	4,16	6	37	27	29	1	0	6	43	70
57	Commercial Artist*	4,15	8	35	22	33	2	0	8	43	69
58	Private Secretary	4,10	4	35	28	32	1	0	5	39	68
59	Owner of a Clothing Shop*	4,03	4	35	22	37	1	1	7	39	67
60	Air Hostess	4,00	7	28	25	37	3	0	5	35	67
61	Reporter	3,97	8	27	25	36	2	2	4	35	66
62.5	Bantu High School Teacher	3,95	7	34	17	31	9	2	4	41	66
62.5	Owner Small Engineering Workshop*	3,95	2	33	27	36	2	0	7	35	66

TABLE 1.2 Continued

Rank	CASS Survey Occupational Titles	Mean Rating	Scale % = 100						Residual Category	Percentage Rated 'Excellent' and 'Good'	Prestige Score
			Excellent	Good	Above Average	Average	Below Average	Poor			
			%	%	%	%	%	%	%	%	
64	Secretary Trade Union	3,92	4	33	20	37	5	1	5	37	65
65	Coloured High School Teacher	3,91	5	32	20	35	7	1	6	37	65
66	Factory Foreman	3,89	2	33	22	39	4	0	6	35	65
67	Bank Teller	3,85	5	27	21	44	3	0	4	32	65
68	Bookkeeper	3,83	4	31	14	48	3	0	6	35	64
69	Apostolic Preacher	3,80	5	35	14	32	8	6	8	40	63
70	Chief Clerk in an Office	3,78	4	25	20	48	2	1	4	29	63
71	Dairy Technician	3,76	3	28	19	43	6	1	6	31	63
72.5	Bank Clerk	3,75	6	26	12	49	6	1	5	32	62
72.5	Sergeant in Police	3,75	5	25	18	43	7	2	6	30	62
74	Electrician	3,73	7	24	10	53	5	1	4	31	62
75	Miss South Africa	3,63	11	23	14	33	11	8	8	34	61
76	Mechanic	3,60	7	24	6	52	9	2	5	31	60
77	Estate Agent	3,58	3	23	14	51	7	2	5	26	60
78	Typist*	3,48	2	14	21	56	7	0	7	16	58
79	Cafe Owner	3,43	1	23	13	47	14	2	7	24	57
80	Insurance Agent	3,38	0	20	16	51	10	3	6	20	57
81.5	Location Superintendent	3,36	1	17	16	49	14	3	8	18	56
81.5	Hairdresser (Female)	3,36	2	15	13	58	11	1	5	17	56
83	Train Driver	3,35	3	17	15	46	14	5	5	20	56
84	Clerk in Office	3,33	1	16	10	63	8	2	4	17	56
85	Farmer with Small Farm	3,31	1	16	12	57	12	2	6	17	55
86	Supervisor of a Building*	3,27	3	19	10	43	21	4	7	22	55
87	Bantu Foreman	3,26	2	19	17	34	21	7	6	21	54

TABLE 1.2 Continued

Rank	CASS Survey Occupational Titles	Mean Rating	Scale % = 100						Residual Category	Percentage Rated 'Excellent' and 'Good'	Prestige Score
			Excellent	Good	Above Average	Average	Below Average	Poor			
			%	%	%	%	%	%	%	%	
88	Bantu Policeman	3,24	3	19	9	44	20	5	6	22	54
89.5	Motor Car Salesman	3,22	2	14	10	57	13	4	5	16	54
89.5	Undertaker	3,22	2	20	11	46	13	8	7	22	55
91	Plumber	3,18	2	14	8	57	15	4	5	16	53
92	Police Constable	3,16	1	17	9	49	19	5	6	18	53
93	Carpenter	3,11	2	13	7	57	18	3	5	15	53
94	Miner	3,08	3	12	9	49	19	8	5	15	51
95	Switchboard Operator	3,02	1	11	7	56	20	5	4	12	50
96	Machine Operator Factory	2,94	3	12	6	43	28	8	5	15	49
97	Bricklayer	2,88	1	13	3	52	21	10	5	14	49
98	Storeman	2,84	0	7	8	51	29	5	5	7	47
99	Shop Assistant	2,58	0	4	4	47	35	10	6	4	43
100.5	Bulldozer Driver	2,49	1	6	5	37	30	21	5	7	41
100.5	Bantu Carpenter	2,49	0	7	6	36	30	21	7	7	41
102	Meter Reader	2,46	0	9	4	33	32	22	7	9	41
103	Portuguese Market Gardener	2,42	1	5	5	33	35	21	8	6	40
104	Barman	2,37	1	6	1	36	35	21	6	7	40
105	Truck Driver	2,36	0	5	4	34	35	22	4	5	39
106	Bus Conductor	2,31	0	6	1	34	36	23	4	6	39
107.5	Postman	2,23	1	6	4	25	34	30	6	7	38
107.5	Indian Waiter	2,23	0	5	6	26	33	30	6	5	37
109	Taxi Driver	2,21	0	7	3	25	36	29	7	7	37
110	Bantu Truck Driver	2,09	0	4	3	27	30	36	6	4	35
111	Railway Labourer	1,95	1	5	2	18	30	44	6	6	33
112	Road Worker	1,92	1	4	3	18	26	48	6	5	32
113	Lift Operator	1,84	1	4	2	14	30	49	5	5	31
114	Petrol Attendant	1,73	0	4	1	14	26	55	5	4	29

* These occupational titles were included in only 3 of the cities: Cape Town, Bloemfontein and Port Elizabeth.

So far we have achieved the first aim sought in this paper: i.e., the presentation of the CASS Survey rank order of occupational prestige. However, scrutiny of the 114 occupational titles will reveal that some titles are qualified by a Black racial tag and some refer specifically to occupations usually performed by women. The former titles arise as a result of the overall aims of the CASS Survey which is an analysis of social stratification in the total population, albeit that the sample is a White one, and the latter titles are something of a departure to gauge the relative influence of sex on social status via occupations. While these aspects of the occupational ranking have been fully exploited in Schlemmer's manuscript mentioned earlier, they are unnecessary and problematic for the achievement of the remaining aims set out at the beginning of this chapter. As the CASS occupational titles have to be matched with occupational titles appearing in the Population Census of 1960 (or as many matchings achieved as possible - see Chapter 2) it is theoretically possible to retain occupations with Black or female qualifications. But, as it is unlikely that we would be able to match more than a few of this small number of 17 titles with the census, to construct an index for all occupations for the total population on this basis would be misleading. Therefore, the selection of 97 obvious occupational titles appearing in Table 1.3 is the final one made referring to occupations which can be filled by White males. The rank order and values corresponding to occupational titles in Table 1.3 are the variables which are used in all subsequent analyses bearing on the CASS Survey occupational titles in this paper. The choice of occupations for the construction of an index is, therefore, limited to Whites by virtue of the White sample: the case for excluding the occupations usually performed by women is made in the following chapter.

TABLE 1.3

"PRESTIGE" (STANDING) RANK ORDER OF 97 CASS SURVEY OCCUPATIONAL TITLES SELECTED TO REPRESENT OCCUPATIONS USUALLY ASSOCIATED WITH PERFORMANCE BY (WHITE) MALES

Rank	CASS Survey Occupational Titles	Mean Rating	Percentage Rated 'Excellent' and 'Good'	Prestige Score
1	Judge	5,63	93	94
2	Surgeon*	5,60	96	94
3	University Professor	5,49	91	92
4	Doctor	5,45	92	91
5	Cabinet Minister	5,43	87	90
6	Mayor of Large City	5,28	86	89
7	Magistrate	5,27	85	88
8	Chairman of Bank	5,24	88	88
10	Psychologist	5,14	83	86
10	Architect	5,14	84	86
10	Lawyer*	5,14	86	86
12	University Lecturer	5,13	83	86
13	Member of Parliament	5,11	82	85
14	Engineer	5,02	81	84
15	Dentist	4,99	82	83
16	Chartered Accountant	4,95	79	83
17.5	Dominee	4,94	77	83
17.5	Headmaster, Boys' High School	4,94	78	83
19	Minister of Religion	4,93	77	82
20	Airline Pilot	4,89	74	82
21	Headmaster, Primary School	4,86	74	81
22	Owner of Big Factory	4,85	71	81
23	Chemist	4,81	74	81
24.5	Owner of Big Department Store	4,80	69	80
24.5	Physiotherapist	4,80	71	80
26.5	City Treasurer Big City	4,75	69	79
26.5	Industrial Chemist*	4,75	71	79
28.5	Captain in Air Force	4,74	69	80

TABLE 1.3 Continued

Rank	CASS Survey Occupational Titles	Mean Rating	Percentage Rated 'Excellent' and 'Good'	Prestige Score
28.5	Secretary Head Government Department	4,74	68	80
30	High School Teacher	4,72	66	79
31	Senior Admin. Officer Municipal*	4,71	69	79
32	Manager Farm Co-op	4,62	64	77
33	Manager Large Factory	4,61	62	77
34	Farmer Big Farm	4,57	63	76
35	Town Clerk Big City	4,52	64	76
36	Manager Big Department Store	4,51	59	75
37	City Councillor	4,50	59	75
38	Radio Announcer	4,49	57	75
39	Social Worker	4,46	59	75
40	Opera Singer	4,44	58	75
41	Captain in Army	4,43	57	74
42	Professional Golfer	4,42	52	74
43	Successful Actor	4,35	52	73
44.5	Health Inspector*	4,28	51	72
44.5	Sales Manager in a Business*	4,28	52	72
46	Stockbroker	4,27	46	71
47.5	Primary School Teacher	4,21	47	70
47.5	Diamond Cutter*	4,21	45	71
49	Draughtsman*	4,20	46	71
50	Building Contractor	4,16	43	70
51	Commercial Artist*	4,15	43	69
52	Private Secretary	4,10	39	68
53	Owner of a Clothing Shop*	4,03	39	67
54	Reporter	3,97	35	66
55	Onwer Small Engineering Workshop*	3,95	35	66
56	Secretary Trade Union	3,92	37	65
57	Factory Foreman	3,89	35	65
58	Bank Teller	3,85	32	65

TABLE 1.3 Continued.

Rank	CASS Survey Occupational Titles	Mean Rating	Percentage Rated 'Excellent' and 'Good'	Prestige Score
59	Bookkeeper	3,83	35	64
60	Apostolic Preacher	3,80	40	63
61	Chief Clerk in an Office	3,78	29	63
62	Dairy Technician	3,76	31	63
63.5	Bank Clerk	3,75	32	62
63.5	Sergeant in Police	3,75	30	62
65	Electrician	3,73	31	62
66	Mechanic	3,60	31	60
67	Estate Agent	3,58	26	60
68	Cafe Owner	3,43	24	57
69	Insurance Agent	3,38	20	57
70	Location Superintendent	3,36	18	56
71	Train Driver	3,35	20	56
72	Clerk in an Office	3,33	17	56
73	Farmer with Small Farm	3,31	17	55
74	Supervisor of a Building*	3,27	22	55
75.5	Motor Car Salesman	3,22	16	54
75.5	Undertaker	3,22	22	55
77	Plumber	3,18	16	53
78	Police Constable	3,16	18	53
79	Carpenter	3,11	15	53
80	Miner	3,08	15	51
81	Switchboard Operator	3,02	12	50
82	Machine Operator Factory	2,94	15	49
83	Bricklayer	2,88	14	49
84	Storeman	2,84	7	47
85	Shop Assistant	2,58	4	43
86	Bulldozer Driver	2,49	7	41
87	Meter Reader	2,46	9	41
88	Portuguese Market Gardener	2,42	6	40

TABLE 1.3 Continued

Rank	CASS Survey Occupational Titles	Mean Rating	Percentage Rated 'Excellent' and 'Good'	Prestige Score
89	Barman	2,37	7	40
90	Truck Driver	2,36	5	39
91	Bus Conductor	2,31	6	39
92	Postman	2,23	7	38
93	Taxi Driver	2,21	7	37
94	Railway Labourer	1,95	6	33
95	Road Worker	1,92	5	32
96	Lift Operator	1,84	5	31
97	Petrol Station Attendant	1,73	4	29

* These occupational titles were included in only 3 of the cities: Cape Town, Bloemfontein and Port Elizabeth.

CHAPTER 2

CONSTRUCTING A SOCIO-ECONOMIC INDEX FOR ALL OCCUPATIONS.

The CASS occupational prestige scores, which for the remainder of this paper refer to only 97 particular occupations, limit the student of social stratification who might wish to stratify a population among all occupations. The limitations of prestige scores as a research tool have invoked a variety of inferential, interpolational and comparative methods in order to assign scores to items not included in the original rated selection. Some of the expedients employed to infer the prestige standing of occupations not on a ranking scale are reported by Duncan (Reiss, 1961: 110-112) with respect to the original NORC list. These attempts fell short of providing an index for all occupations on a uniform basis and Duncan, who was at that time contemplating a classification of occupations with the use of census data on detailed occupational characteristics, "decided to approach the problem of constructing the occupational socioeconomic index in terms of the relationship between the NORC prestige rankings and socioeconomic characteristics of the occupations" (Reiss, 1961: 114). We follow Duncan's method of socio-economic index construction *quoad omnia* save that it has not been practicable to age-adjust for socio-economic characteristics of occupations.

Following Duncan very closely (Reiss, 1961: 115) our technical problem may be stated in the terms he used substituting only South African material, in parenthesis, for the American study and census enumeration.

> "Our problem, then is defined as that of obtaining a socioeconomic index for each of the occupations in the detailed classification of the (1960 Population Census). This index is to have both face validity, in terms of its constituent variables, and sufficient predictive efficiency with respect to the (CASS) occupational prestige ratings that it can serve as an acceptable substitute for them in any research where it is necessary to grade or rank occupations in the way that the (CASS) score does but where some of the occupations are not on the (CASS) list."

The socio-economic index once constructed is then a tool for predicting prestige scores that would theoretically pertain to a particular scale, in the present case CASS occupational prestige scores. The choice of CASS scores as the variable to be predicted is not a matter for scholarly deliberation as the CASS Survey 1966/67 from which prestige scores are derived has yet to be superceded in scope and content in South Africa. The predictor variables of the index, characteristics of income and education of persons engaged in the several occupations reported in the Population Census, will be discussed at greater length as the published census data in South Africa creates special problems for the construction of a local index.

In constructing his index Duncan argued the advantages of substituting the percentage rated "excellent" and "good" in the prestige scale of "standing" of occupations for the prestige score. He argues that the score is an arbitrary, weighted summation procedure the properties of which are questionable; that the percentages rated "excellent" and "good" are the least ambiguous of prestige rating categories reflecting the finding that "respondents are less willing to make or are less expert in making negative judgements than in making positive judgements"; and, that the range of the variable, percentage "excellent" and "good" ratings, is greater and somewhat magnified than that of the prestige score, especially in the intermediate portion of the range. Although the CASS Survey employed a six-point rating scale which spreads the range of scores at the lower level slightly and might tend to magnify the range at the intermediate level the scattergram showing the relationship between scores and percentage rated "excellent" and "good" (see Fig. 1) is so similar to Duncan's diagram for the NORC study[1] that no cause for deviating from Duncan's method is apparent. We proceed on the basis then that the socio-economic index will predict percentage of "excellent" and "good" ratings of the standing of occupations. This percentage can, of course, be transformed back to a prestige score by recourse to the

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1) Scrutiny of these diagrams will show that people are relatively less willing to make negative rather than positive ratings.

hand-drawn curve in Fig.1. (A scattergram showing the same relationship for all 114 occupational titles of the CASS Survey at Appendix B.1 reproduces a very similar curve to that in Fig. 1 and the correlation co-efficient is of the same value).

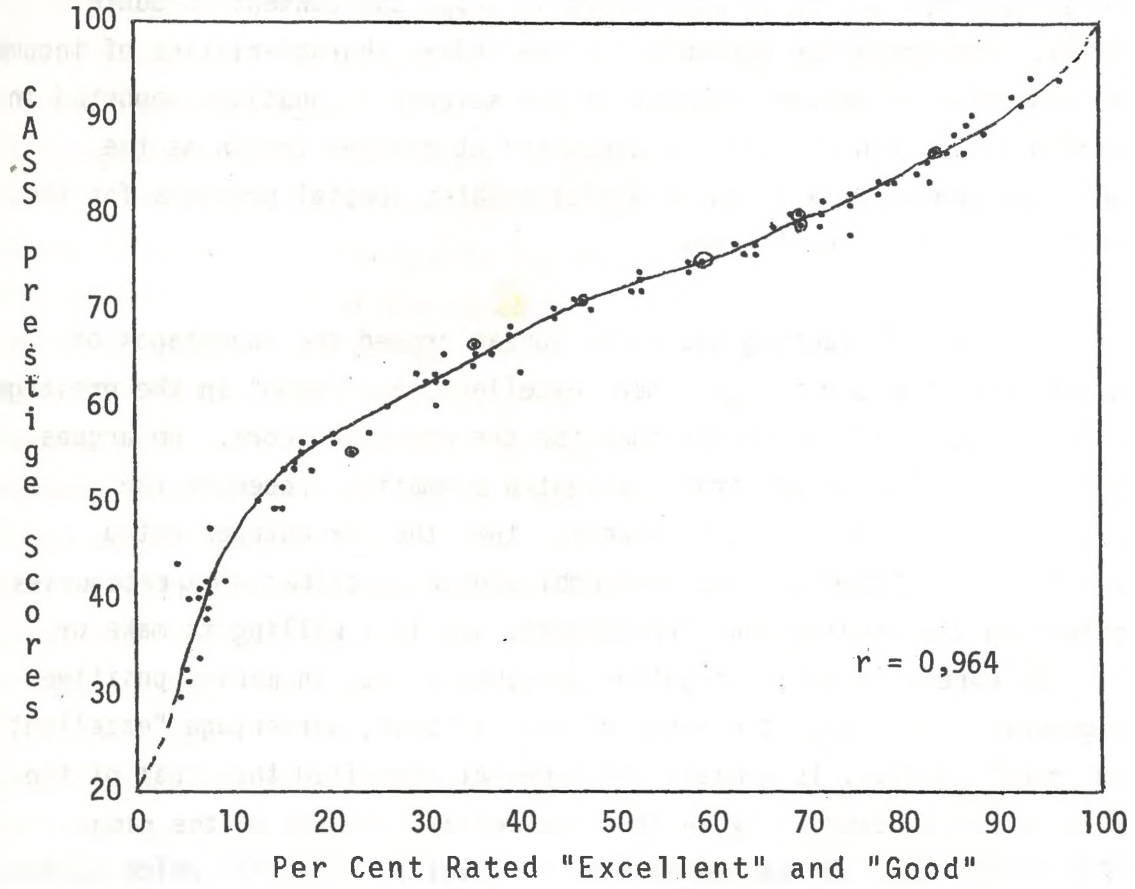

FIG. 1

RELATION OF CASS PRESTIGE SCORE TO PER CENT "EXCELLENT" OR "GOOD" RATINGS FOR 97 WHITE MALE OCCUPATIONAL TITLES IN THE CASS SURVEY

The predictor variables, income and education, are not so easily disposed of and before the index can be constructed a number of pertinent as well as detracting observations have to be made. Initially the question of the suitability of income and education as measures of the "socio-economic" status of an occupation arises. It is probably insufficient, though necessary, to point out that these predictors account, on one measure, for 88% of the variance associated with the "prestige ratings" (see below), and as such are effective estimators of

the rated values. We follow Duncan in his thesis that occupation is the intervening activity linking income to education where education is not only an estimate of "social status" of an occupation but one of its "causes" and income not only an estimate of "economic status" but one of the "effects" of an occupation. Little surprise then that both income and education are often highly inter-correlated and where this can be tested usually highly correlated with prestige of occupations.

The decision to base the index on the occupations of males (males in occupations) only is not as clear cut as the selection of predictor variables and though this does not reflect any preconceived chauvinism it is in part dictated by the conventions of occupational prestige rating research. These conventions are, of course, in turn related to the socio-economic structure of the population. The 1960 Census reveals almost three economically active men for every economically active woman among Whites in South Africa. The distribution of women over the range of more than 300 entries in the detailed classification of occupations in the published census report shows what might be expected - women are generally not employed in a number of occupational groupings, for example in mining, construction, heavy manual occupations and even in some particular professional groups.

The social climate is such that gainful, active employment in occupations is somehow thought to be the preserve of men in society. Although this is changing rapidly, even in South Africa, the stamp of male dominance in the occupational sphere remains and is testified to by the gender associated with many jobs. The CASS Survey sought to overcome this bias in occupational prestige studies by including some occupational titles denoting female employment. For the purposes of this paper these titles have been eliminated because little is known about prestige among gainfully employed women and in fact the complexity of including a sex factor in constructing an index is near insuperable. If the prestige of occupations filled mostly by women were to be estimated on the strength of an equation based on prestige of typically male occupations then the index measures resulting would reflect the design of the prestige survey and not what the design was meant to accomplish.

Having settled on income and education characteristics of males in occupations as predictors for the estimation of percentage rated "excellent" and "good" on the scale of social standing of occupations it is necessary to devote some time to discussing the summary statistics which are used in the construction of the index to reflect these characteristics. The median is probably the most widely used statistic employed to summarise income distributions and is often used to summarise educational levels. However, as Duncan points out (Reiss, 1961: 120) a measure of central tendency is not an appropriate summary of the income or education distribution for the problem engendered by an attempt to construct a socio-economic index. The very form of the occupational prestige variable, and the arguments which suggest it, require measures more appropriate to the task of setting up an equation which would be satisfied by a summary that indicates proportions falling at the upper ends of the distribution of income and education for White males.

Apart from the difficulties encountered with the form of published census data, three specific factors detracting from the attempt to construct a local socio-economic index emerge. At the outset the index takes on something of the cast of an historical document as it is based on the 1960 Population Census - detailed information on the 1970 Census not being available at the time of writing (and funds not available for pre-publication prints-out of data cross tabulations). When the 1970 information becomes available the index will have to be revised and the results will indicate whether changes in socio-economic characteristics change in a pattern to maintain their congruence with prestige ratings, which are held to be stable over longish periods. It is anticipated that the index will not be obsolete with the passing of only ten years, despite the upheavals of the sixth decade, but if it were to prove obsolete then the quite radical changes that would have occurred in the occupational structure to bring this about would occasion another major study of occupational prestige in South Africa among all races (not that this is not required at present given the caste-like nature of our economy).

A further detraction from the attempt to construct an index is

that the dependent variable, occupational prestige, is derived from an urban sample of Whites while the independent variables are based on the total White economically active males in the population. This is a relatively serious qualification to the index being constructed as it is primarily for the purpose of providing a socio-economically rank-ordered configuration of major occupational groupings to facilitate occupational mobility studies. We have no substantive way of knowing how rural populations would differ from urban populations in their relative perception of prestige of occupations. Further, the rural area has been a big supplier of White labour in the South African market this century and their collective perception of prestige is bound to be affected by views of what constitute upward or downward passages from farming or village origins which will not be reflected in our index equation. Nevertheless, the proportion of urban population among Whites in South Africa is approximately 85% and assuming that permanent rural migrants take on the value system of the urban population with respect to prestige of occupations the urban base of the dependent variable in the index equation should not distort the ranking of occupations to a degree that will falsify any findings based on the socio-economic index of occupations as a research tool.

By the desirable standards of rigorous research the income and education variables should be adjusted for differences in age composition among incumbents of different occupations to ensure uniform comparability between the characteristics of one occupation with those of another. This has not been done here. The age adjustment is an extremely laborious task and the experience of Duncan in the American case shows that there age accounted for less than 3% of the variance (Reiss, 1961: 137) which prompts us to forego this refinement here. We could in point of fact attempt nothing more than an indirect method similar to the method used by Duncan and even this is problematic when working with available census data.

To recapitulate: the attempt to construct a socio-economic index for all occupations (reported in the 1960 Census) among White males in South Africa is based on summary proportions toward the upper levels

of the distributions of income and education levels characterising "each occupation" and which have the effect of estimating in a predictive way the proportion of "excellent" and "good" ratings that would be made on the six-point scale used to judge the standing of occupations in the CASS Survey (bearing in mind that the independent variables are not age adjusted). The source for the income and education variables is the Population Census, 6th September 1960, and the manner of extracting the data, described below, is the same for both exercises necessary to assign an index value to each occupational table in the census report. These exercises consist in deriving an equation by combining the values of prestige, income and education variables of selected (matched) occupations, and substituting values of the income and education variables in the equation for all occupations. Before proceeding with the arithmetic, however, it is necessary to detail the method of extracting independent variable values and to acquaint the reader with some of the problems caused by the presentation of published census tables for the purposes at hand.

The income variable is drawn from the Population Census (1960: Vol. 8, No. 1, Table A 2.1). In Table A 2.1 of this report the incumbents of the several occupations listed are distributed through income intervals ranging from -R400 to R10 000+ including categories for "no income" and "unspecified" corresponding to the "work status"[1] of the incumbents. The proprotion in each occupation which represents the value of the predictor variable, income, in the index, is the percentage of incumbents earning R2 000 or more (excluding the categories "no income" and "unspecified") which at 1960 included some 42% of the total economically active males in the Republic. This proportion is based on all incumbents of the occupation irrespective of whether they were employees or unemployed on 6th September 1960. In the case of salary and wage earners the variable reflected is gross income, and in the case of farmers, businessmen and professional men, net income.

The education variable is drawn from the Population Census

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1) Work status defines whether a man is an employer or employee.

(1960: Vol. 8, No. 2, Table A 3). The distribution in Table A 3 covers a number of categories including levels through school education and university education both with or without "diploma" qualifications. Levels of education below school standard level and "unspecified" responses are combined in one category. The proportion in each occupation which represents the value of the predictor variable, education, in the index is the percentage of high school graduates excluding "no standard" and "unspecified" (excluding as well "diploma with Std. 9 or lower") which at 1960 included nearly 29% of the total economically active males in the Republic. High school graduate is defined by an educational level of Std. 10 and above. The disparity between the total values of the predictor variables suggests that education will be a more discriminating predictor than income which is confirmed by the weights in the index equation. This disparity was allowed to stand because the "high school graduate" definition of the educational level proportion is both conventional and useful and the most equitable comparative income interval for the income proportion was the one with the lower reach of R2 000 (R2 000 - R2 999). The income interval below R2 000 would have boosted the total income proportion to something just over 60% and the interval following R2 999 would have reduced the percentage to nearly 17%, both proportions being too extreme for our purpose. It is true that the income proportion could have been matched with the education value by interpolation within the R2 000 - R2 999 interval but the task of repeating this over 300 and more cases when the desired value fell within the interval chosen finally proved sufficiently daunting not to be attempted.

There is a final qualification to be broached before the construction of the index can be commenced. The classification of occupational titles in the census tables for occupation x income and occupation x education is not comparatively standard or uniform. The classification in the income table is detailed and contains over 300 occupational titles; the classification in the education table contains less than 100 occupational titles. Fortunately, the major groupings are entered for each of the tables in a standard fashion and the broader occupational title classification in the education table subsume in an accountable fashion the more detailed title classification in the income

table. Therefore, the values for the income variable can always be specific but the value attributed to most specific occupations on the education variable derive from the value of the range of occupations collapsed to a single title (of course, the education variable titles can be used as the originating definition and the income variable titles collapsed to fit that format - this has been included at Appendix B.4). The effects of this source of bias can be scrutinised as we proceed with the construction of the index directly below.

Of the original 114 occupational prestige ratings given in the CASS Survey 97 occupational titles have been retained for treatment in this paper. But a comparison of these 97 titles with titles appearing in the census reports will reveal that the CASS titles are in general more specific than titles in the latter. In the process of matching CASS with Census occupational titles, 50 items from the CASS list were lost leaving 47 occupational titles which were, if not all equivalent, reasonably comparable with census titles. These 47 comparable titles account for 50,7% of the economically active male population reported in the census (as calculated on the numbers reported for the income variable), a proportion similar to that computed for the construction of the American index. The matching achieved from the CASS list is not as adequate as the matching with American census data that Duncan achieved with the NORC list as, following on from the above, we were in the unenviable situation of having to match each CASS occupational title with two lists of census titles. The results of this matching are not unequivocal and the results are reproduced for scrutiny at Tables 2.1 and 2.2 showing matches with the census income and education variable occupation lists respectively.

These tables show clearly that the match of CASS occupation titles with the titles corresponding to the predictor variables is closer for the income variable than for the education variable as has already been mentioned. The format of published census information is an unavoidable condition for the present attempt, but does not determine all the decisions taken at a technical level. The process of deciding which matches of occupational titles to accept from available information can be culled from Appendix B.2, where all possible, even if improbable,

matches of CASS with census occupational titles are displayed with an indication of the selection finally made. Further detailed description of this selection process would be superfluous to most readers of this document and instead of chronicling our personal experiences of anguish we invite the interested reader to decide whether or not a competant matching has been achieved.

TABLE 2.1

FORTY-SEVEN CASS SURVEY OCCUPATIONAL TITLES MATCHED WITH CENSUS OCCUPATION CLASSIFICATION ON THE INCOME VARIABLE SHOWING TOTAL WITHIN CENSUS OCCUPATIONAL TITLE AND THE INCOME VARIABLE

Census Occupation Title	CASS Occupation Title	Total Within Occupational Title: Excluding "No Income" and "No Information"	Per Cent of Males in the 1960 Census with Incomes of R2 000 or More. Based on those reporting income. Not adjusted for age.
Medical Practitioner, Specialist	Doctor	5 686	93
Judge, Magistrate, Public Prosecutor	Magistrate	771	91
Architect	Architect	1 518	80
Attorney, Conveyencer, Lawyer, Solicitor, Patent Agent	Lawyer	3 034	91
Professor, Lecturer Teacher (Universities, Training Colleges and Correspondence Colleges)	University Lecturer	1 970	90
Legislative (Elected) and Administrative (Appointed)	Member of Parliament	478	91
Engineer: Civil, Mechanical, Electrical, Mine, Chemical, Other	Engineer	7 498	89
Dentist	Dentist	1 040	91

TABLE 2.1 Continued

Census Occupation Title	CASS Occupation Title	Total Within Occupational Title; Excluding "No Income" and "No Information"	Per Cent of Males in the 1960 Census with Incomes of R2 000 or More. Based on those reporting income. Not adjusted for age.
Accountant (Chartered or Certified), Auditor	Chartered Accountant	4 722	85
Clergyman, Priest	Minister of Religion	3 249	47
Aircraft Pilot, Navigator and Flight Engineer	Airline Pilot	607	71
Chemist (not pharmacist)	Chemist	1 523	77
Physiotherapist	Physiotherapist	95	72
Teacher, Inspector of Schools (Primary and Secondary Schools)	High School Teacher	13 350	74
Farmer	Farmer, Big Farm	89 772	43
Director, Manager: Wholesale and Retail Trade (Excluding Working Proprietor)	Manager, Big Department Store	14 988	83
Social Welfare Worker	Social Worker	220	69
Health and Food Inspector	Health Inspector	1 336	60
Stockbroker, Dealer in Shares	Stockbroker	210	90
Diamond Cutter and Polisher	Diamond Cutter	775	84
Draughtsman	Draughtsman	4 496	57
Commerical and Industrial Artist: Drawer, Sketcher of Posters	Commerical Artist	695	54
Author, Journalist and Related Worker	Reporter	1 306	73
Bookkeeper, Accountant (not chartered)	Bookkeeper	6 869	71
Policeman, Detective (Public)	Sergeant in Police	14 159	19

TABLE 2.1 Continued

Census Occupation Title	CASS Occupation Title	Total Within Occupational Title: Excluding "No Income" and "No Information"	Per Cent of Males in the 1960 Census with Incomes of R2 000 or More. Based on those reporting income. Not adjusted for age.
Electrician, Electrical Wireman, (Construction)	Electrician	14 783	43
Mechanic (so stated)	Mechanic	2 216	30
Estate Agent	Estate Agent	1 159	71
Insurance Agent	Insurance Agent	3 399	62
Driver (Steamloco., Electric, Railcar)	Train Driver	5 938	75
Clerk	Clerk in an Office	108 147	40
Undertaker	Undertaker	206	24
Plumber, Drainlayer, Pipe Fitter	Plumber	4 734	31
Carpenter, Joiner, Etc.	Carpenter	16 651	24
Miner (Stoper, Developer, Shaft Sinker, Blaster, Reclaimer, Early Examiner)	Miner	16 793	63
Bricklayer	Bricklayer	11 164	19
Shop Assistant (Wholesale and Retail Trade)	Shop Assistant	19 226	33
Road-Grader/Scraper/ Roller Operator	Bulldozer Driver	1 106	4
Market Gardener	Portuguese Market Gardener	498	10
Barman, Head Barman	Barman	2 680	4
Lorry, Van, Bus, Truck Driver, Tractor Driver (not farm)	Truck Driver	16 017	10

TABLE 2.1 Continued

Census Occupation Title	CASS Occupation Title	Total Within Occupational Title : Excluding "No Income" and "No Information"	Per Cent of Males in the 1960 Census with Incomes of R2 000 or More. Based on those reporting income. Not adjusted for age.
Conductor (Bus and Tram)	Bus Conductor	1 340	11
Postman	Postman	1 742	3
Taxi Driver	Taxi Driver	720	6
Labourer in Transport and Storage	Railway Labourer	3 796	0,5
Lift Attendant	Lift Operator	481	4
Petrol Filling Station Attendant	Petrol Station Attendant	57	3

TABLE 2.2

FORTY-SEVEN CASS SURVEY OCCUPATIONAL TITLES MATCHED WITH CENSUS OCCUPATION CLASSIFICATIONS ON THE EDUCATION VARIABLE SHOWING TOTAL WITHIN CENSUS OCCUPATIONAL TITLE AND THE EDUCATION VARIABLE

Census Occupation Title	CASS Occupation Title	Total Within Occupational Title: Excluding "No Standard" and "Unspecified"	Per Cent of Males in the 1960 Census Having Graduated from High School i.e. Std. 10 and above. Excluding "Diploma with Std.9 or Lower"
Medical Pratictioner, Dentist, Etc.	Doctor	6 786	100
Jurist (Advocate, Etc.)	Magistrate	4 814	99
Architect, Quantity Surveyor	Architect	2 185	98

TABLE 2.2 Continued

Census Occupation Title	CASS Occupation Title	Total Within Occupational Title: Excluding "No Standard" and "Unspecified"	Per Cent of Males in the 1960 Census Having Graduated from High School i.e. Std. 10 and above. Excluding "Diploma with Std.9 or Lower"
Jurist (Advocate, etc)	Lawyer	4 814	99
Professor, Teacher, etc.	University Lecturer	17 104	94
Public Administrative Officer	Member of Parliament	478	87
Engineer: Civil, Mechanical, etc.	Engineer	7 490	94
Medical Practitioner, Dentist, etc.	Dentist	6 786	100
Chartered Accountant, etc.	Chartered Accountant	6 084	97
Other: Minister, Missionary, Journalist, etc.	Minister of Religion	12 126	73
Aircraft Pilot, Navigator, etc.	Airline Pilot	611	86
Chemist, Physicist, etc.	Chemist	2 224	97
Medical Auxiliaries (Pharmacist, Optometrist, etc.)	Physiotherapist	3 371	90
Professor, Teacher etc.	High School Teacher	17 104	94
Farmer, Market Gardener, etc.	Farmer, Big Farm	95 488	20
Managerial Worker	Manager, Big Department Store	50 861	49
Other: Minister, Missionary, Journalist, etc.	Social Worker	12 126	73
Other Medical Services	Health Inspector	2 971	50
Insurance and Estate Agent, etc.	Stockbroker	7 380	49

TABLE 2.2 Continued

Census Occupation Title	CASS Occupation Title	Total Within Occupational Title : Excluding "No Standard" and "Unspecified"	Per Cent of Males in the 1960 Census Having Graduated from High School i.e., Std. 10 and above. Excluding "Diploma with Std.9 or Lower"
Precision Instrument Maker, etc.	Diamond Cutter	2 678	24
Draughtsman, Technician, etc.	Draughtsman	14 482	68
Other: Minister, Missionary, Journalist, etc.	Commercial Artist	12 126	73
Other: Minister, Missionary, Journalist, etc.	Reporter	12 126	73
Other: Cashier, Typist, etc.	Bookkeeper	21 171	33
Policeman, Fire Fighter, etc.	Sergeant in Police	21 153	13
Electrician, etc.	Electrician	22 605	21
Mechanic (Not Electrical)	Mechanic	26 550	10
Insurance and Estate Agent, etc.	Estate Agent	7 380	49
Insurance and Estate Agent, etc.	Insurance Agent	7 380	49
Driver, Fireman (Railway)	Train Driver	11 113	1
Clerk	Clerk in an Office	108 702	49
Other Service Worker	Undertaker	10 855	25
Sheetmetal Worker, Plumber, etc.	Plumber	8 050	9
Carpenter, Woodworker, etc.	Carpenter	21 384	8
Specialised Mining Occupation	Miner	25 235	10
Bricklayer, Plasterer, etc.	Bricklayer	24 952	6

TABLE 2.2 Continued

Census Occupation Title	CASS Occupation Title	Total Within Occupational Title: Excluding "No Standard" and "Unspecified"	Per Cent of Males in the 1960 Census Having Graduated from High School, i.e. Std. 10 and above. Excluding "Diploma with Std.9 or Lower"
Shop Assistant	Shop Assistant	19 231	23
Craftsman and Production Worker, N.E.C.	Bulldozer Driver	22 096	13
Farmer, Market Gardener, etc.	Portuguese Market Gardener	95 488	20
Other Service Worker	Barman	10 855	25
Driver (Road Transport)	Truck Driver	17 253	2
Other: Guard, Telephone Operator, etc.	Bus Conductor	31 868	4
Other: Guard, Telephone Operator, etc.	Postman	31 868	4
Driver (Road Transport)	Taxi Driver	17 253	2
Labourer: Other	Railway Labourer	12 582	1
Other: Guard, Telephone Operator, etc.	Lift Operator	31 868	4
Labourer: Other	Petrol Station Attendant	12 582	1

The construction of the socio-economic index is achieved by computing a multiple-regression equation which expresses the estimated CASS prestige rating as a function of the two predictors, census income and education variables, based on the values pertaining to the 47 selected occupational titles above. Table 2.3 shows the income and education indicators symbolised by X_2 and X_3 respectively, and the CASS prestige rating symbolised by X_1. Duncan (Reiss, 1961: 124) does not show his scattergrams for X_1 to X_2 and X_1 to X_3 but says that the relationships are

essentially linear. Scattergrams for these relationships in the present study are illustrated at Appendix A.3 and while the tendency is certainly linear the distribution is more dispersed than anticipated. The relationship of the prestige variable to the predictors, however, compares favourably with Duncan's results (we give below our statistics followed in parenthesis by Duncan's results which can be found on page 124 of Reiss, quoted above). The prestige variable can be considered to be highly related to each predictor: This is indicated by the zero-order correlations $r_{12} = 0,84$ ($r_{12} = 0,84$) and $r_{13} = 0,90$ ($r_{13} = 0,85$); a very close fit with Duncan's computations on the American data. The relationship between the two predictors is summarised by the correlation $r_{23} = 0,81$ ($r_{23} = 0,72$) which is higher than Duncan's result (again the relationship tends to be linear but with some quite definite deviations, see scattergram for X_2 to X_3 at Appendix A.3). Given these inter-correlations the partial correlations of the prestige rating with each of the predictor variables (holding constant the other) would be expected to be substantial - the result shows, however, that in the CASS index, education is a more powerful predictor than income, due no doubt to proportional differentiation in the coverage of the variables as originally defined: $r_{12.3} = 0,45$ ($r_{12.3} = 0,61$) and $r_{13.2} = 0,70$ ($r_{13.2} = 0,65$). Combining the values of the two predictors in a linear multiple-regression equation produces a multiple correlation appreciably larger than the zero-order correlation r and somewhat larger than the correlation r_{13}; that is, $R_{1(23)} = 0,94$; $R^2_{1(23)} = 0,88$, ($R_{1(23)} = 0,91$; $R^2_{1(23)} = 0,83$). With a selection of 47 occupations we are able to account statistically for 88% of the variance in these occupational prestige ratings while the linear combination of indicators that we are replicating accounted for 83% of the variance in 45 NORC ratings. The multiple-regression equation which expresses the estimated occupational prestige rating ($\hat{X}_1$) as a function of the two predictors is $\hat{X}_1 = 0,31X_2 + 0,52X_3 - 0,26$.

TABLE 2.3

ESTIMATION OF CASS PRESTIGE RATING FROM CENSUS INCOME AND EDUCATION, FOR 47 SELECTED OCCUPATIONS

CASS Occupational Title	X_2 Income	X_3 Education	X_1 CASS Prestige Rating	$\hat{X}_1$ Socio-Economic Index	$\hat{X}_1 - X_1$ Error of Estimate
Doctor	93	100	92	81	-11
Magistrate	91	99	85	79	-6
Architect	80	98	84	76	-8
Lawyer	91	99	86	79	-7
University Lecturer	90	94	83	77	-6
Member of Parliament	91	87	82	73	-9
Engineer	89	94	81	76	-5
Dentist	91	100	82	80	-2
Chartered Accountant	85	97	79	77	-2
Minister of Religion	47	73	77	52	-25
Airline Pilot	71	86	74	66	-8
Chemist	77	97	74	74	0
Physiotherapist	72	90	71	69	-2
High School Teacher	74	94	66	72	6
Farmer, Big Farm	43	20	63	24	-39
Manager, Big Department Store	83	49	59	51	-8
Social Worker	69	73	59	59	0
Health Inspector	60	50	51	44	-7
Stockbroker	90	49	46	53	7
Diamond Cutter	84	24	45	38	-7
Draughtsman	57	68	46	53	7
Commercial Artist	54	73	43	54	11
Reporter	73	73	35	60	25
Bookkeeper	71	33	35	39	4
Sergeant in Police	19	13	30	12	-18
Electrician	43	21	31	24	-7
Mechanic	30	10	31	14	-17
Estate Agent	71	49	26	47	21
Insurance Agent	62	49	20	44	24

TABLE 2.3 Continued

CASS Occupational Title	X_2 Income	X_3 Education	X_1 CASS Prestige Rating	$\hat{X}_1$ Socio-Economic Index	$\hat{X}_1 - X_1$ Error of Estimate
Train Driver	75	1	20	24	4
Clerk in an Office	40	49	17	38	21
Undertaker	24	25	22	20	-2
Plumber	31	9	16	14	-2
Carpenter	24	8	15	11	-4
Miner	63	10	15	24	9
Bricklayer	19	6	14	9	-5
Shop Assistant	33	23	4	22	18
Bulldozer Driver	4	13	7	8	1
Portuguese Market Gardener	10	20	6	13	7
Barman	4	25	7	14	7
Truck Driver	10	2	5	4	-1
Bus Conductor	11	4	6	5	-1
Postman	3	4	7	3	-4
Taxi Driver	6	2	7	3	-4
Railway Labourer	0,5	1	6	0	-6
Lift Operator	4	4	5	3	-2
Petrol Station Attendant	4	1	4	2	-2

The value of $\hat{X}_1$ obtained by substituting values of the income and education indicators for a given occupation into the multiple-regression equation is that occupation's socio-economic index. Therefore, on the basis of the argumentative and statistical evidence above, it is proposed that the index can be calculated for any occupation for which comparable income and education data are available in the Population Census. The "validity" of the index rests initially on the argument that occupation does link education and income in a general way both in fact and in the minds of the general public: that is, that the index is derived from a uniform process that allows inductive generalisation from

a particular analysis (of 47 occupations) to all, and if not all then most, occupations. We are, however, primarily concerned here with a statistical analysis and the validity of our statistical presentation. Recall that the socio-economic index is constructed for the purpose of estimating a prestige rating (per cent "excellent" and "good" ratings) and, therefore, the predictions can be compared with the true value of the ratings in the case of the 47 selected occupations and the results analysed to substantiate the seeming validity established by the inter-correlations above. The question of overall validity of the index cannot be finally solved, of course, because we do not have a representative sample of all occupations with corresponding prestige ratings at our disposal.

The error of the estimate of prestige ratings provided by the index for 47 selected occupations is shown by the value $\hat{X}_1 - X_1$ in Table 2.3 and the graphic presentation of the scatter of the prestige rating about the estimate of the index can be scrutinised at Fig. 2. The root-mean-square of the errors for these 47 occupations is 12,0 points (compared with 13,0 points on the 45 occupations of the NORC study) and although this statistic conceals some very substantial errors the relationship between actual ratings and estimates is by and large uniform and linear. Two comments arising from the distribution of the errors of estimates seem pertinent: in general the index, though subject to error, can be considered to be a good indicator of the relative prestige ranking of occupations; but for certain specific occupations the index can be considered to be seriously biased (a finding corroborated by Duncan's results). The bias can arise for numerous reasons: poor matching of occupational titles (e.g., farmers in the present study); defective census statistics; determinants of prestige other than income and education (possibly clergy fall in this category); and hidden factors in real income for some occupations (clergy and farmers being cases in point). A further problem arises with respect to ongoing changes in the economic structure which cause prestige ratings to lag in reflecting changes, especially in the income sphere. However, this problem is beyond the competance of this paper but our findings here might very well lead to a study of the effects of such change as a separate issue.

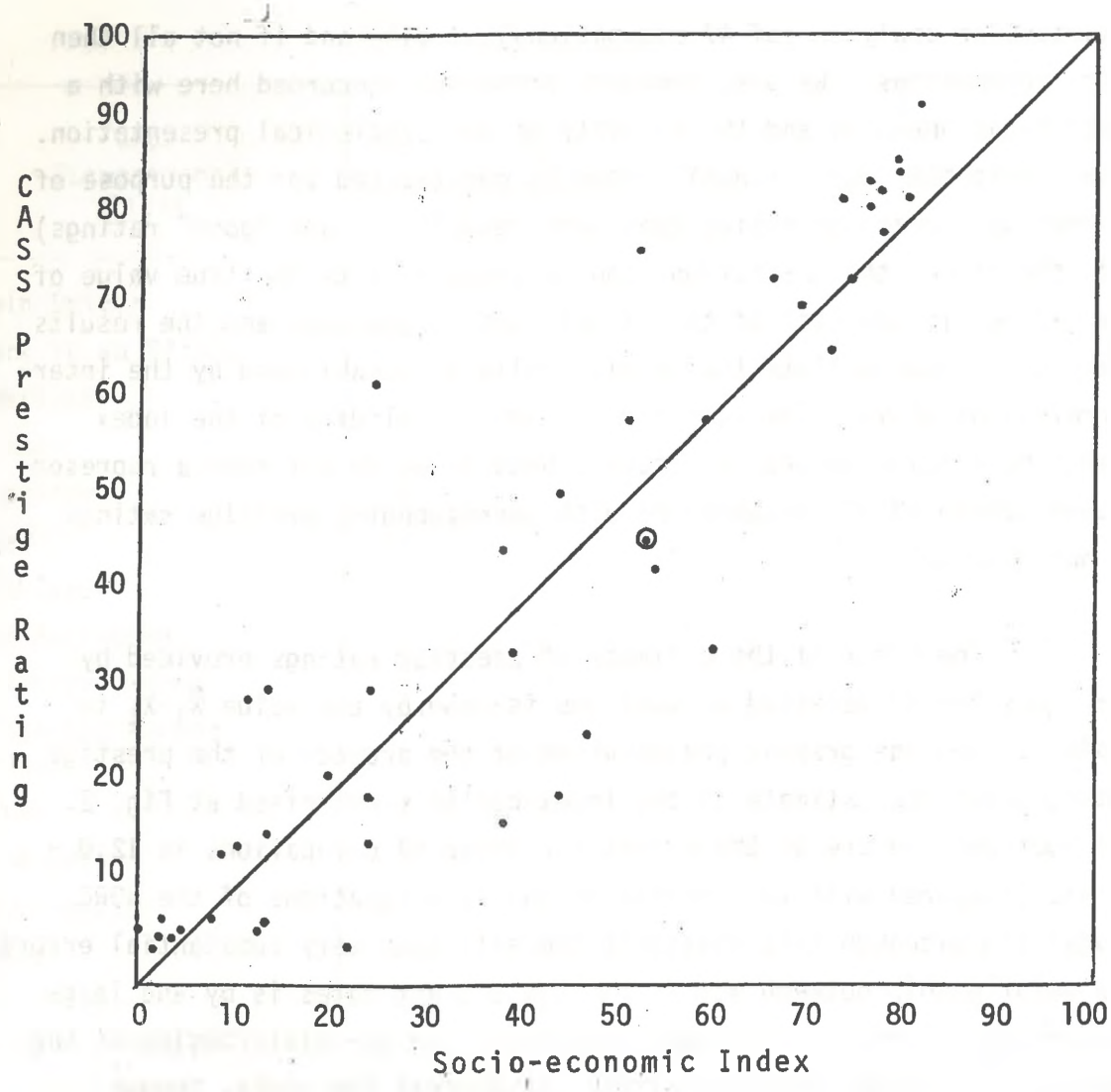

FIG. 2

RELATION OF SOCIO-ECONOMIC INDEX WITH CASS PRESTIGE RATINGS ON 47 MATCHED OCCUPATIONAL TITLES

Using the root-mean-square of the error as a cut-off it can be seen that the index at this standard underestimates the prestige ratings of the occupational titles Minister of Religion (-25), Farmer (Big Farm) (-39), Sergeant in Police (-18) and Mechanic (-17) while it overestimates the rating of a range of white-collar occupational titles - Estate Agent (21), Insurance Agent (24), Clerk in an Office (21), Reporter (25) and Shop Assistant (18). The underestimate of the prestige of the Minister of Religion occupational title is in no way surprising and probably reflects hidden income,[1] heterogeniety of jobs in the title

1) Hidden income would comprise transport, housing and other allowances in this case.

as well as prestige allocated to "role model" occupations not taken into account by our indicators. Farmers are a special case in South Africa and we shall return to them at some length later - note that the prestige rating for farmers with big farms is close to the index estimate for farmers in general (compare at Tables 2.3 and 2.4). It is probable that some routine non-manual (e.g. Sergeant in Police) and some skilled manual occupations (e.g. Mechanic) will be underestimated as to a prestige rating by the index. The range of white-collar occupations in which prestige is overestimated by the index suggests that many non-manual jobs are either better paid or attract people with more education than prestige ratings allow for given the general view that income and education are usually associated with prestige of occupations.

Table 2.4 which shows the socio-economic index for "all" occupational titles (White male) in the classification of the 1960 Population Census of the Republic according to the order of occupation and occupational groupings of published census data comprises the fulfilment of the aim of this chapter. For the convenience of the reader or researcher, values for corresponding income and education variables of the several occupational titles are shown with the socio-economic index as is the transform[1)] of each index value to a CASS "prestige score". The transform of the scale is achieved by using the curvilinear relationship between percentage of "excellent" and "good" ratings and the prestige score illustrated at Fig. 1: the socio-economic index is entered on the abscissa of the graph and the corresponding ordinate on the curve is read off as a transform to the CASS scale. Finally, it should be clearly understood that the socio-economic index is not an effective substitute or a predictor of income and education levels for any individual case within an occupational title. Duncan treats this issue carefully and at some length so the argument is not repeated here (Reiss, 1961: 143-146). In this regard it should be clear that the index scale is based on a variable of stratification limited in its dimensions, i.e., "socio-economic status" which has been summarised for a population.

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1) We accept the American usage for this purpose.

TABLE 2.4

SOCIO-ECONOMIC INDEX FOR "ALL" OCCUPATIONAL TITLES AMONG THE ECONOMICALLY ACTIVE WHITE MALES IN SOUTH AFRICA CLASSIFIED IN THE POPULATION CENSUS 1960

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census, 1960: Vol.8, No.1 (A 2.1)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
Professional, Technical and Related Worker							
Architect, Engineer and Surveyor							
001 Architect	1 518	2 185	80	98	76	82	a
002 Quantity Surveyor	652	2 185	73	98	72	80	
003 Engineer: Civil	1 908	7 490	90	94	77	83	a
004 Engineer: Mechanical	920	7 490	90	94	77	83	a
005 Engineer: Electrical	1 094	7 490	89	94	76	82	a
006 Engineer: Mine	480	7 490	91	94	77	83	a
007 Engineer: Chemical	392	7 490	90	94	77	83	a
008 Engineer: Other	2 704	7 490	88	94	76	82	a
010 Surveyor: Land	513	2 060	80	80	66	78	b
011 Surveyor: Other	418	2 060	69	80	63	77	
012 Surveyor: Surveying Technician	1 114	2 060	53	80	58	75	
Chemist (Not Pharmacist), Physicist, Geologist and Other Physical Scientist							
015 Chemist (Not Pharmacist)	1 523	2 224	77	97	74	81	a,b
016 Physicist	83	2 224	75	97	73	81	
017 Geologist	365	2 224	85	97	77	83	
018 Physical Scientist N.E.C.	250	2 224	80	97	75	82	
Veterinarian, Biologist, Agronomist and Related Scientist							
021 Veterinarian	284	1 336	85	90	73	81	b

1) - 6) See page 67.

TABLE 2.4 Continued

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census, 1960: Vol.8, No.1 (A 2.1)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
022 - 025 Biologist, Botanist, Zoologist, Bacteriologist, Bio-chemist	79	1 336	65	90	67	78	c
026 Biologist: Other Biologist	240	1 336	76	90	70	80	
027 Biologist: Agronomist, Silviculturist, Horticulturist	722	1 336	61	90	65	78	
Medical and Related Professions:							
031 Medical Practitioner, Specialist	5 686	6 786	93	100	81	84	a,b
032 Dentist	1 040	6 786	91	100	80	84	a
033 Dental Mechanic	331	2 971	54	50	42	68	
034; 036 Nurse and Nursing Aid	1 405	1 432	25	15	15	53	b,c
037 Health and Food Inspector	1 336	2 971	60	50	44	70	a
038 Vermin Exterminator	117	2 971	24	50	33	63	
039 Disease Preventer	762	2 971	12	50	29	61	
Medical Auxilliaries:							
040 Pharmacist, Dispensing Chemist	2 444	3 371	83	90	72	80	
041 Optometrist, Optician	327	3 371	81	90	72	80	
042 - 044 Occupational Therapist, Physiotherapist, Masseur	165	3 371	67	90	67	78	a,c
045 Radiographer (including diagnostic)	122	3 371	69	90	68	79	
046 Orthopaedic Mechanic and Surgical Appliance Maker (Not Factory)	85	3 371	52	90	63	77	
047 Medical Auxilliaries N.E.C.	209	3 371	60	90	65	78	
048 Healer (Nature Curing, etc.)	53	2 971	55	50	43	69	
049 Laboratory Technician (Medical or Dental)	361	2 971	46	50	40	67	

TABLE 2.4 Continued

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census, 1960: Vol.8, No.1 (A 2.1)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
Professor, Teacher and Instructor:							
051 Professor, Lecturer, Teacher (Universities, Training Colleges and Correspondence Colleges)	1 970	17 104	90	94	77	83	a,b
052 Teacher, Inspector of Schools (Primary and Secondary)	13 350	17 104	74	94	72	80	a
053 Vocational Teacher, Instructor, Nurse Tutor	989	17 104	71	94	71	80	
054 Teacher, Instructor (Cultural and Other Education)	655	17 104	52	94	65	78	
Religious Worker:							
061 Clergyman, Priest	3 249	12 126	47	73	52	73	a
062 Missionary	728	12 126	27	73	46	71	
063 Religious Worker (not ordained)	493	12 126	19	73	44	70	
Jurist:							
070 Judge, Magistrate, Public Prosecutor	771	4 814	91	99	79	83	a,b
071 Advocate, Barrister	456	4 814	88	99	79	83	
072 Attorney, Convenancer, Lawyer, Soliciter, Patent Agent	3 034	4 814	91	99	79	83	a
073 Articled Clerk (Attorney)	436	4 814	13	99	55	74	
074 Worker in Other Legal Occupation	87	4 814	63	99	71	80	
Artist, Writer and Related Creative Artist:							
075 Painter, Sculptor	226	12 126	37	73	49	72	
076 Drawer, Sketcher of Posters	695	12 126	54	73	54	74	a
077 Window Dresser, Interior Decorator	764	12 126	38	73	49	72	
078 Author, Journalist and Related Writer	1 306	12 126	73	73	60	76	a

TABLE 2.4 Continued

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census, 1960: Vol.8, No.1 (A 2.1)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
079 Actor (Theatrical, Music Hall)	67	12 126	37	73	49	72	
080 Musician, Dancer, Singer	508	12 126	45	73	52	73	
Draughtsman and Other Technicians:							
081 Draughtsman	4 496	14 482	57	68	53	73	a
082 Engineering Technician	5 575	14 482	80	68	60	76	
083 Agricultural, Silvicultural and Horticultural Technician	731	14 482	36	68	46	71	
084 Laboratory Technician (Not Medical or Dental)	1 311	14 482	27	68	43	69	
085 Other Technical Assistant	2 568	14 482	41	68	48	72	
Other Professional, Technical and Related Worker:							
090 Accountant (Chartered or Certificated), Auditor	4 722	6 084	88	97	77	83	a,b
091 Articled Clerk (Accountant) etc.	1 317	6 084	6	97	52	73	
092 Actuary	76	12 126	93	73	67	78	
093 Economist	93	12 126	87	73	65	78	
094 Statistician	149	12 126	77	73	62	76	
095 Librarian, Archivist	234	12 126	50	73	53	73	
096 Designer (Industrial and Commercial Products)	341	12 126	79	73	62	76	
097 Interpreter, Translater	167	12 126	68	73	59	75	
098 Social Welfare Worker	220	12 126	69	73	59	75	a
099 Professional, Technical and Related Worker N.E.C.	2 686	12 126	69	73	59	75	

TABLE 2.4 Continued

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census, 1960: Vol.8, No.1 (A 2.1)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
Administrative, Executive and Managerial Worker							
101-2 Legislative (Elected) and Administrative (Appointed)	478	478	95	87	74	81	a,b
Director, Manager and Working Proprietor:							d
120 Forestry and Fishing (Excluding Farmer and Farm Manager)	171	50 861	62	49	44	70	b
121 Mining and Quarrying	823	50 861	84	49	51	72	
122 Manufacturing, Construction, Gas, Water and Sanitary Services	20 787	50 861	82	49	51	72	
123 Wholesale and Retail Trade (Excluding Working Proprietor)	14 988	50 861	83	49	51	72	a
124 Financial Institutions and Insurance	3 094	50 861	96	49	55	74	
125 Real Estate	479	50 861	88	49	53	73	
126 Transport, Storage and Communication	3 840	50 861	55	49	42	68	
127 Catering and Accommodation Services	5 063	50 861	56	49	43	69	
128 Business Services	922	50 861	83	49	51	72	
129 Other Service Industries	1 326	50 861	70	49	47	71	
131 Director of Companies	1 028	50 861	98	49	56	74	b
Clerical Worker							
141 Bookkeeper, Accountant (Not Chartered)	6 869	21 171	71	33	39	67	a,b
142 Cashier, Teller	571	21 171	33	33	27	60	
143 Stenographer, Typist	157	21 171	24	33	24	59	
144 Office-machine Operator	253	21 171	25	33	25	60	
145 Clerk	108 147	108 702	40	49	38	66	a

TABLE 2.4 Continued

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census, 1960: Vol.8, No.1 (A 2.1)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
146 Receptionist	123	21 171	21	33	23	59	
147 Clerical Worker N.E.C.	13 249	21 171	24	33	24	59	
Salesworker							
160 Working Proprietor, Wholesale and Retail Trade	18 010	16 979	61	29	34	64	b
Insurance and Estate Salesman, Stockbroker, Salesman of Securities and Services and Auctioneer:							
161 Insurance Agent	3 399	7 380	62	49	44	70	a
162 Estate Agent	1 159	7 380	71	49	47	71	a
163 Stockbroker, Dealer in Shares	210	7 380	90	49	53	73	a
164 Salesman - Business Services	668	7 380	57	49	43	69	
165 Auctioneer, Sworn Appraiser, Valuator (Diamonds, etc.)	900	7 380	72	49	48	72	
166 Market and General Commission Agent	320	7 380	60	49	44	70	
167 Other Agent N.E.C.	834	7 380	59	49	44	70	
Commercial Traveller and Manufacturers' Agent:							
171 Manufacturers' Agent, Representative	6 405	15 258	76	48	48	72	e
172 Commercial Traveller	7 379	15 258	67	48	46	71	e
Salesman, Shop Assistant and Related Worker:							
191 Shop Assistant (Wholesale and Retail Trade)	19 226	19 231	33	23	22	58	a,b
192 Floorwalker							f
193 Canvasser, Demonstrator (Commercial)	133	-	34	15	18	56	g

TABLE 2.4 Continued

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census, 1960: Vol.8, No.1 (A 2.1)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
194 Hawker, Newsvendor, Pedlar	289	-	9	15	10	47	g
195 Petrol Filling Station Attendant	57	-	4	4	3	26	a,g
196 Other Related Worker N.E.C	1 324	-	76	15	31	62	g
Farmer, Fisherman, Hunter, Lumberman and Related Workers							
Farmer and Farm Manager:							
201 Farmer	89 772	95 488	43	20	23	59	a,b
202 Market Gardener	498	95 488	10	20	13	51	a
211 Farm Manager	4 737	95 488	23	20	17	55	b
Farm Worker N.E.C.:							
221 Farm Foreman	7 243	12 873	5	15	9	45	b
222 Driver of Mechanical Vehicles or Farm Implements	207	12 873	3	5	8	43	
223 Sorter, Grader of Agricultural and Pastoral Produce (Agriculture only)	510	12 873	20	15	14	52	
224 Family Worker (Relatives)	67	12 873	9	15	10	47	
225 Gardener, Groundsman	1 097	12 873	9	15	10	47	
226 Farm Labourer	829	12 873	1	15	8	43	
Hunter and Trapper:							
231 Hunter, Trapper							b,f
235 Fisherman	1 208	1 275	26	8	12	50	b
236 Diver and Related Worker							f

TABLE 2.4 Continued

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census, 1960: Vol.8, No.1 (A 2.1)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_2 4)	$\hat{X}_1$ 5)	T 6)	Notes*
Forestry Worker:							
238 Lumberman, Wood-cutter, Tree-cutter							b,f
239 Other N.E.C.	1 136	1 275	7	8	6	36	
Miner, Quarryman and Related Worker							
240 Mine Captain, Overseer	1 153	5 612	90	28	42	68	
241 Shift Boss	3 357	5 612	93	28	43	69	
242 Miner (Stoper, Developer, Shaft Sinker, etc.)	16 793	25 235	63	10	24	59	a
243 Quarryman, Sandpit Worker	148	25 235	36	10	16	54	
244 Timberman (Shaft)	1 072	25 235	80	10	30	62	
245 Reduction Worker (Amalgamator, Cyanider)	2 004	25 235	51	10	21	58	
246 Banksman, Onsetter, Cage Man, etc.	3 214	25 235	56	10	22	58	
247 Other N.E.C.	1 685	25 235	42	10	18	56	
250 Alluvial Diamond Digger	265	5 612	14	28	19	56	b
251 Other Worker in Mining and Quarrying N.E.C.	859	5 612	21	28	21	58	
Worker in Transport and Communication							
Deck Officer, Engineer Officer and Pilot (Ship):							
260 Deck Officer, Pilot (Ship)	453	2 131	70	21	32	63	
261 Engineer Officer (Ship)	290	2 131	62	21	30	62	
Deck and Engine-room Rating (Ship), Barge Crew and Boatman:							
265 Deck Rating, Hand, Barge Crew,Member, etc.	1 199	-	12	7	7	40	b,g

TABLE 2.4 Continued

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census, 1960: Vol.8, No.1 (A 2.1)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
266 Engine Room Rating, Fireman and Oiler, Marine Driver	150	-	21	7	10	47	g
269 Aircraft Pilot, Navigator and Flight Engineer	607	611	71	86	66	78	a,b
270 Driver (Steam Loco, Electric Railcar)	5 938	11 113	75	1	24	59	a
271 Fireman (Loco)	4 925	11 113	9	1	3	26	
Driver, Road Transport:							
280 Chauffeur	293	17 253	14	2	5	34	b
281 Taxi Driver	720	17 253	6	2	3	26	a
282 Lorry, Van Bus, Truck Driver, Tractor Driver (Not Farm)	16 017	17 253	10	2	4	33	a
283 Driver of Animal-drawn Vehicle							f
284 Driver of Other Self-propelled Vehicles							f
289 Guard, Ticket Examiner, Barrier Attendant	4 252	31 868	57	4	19	56	b
Inspector, Supervisor, Traffic Controller and Dispatcher:							
290 Inspector, Supervisor	2 392	31 868	71	4	24	59	
291 Checker	4 312	31 868	9	4	5	34	
292 Yard Inspector, Shunter	5 672	31 868	15	4	6	36	
293 Station Foreman, Signalman	3 647	31 868	30	4	11	48	
294 Air Traffic Controller	56	31 868	86	4	28	61	
295 Traffic Controller, Dispatcher, N.E.C.	131	31 868	25	4	10	47	
Telephone, Telegraph, and Related Telecommunication Operator:							
301 Telephone and Telegraph Operator	3 858	31 868	11	4	5	34	b

TABLE 2.4 Continued

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census, 1960: Vol.8, No.1 (A 2.1)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
302 Radio-communication Operator	251	31 868	43	4	15	53	
Postman, Messenger and Deliveryman:							
311 Postman	1 742	31 868	3	4	3	26	a,b
312 Messenger	1 530	31 868	3	4	3	26	
313 Deliveryman	82	31 868	11	4	5	34	
Worker in Transport and Communication N.E.C.:							
321 Conductor (Bus and Tram)	1 340	31 868	11	4	5	34	a,b
322 Lift Attendant	481	31 868	4	4	3	26	a
323 Worker in Transport and Communication Occupations N.E.C.	1 702	31 868	14	4	6	36	
Craftsman, Production Process Worker and Labourer N.E.C.							
331 - 339 Spinner, Weaver, Knitter, Dyer and Related Worker	697	669	41	17	21	58	b,c
341 - 348 Tailor, Cutter, Furrier and Related Worker	985	927	29	12	15	53	b,c
Upholsterer and Related Worker:							
350 Furniture	298	1 705	22	6	10	47	b
351 Motor Vehicles	363	1 705	18	6	8	43	
352 Other	194	1 705	55	6	20	57	
353 - 360 Mattress and Patern Makers, Machinists	496	1 705	31	6	12	50	c
361 Other Textile, For Products, etc. N.E.C.	353	1 705	12	6	7	40	

TABLE 2.4 Continued

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census, 1960: Vol.8, No.1 (A 2.1)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
Leather Cutter, Laster, and Sewer (Excluding Gloves and Garments):							
370 - 371 Shoe Repairer, Cobbler, Shoemaker	668	1 800	12	5	6	36	b,c
372 - 378 Footwear-Cutter, Sewer, Machinist	559	1 800	8	5	5	34	c
379 Other Footwear Factory Operative	428	1 800	6	5	4	33	
380 - 383 Other Leather Products N.E.C.	157	1 800	17	5	8	43	c
Furnaceman, Roller, Moulder and Related Worker in Metal:							
391 Blast Furnaceman	589	9 409	52	5	18	56	b
392 - 395 Other Metal Furnaceman, Temperer	302	9 409	45	5	16	54	c
399 Roller, Roll Turner, Mill Steel Roller, etc.	1 620	9 409	30	5	12	50	b
401 Blacksmith	1 137	9 409	38	5	14	52	b
402 Hammersmith, Forgeman, etc.	1 219	9 409	32	5	12	50	
403 Moulder (Hand or Machine)	2 198	9 409	43	5	16	54	
404, 411 - 413 Coremaker, Wire and Pipe Drawers	193	9 409	36	5	14	52	b,c
419 Metal Worker N.E.C.	2 027	9 409	37	5	14	52	b
Precision Instrument Maker, Watchmaker, Jeweller and Related Worker:							
420 Watchmaker and Repairer	700	2 678	41	24	25	60	
421 Precision Instrument Maker and Repairer	571	2 678	47	24	27	60	
422 Other Worker in Precision Instruments	312	2 678	38	24	24	59	
423 Diamond Cutter and Polisher	775	2 678	84	24	38	66	a
424 Jewel Setter (Diamond Setter)	107	2 678	63	24	32	63	
425 Goldsmith and Silversmith	142	2 678	63	24	32	63	
426 Other Precious Metal Worker	181	2 678	54	24	29	61	

TABLE 2.4 Continued

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census, 1960: Vol.8, No.1 (A 2.1)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
Toolmaker, Machinist, Plumber, Welder, Plater and Related Worker:							
431 Fitter and Turner	25 468	34 163	48	14	22	58	b
432 Toolmaker, Die Setter, etc.	1 526	34 163	56	14	24	59	
433 Patternmaker (Metal)	588	34 163	57	14	25	60	
434 Other Machine and Toolsetting Worker	4 645	34 163	22	14	14	52	
441 - 443 Assembler and Machine Erector, etc.	1 985	34 163	30	14	16	54	c
Mechanic-Repairman:							
451 Motor Vehicles and Motor Cycles	18 919	26 550	24	10	12	50	b
452 Diesels	1 155	26 550	36	10	16	54	
453 Aircraft	1 039	26 550	56	10	22	58	
454 Mechanic (So Stated)	2 216	26 550	30	10	14	52	a
455 Other Mechanic	2 917	26 550	33	10	15	53	
Sheetmetal Worker, Plumber, Drainlayer, Pipe Fitter:							
461 Sheetmetal Worker	1 074	8 050	40	9	17	55	b
462 Panelbeater	1 905	8 050	27	9	13	51	
463 Plumber, Drainlayer, Pipe Fitter	4 734	8 050	31	9	14	52	a
464 Other (Coppersmith, Tinsmith, Platesmith)	193	8 050	59	9	22	58	
471 - 475 Welders and Cutters	7 012	15 094	35	7	14	52	b,c
Metal Plate and Structural Metal Workers:							
481 Structural Steel Worker	126	15 094	45	7	17	55	b
482 Shipwright	173	15 094	37	7	15	53	

TABLE 2.4 Continued

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census, 1960: Vol.8, No.1 (A 2.1)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
483 Boilermaker	5 387	15 094	54	7	20	57	
484 Reinforcing Steel Worker	50	15 094	50	7	19	56	
485 Underframemaker, Body Builder	632	15 094	34	7	14	52	
486 Other Metal Plate and Structural Metal Worker	710	15 094	32	7	13	51	
491 Electro-plater	95	15 094	53	7	20	57	b
492 Dip-plater and Related Worker	50	15 094	38	7	15	53	
Metal Worker N.E.C.:							
500 Locksmith	113	15 094	37	7	15	53	b
501 - 503 Tool Grinder, Saw Doctor, etc.	284	15 094	43	7	17	55	c
504 Other Metal Worker N.E.C.	280	15 094	33	7	14	52	
Electrician and Related Electrical and Electronics Worker:							
511 Electrician, Electrical Wireman (Construction)	14 783	22 605	43	21	24	59	a,b
512 Auto Electrician	634	22 605	26	21	19	56	
513 Electrician (Telephone)	4 772	22 605	33	21	21	58	
514 Electrician (Aircraft)	149	22 605	38	21	22	58	
515 Armature/Coil Winder	332	22 605	29	21	20	57	
516 Other Electrician and Electrical Worker N.E.C.	1 815	22 605	33	21	21	58	
Mechanic-repairer (Radio, Appliances, etc.):							
521 Radiotrician, Electronic Mechanic	1 700	5 473	37	25	24	59	b
522 Air-conditioning and Refrigeration Mechanic	504	5 473	40	25	25	60	
523 Domestic Appliances	223	5 473	37	25	24	59	
524 Office Machinery	984	5 473	29	25	22	58	
525 Other Mechanic and Related Worker N.E.C.	619	5 473	42	25	26	60	

TABLE 2.4 Continued

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census, 1960: Vol.8, No.1 (A 2.1)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
526 Linesman, Cable Joiner	988	5 473	20	25	19	56	
527 Assembler	110	5 473	43	25	26	60	
528 Other Electrical Worker N.E.C.	345	5 473	26	25	21	58	
Carpenter, Joiner, Cabinet Maker, Cooper and Related Worker:							
531 Carpenter, Joiner, etc.	16 651	21 384	24	8	11	48	a,b
532 Block Floor Layer	94	21 384	20	8	10	47	
533 Shipwright (Wood), Boad Builder	148	21 384	39	8	16	54	
534 Shopfitter	420	21 384	30	8	13	51	
535 Cabinet Maker	1 137	21 384	12	8	8	43	
536 Sawer (Sawmill)	123	21 384	7	8	6	36	
537 Sawer (Other than Sawmill/Saw Operator)							f
538 - 539 Woodwork Machine Operator N.E.C. and Cooper	1 453	21 384	20	8	10	47	c
540 Vehicle Body Builder (Wood/Composite)	601	21 384	40	8	16	54	
541 Furniture Polisher, French Polisher	289	21 384	18	8	9	45	
542 Other Woodworker N.E.C.	401	21 384	18	8	9	45	
Painter and Paper Hanger:							
550 Painter (Construction)	5 777	7 710	16	4	7	40	b
551 Spray Painter (Not Construction)	513	7 710	24	4	9	45	
552 Spray Painter and Panel Beater (So Stated)	202	7 710	33	4	12	50	
553 Signwriter	509	7 710	24	4	9	45	
554 Glazier	155	7 710	18	4	7	40	
555 Other Painter, etc. N.E.C. (Paper Hanger)	202	7 710	22	4	9	45	

TABLE 2.4 Continued

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census, 1960: Vol.8, No.1 (A 2.1)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
Bricklayer, Plasterer and Related Worker:							
558 Bricklayer	11 164	24 952	19	6	9	45	a,b
559 Plasterer	2 167	24 952	17	6	8	43	
560 Stonemason	316	24 952	23	6	10	47	
561 Tiler - Wall and Floor	419	24 952	26	6	11	48	
562 Slater, Tiler - Roof	100	24 952	39	6	15	53	
563 Other Related Worker N.E.C.	193	24 952	22	6	10	47	
Other Construction Worker N.E.C.:							
564 Builder (So Stated)	1 067	24 952	24	6	10	47	
565 Builder Foreman, Foreman, Overseer	5 453	24 952	22	6	10	47	
566 Fence Erector	193	24 952	10	6	6	36	
567 Water Borer Driller, Well Sinker	1 212	24 952	51	6	19	56	
568 Inspector, Clerk of Works	1 562	-	72	50	48	72	g
569 Other Building Worker N.E.C.	1 011	24 952	18	6	8	43	
Compositor, Pressman, Engraver, Bookbinder and Related Worker:							
570 Compositor, Type Setter	1 619	6 705	51	20	26	60	
571 Linotype Operator	424	6 705	79	20	35	65	
572 Stereotyper, Electrotyper	141	6 705	55	20	27	60	
573 - 576 Machine Minder (Printing)	3 589	6 705	56	20	28	61	c
577 - 578 Engraver, Photo-engraver, Etcher	452	6 705	64	20	30	62	c
579 Bookbinder/Cutter/Ruler	537	6 705	44	20	24	59	

TABLE 2.4 Continued

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census, 1960: Vol.8, No.1 (A 2.1)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
Potter, Kilnman, Glass and Clay Former and Related Worker:							
580 - 583, 585 Glass Blower, Grinder, Finisher, etc.	316	1 040	38	9	16	54	b,c
586 - 589 Potter and Related Clay Worker	487	1 040	30	9	14	52	c
591 - 595 Glass Furnace Workers	169	1 040	29	9	13	51	b,c
610 - 615 Decorator of Glass and Pottery Products	69	1 040	42	9	17	55	b,c
Miller, Baker, Brewer and Related Food and Beverage Workers:							
620 - 623 Miller, Grinder, Other Workers in Grain and Related Products	603	594	51	13	22	58	b,c
631 - 635 Baker, Confectioner, Sweet Maker and Related Worker	1 131	1 116	36	11	17	55	b,c
640 - 645 Brewer, Wine Maker, Mineral Water Worker	367	360	39	27	26	60	b,c
650 - 657, 660 - 667, 670 - 676 Other Workers in Food	1 676	1 676	21	7	10	47	b,c
680 - 687 Distiller, Batchstill and Other Still Operator	366	2 848	30	11	15	53	b,c
690 - 693 Pulp and Paper Worker (Not Paper Products)	411	2 848	43	11	19	56	b,c
Chemical and Related Process Worker N.E.C.:							
701 Machine Operator (Chemical)	549	2 848	23	11	13	51	b
702 Other Worker in Chemicals	1 527	2 848	25	11	13	51	
704 - 709 Tobacco Preparer and Tobacco Products Worker	138	160	18	17	14	52	b,c
710 - 712 Worker in Cane, Wicker Bamboo, etc.	95	22 096	3	13	7	40	c

TABLE 2.4 Continued

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census, 1960: Vol.8, No.1 (A 2.1)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
720, 722 - 723 Machine Operator (Rubber Products)	193	22 096	10	13	10	47	b,c
724 Tyre Builder	313	22 096	2	13	7	40	
725 Vulcanizer, Attendant and Retreader	98	22 096	45	13	20	57	
726 Other Worker in Rubber Products N.E.C.	438	22 096	9	13	9	45	
731 - 732 Machine Operator and Process Worker (Plastic Products)	77	22 096	34	13	17	55	b,c
741 - 746 Tanner, Dress and/or Fellmonger	86	22 096	27	13	15	53	b,c
751 - 753 Photographic Darkroom Worker	49	22 096	43	13	20	57	b,c
761 Musical Instrument Maker	65	22 096	52	13	23	59	b
762 - 763 Musical Instrument Tuner and Other Worker in Musical Instruments N.E.C.	154	22 096	28	13	15	53	c
770 - 773 Stone Cutter and Carver	389	22 096	17	13	12	50	b,c
774 - 776 Paper Products Maker	248	22 096	44	13	20	57	c
781 - 782 Match Worker, Machinist and Other N.E.C.	56	22 096	14	13	11	48	b,c
790 Other Production Worker N.E.C.	2 850	22 096	18	13	12	50	b
795 - 796 Packer and Labeller	167	167	10	7	6	36	b,c
801 Stationary Engine Operator (So Stated)	248	15 503	18	4	7	40	b
802 Pump Attendant/Operator N.E.C.	726	15 503	39	4	14	52	
803 Compressor Operator	157	15 503	58	4	20	57	
804 Boiler Attendant/Boiler Fireman	1 567	15 503	23	4	9	45	
805 Other Stationary Engine or Related Equipment Operator N.E.C.	2 864	15 503	21	4	8	43	
811 Crane Operator	2 505	15 503	30	4	11	48	b
812 Hoist Operator	420	15 503	78	4	26	60	
813 Other Lifting Equipment Operator	120	15 503	32	4	12	50	
821 - 823 Rigger (Construction, Ship and Other)	1 439	15 503	61	4	21	58	b,c
831 - 832 Road Grader/Scraper/Roller and Concrete Mixer Operator	1 153	15 503	4	4	3	26	a,b,c

TABLE 2.4 Continued

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census, 1960: Vol.8, No.1 (A 2.1)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
833 Other Earth-moving and Construction Machinery Operator N.E.C.	3 704	15 503	7	4	4	33	
841 - 842, 851 - 853 Material-handling Equipment Operator	529	15 503	15	4	6	36	b,c
861 - 862 Stevedore and Dock Worker N.E.C.	243	22 096	51	13	22	58	b,c
863 Porter (Transportation - Not Hotel)	529	22 096	0	13	7	40	
871 Foreman (So Stated) N.E.C.	9 071	22 096	55	13	24	59	b
872 Supervisor (So Stated) N.E.C.	4 302	22 096	45	13	20	57	
873 Apprentice (So Stated) N.E.C.	2 786	22 096	1	13	7	40	
Labourer In (Excluding Agriculture and Forrestry) :							
880 Mining and Quarrying	53	12 651	8	1(0,7)	3	26	b
881 Manufacturing	1 692	12 651	2	1(0,7)	1	21	
882 Construction	5 228	12 651	1	1(0,7)	1	21	
883 Electricity, Gas, Water and Sanitary Services	67	12 651	4	1(0,7)	2	24	
884 Commerce	396	12 651	1	1(0,7)	1	21	
885 Transport and Storage	3 796	12 651	1(0,5)	1(0,7)	1	21	a
886 Communications	95	12 651	2	1(0,7)	1	21	
887 Government, Provincial and Local Authorities N.E.C.	1 113	12 651	1(0,4)	1(0,7)	1	21	
888 - 891 Labourer (Industries Not Stated)	208	12 651	3	1(0,7)	1	21	c
Service, Sports and Recreation Worker							
Policeman, Guard, Fire Fighter and Related Worker							
900 Policeman, Detective (Public)	14 159	21 153	19	13	12	50	a,b

TABLE 2.4 Continued

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census, 1960: Vol.8, No.1 (A 2.1)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
901 Policeman, Detective (Private)	700	21 153	46	13	21	58	
902 Fire Officer, Fire Fighter, Member of Fire Brigade N.E.C.	1 252	21 153	23	13	14	52	
903 Traffic Inspector/Officer (Except S.A.R. & H.)	1 277	21 153	26	13	15	53	
904 Prison Warder, Goaler	2 265	21 153	14	13	11	48	
905 Watchman	969	21 153	9	13	9	45	
906 Lifesaver/Guard	45	21 153	2	13	7	40	
907 Messenger of the Court, Deputy Sheriff	313	21 153	40	13	19	56	
908 Other Related Worker N.E.C.	105	21 153	13	13	11	48	
Caretaker, Cleaner and Related Worker:							
911 Caretaker, Doorkeeper, Guardsman	3 249	4 763	10	6	6	36	b
912 Church Warden	211	4 763	1(0,5)	6	3	26	
913 Cloak/Baggage/Bedding/Linen Room Attendant	147	4 763	5	6	4	33	
914 Ranger	223	4 763	13	6	7	40	
915 - 919 Cleaner and Related Worker N.E.C.	1 105	4 763	1	6	3	26	c
921 - 925 Housekeeper, Cook, etc.	664	5 055	30	9	14	52	b,c
931 - 933 Domestic Worker	48	5 055	8	9	7	40	b,c
934 Children's Nurse							f
936 Page, Porter (Hotel), Hall Porter, Usher	259	5 055	2	9	5	34	b
938 Other "Lower Routine" Services	318	5 055	19	9	10	47	b
Waiter, Wine Steward and Related Worker:							
941 Waiter, Wine Steward	1 076	5 055	9	9	7	40	b
942 Barman, Head Barman	2 680	5 055	4	9	6	36	a
951 - 953 Barber, Hair Dresser, etc.	2 692	10 855	21	25	19	56	b,c
961 - 964 Launderer, Dry Cleaner and Related Worker	194	10 855	40	25	25	60	b,c

TABLE 2.4 Continued

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census, 1960: VOL.8, No.1 (A 2.1)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
971 Photographer and Related Camera Worker	817	10 855	43	25	26	60	b
972 Undertaker and Embalmer	206	10 855	24	25	20	57	a
973 Other Workers in Undertaking (Not Undertaker)	67	10 855	22	25	20	57	
Entertainment, Recreation and Other Sports Worker:							
974 - 976 Professional Sportsmen, Performing Artist, Jockey	255	10 855	31	25	22	58	c
977 Projectionist, Film Revisor	536	10 855	7	25	15	53	
978 Instructor, Trainer, Coach (Personal)	231	10 855	40	25	25	60	
979 Other Service Worker in Entertainment and Sport N.E.C.	168	10 855	26	25	21	58	
Other Service Worker N.E.C.:							
981 Political Party Organiser	150	10 855	61	25	32	63	b
982 Museum Guide							f
983 Hospital Orderly, Ambulance Man/Driver	771	10 855	14	25	17	55	
984 Other Service Worker N.E.C.	4 741	10 855	26	25	21	58	
986 Unemployed and Unspecified	5 772	14 086	13	10	9	45	b
Total Economically Active	821 495	831 966	42	29	28	61	

1) Total White males excluding categories "no income" and "unspecified".
2) Total White males "in broad occupational categories" excluding "no standard" and "unspecified".
3) Percent of males with incomes of R2 000 or more (not adjusted for age).
4) Percent of Males having graduated from high school (excludes "diploma with Standard 9 or less").
5) Socio-economic Index.
6) Transform to CASS Prestige Scale (prestige scores).
* Notes: See page 68 for explanation of Notes.

TABLE 2.4 Continued

*Notes:

a. One, or one of a group, of 47 occupational titles used in deriving the socio-economic index from predictors of the CASS prestige ratings (see Tables 2.1, 2.2 and 2.3).

b. Reflects continuous entry according to detailed census classification where the census code numbering is discontinuous.

c. Occupational title classifications are combined due either to insufficient numbers for computation in one or more classifications or convenience of combining some "very like" occupational titles under one title - sometimes both.

d. Includes workers in both private and public undertakings. Excludes workers who exercise primarily professional functions. Farmers and farm managers are classified elsewhere as are working proprietors in the wholesale and retail trade.

e. The education variable X_3 includes approximately 1 500 lesser workers (Census Codes 192 - 196).

f. Classification category too small for index computation.

g. The education variable X_3 is derived as a weighted mean of the appropriate X_3 proportion from major occupational groupings as defined in Table 4.2 (see Chapter 4).

As a rider to Table 2.4 a corollary table derived on the basis of the occupational title format set out in the Population Census from which the education variable was drawn is given at Appendix A.4 to show the scale of the socio-economic index when wider definitions of occupations are used – recall that the education indicator is not occupation specific in most cases and that many education variables comprise a common value for a range of occupations, sometimes of a heterogeneous category. These education values are used invariably in all tabulations of the socio-economic index scale in this paper.

CHAPTER 3

RANK ORDERING OF ALL OCCUPATIONS

The rank order of 333 occupational titles (some titles combined) in the Population Census is shown in Table 3.1. The first ranks correspond to the highest socio-economic index values and the last ranks to the lowest values of the index which is, of course, the criterion of the ranking procedure. All theoretical values of the index describe a numerical range from 83 - 0 in round numbers. The substantive range of the values of the socio-economic index over 333 occupational titles is 81 - 1. To reiterate, the several values in this range of the socio-economic index estimate the proportion of "excellent" and "good" ratings which would be theoretically made had any of the occupations appeared as an item for "prestige" scaling in the CASS Survey – the range of these proportions over 97 "experimental" occupational titles in the survey is 96 - 4 (theoretical range is, of course, 100 - 0). The scale (of measurement) of the substantive socio-economic index is comprised then of 81 intervals. We shall return to this property of the index scale shortly.

The reasons for the failure of the theoretical and substantive socio-economic index values at the upper level of their respective ranges to approach 100 are clear. Firstly, as shown above, the substantive proportions of the prestige variable fall slightly short of the complete theoretical range. Secondly, in matching CASS Survey occupational titles with titles in the Population Census only 47 of the original 97 CASS items survived the exercise limiting the range somewhat. Thirdly, the form and content of published census information regarding distributions of income and education variables among occupations proved to be a constraining factor: the form of the occupational title "stubs" in the income table used is often wide enough to include occupational definitions which are intuitively separate in status terms while logical in categorical terms (e.g. Judge, Magistrate, Public Prosecutor) and on the education table the occupational item categories are collapsed into gross form which severely limits differentiation among particular

occupations as to educational prowess; partly as a consequence of the foregoing and partly as a function of the characteristics of the actual distributions of income and educational levels in the census which show unexpected deviations at times, the index weights as well as the computation of index values from census content result in a narrower scale of index values.

It is, of course, possible to transform the values of the socio-economic index to values for the occupational prestige scores (an arbitrarily weighted mean of the prestige rating scale) computed for CASS Survey results. This might be appropriate for certain specialised comparative "prestige of occupation" applied exercises, but in general will only serve to limit the range of a scale of measurement: one of the original reasons why proportions of a rating scale rather than mean score on the scale was accepted as the appropriate measure of the prestige variable for index construction. The theoretical range of the prestige score is 100 - 17 and on the 97 "experimental" occupational titles it is 94 - 29. The range of the transform to score values from the substantive values of the index in Tables 2.4 or 3.1 alters by dropping to 84 at the upper level and to 21 at the lower - a substantial loss of 17 intervals under and against the range of the socio-economic index values.

In Table 3.1 the ranks of the socio-eocnomic index opposite corresponding occupational titles are ranked first to last in sequence. Scrutiny of the ranking column reveals immediately which occupations are equivalent on the socio-economic criterion, which are above and which below others. This ranking scale reflects the convention of whole numbers for index values which we have adopted for this study and can be refined so extending the discrimination in the scale. This is accomplished by returning to Table 2.4 and by substituting the income and educational values for a particular occupation in the index equation to get a decimalised value of the index. The task, especially if numerous titles are involved, is, however, laborious and not contemplated here. Care should be exercised in utilising the results of comparison among the rankings of occupations: dentists and engineers are, for example, shown in purer categories than the single category medical practitioner, specialist.

In any event the rank order of occupations considered separate from the scale of the corresponding index values is merely a descriptive, if for some purposes useful, instrument. Used in conjunction with the scale of the socio-economic index the power of statements about the rank of an occupation can be sharply increased.

TABLE 3.1

RANK ORDER AND DECILE DISTRIBUTIONS OF THE SOCIO-ECONOMIC INDEX FOR "ALL" OCCUPATIONAL TITLES AMONG THE ECONOMICALLY ACTIVE WHITE MALES IN SOUTH AFRICA CLASSIFIED IN THE POPULATION CENSUS, 1960

Population Census Occupational Title with Census Code Number Population Census 1960: Vol.8, No.1 (A 2.1)	R 1)	$\hat{X}_1$ 2)	D_1 3)	D_2 4)	Notes*
031 Medical Practitioner, Specialist	1	81	10	10	a
032 Dentist	2	80	10	10	a
070 Judge, Magistrate, Public Prosecutor	3	79	10	10	a,b(3)
071 Advocate, Barrister	3	79	10	10	b(3)
072 Attorney, Conveyancer, Lawyer, Solicitor, Patent Agent	3	79	10	10	a,b(3)
003 Engineer: Civil	6	77	10	10	a,b(7)
004 Engineer: Mechanical	6	77	10	10	a,b(7)
006 Engineer: Mine	6	77	10	10	a,b(7)
007 Engineer: Chemical	6	77	10	10	a,b(7)
017 Geologist	6	77	10	10	b(7)
051 Professor, Lecturer, Teacher (Universities, Training Colleges and Correspondence Colleges)	6	77	10	10	a,b(7)
090 Accountant (Chartered or Certified), Auditor	6	77	10	10	a,b(7)
001 Architect	13	76	10	10	a,b(3)
005 Engineer: Electrical	13	76	10	10	a,b(3)
008 Engineer: Other	13	76	10	10	a,b(3)
018 Physical Scientist N.E.C.	16	75	10	10	
015 Chemist (Not Pharmacist)	17	74	10	10	a,b(2)
101-102 Legislative (Elected) and Administrative (Appointed)	17	74	10	10	a,b(2)

1) Rank order of the socio-economic index. As the index was computed to round numbers a finer ranking by decimal places of the index is not shown here. This can be achieved by applying the index weights to the appropriate variables in Table 2.4.

2) Socio-economic index.

3) Decile scale of the socio-economic index. That is, a decile based on the distribution of $\hat{X}_1$ among occupational titles.

4) Population decile scale. That is, the distribution of $\hat{X}_1$ in the population from which the index was derived.

* See end of table for explanatory notes.

TABLE 3.1 Continued

Population Census Occupational Title with Census Code Number Population Census 1960: Vol.8, No.1 (A 2.1)	R 1)	$\hat{X}_1$ 2)	D_1 3)	D_2 4)	Notes*
016 Physicist	19	73	10	10	b(2)
021 Veterinarian	19	73	10	10	b(2)
002 Quantity Surveyor	21	72	10	10	b(4)
040 Pharmacist, Dispensing Chemist	21	72	10	10	b(4)
041 Optomotrist, Optician	21	72	10	10	b(4)
052 Teacher, Inspector of Schools (Primary and Secondary)	21	72	10	10	a,b(4)
053 Vocational Teacher, Instructor, Nurse Tutor	25	71	10	10	b(2)
074 Other Worker in Legal Occupation	25	71	10	10	b(2)
026 Biologist: Other Biologist	27	70	10	10	
045 Radiographer (Including Diagnostic)	28	68	10	10	
092 Actuary	29	67	10	10	b(3)
022-025 Biologist: Botanist, Zoologist, Bacteriologist, Bio-chemist	29	67	10	10	b(3),c
042-044 Occupational Therapist, Physio-therapist, Masseur	29	67	10	10	a,b(3),c
010 Surveyor: Land	32	66	10	10	b(2)
269 Aircraft Pilot, Navigator and Flight Engineer	32	66	10	10	a,b(2)
027 Biologist: Agronomist, Silviculturist, Horticulturist	34	65	9	10	b(4)
054 Teacher, Instructor (Cultural and Other Education)	34	65	9	10	b(4)
093 Economist	34	65	9	10	b(4)
047 Medical Auxilliaries N.E.C.	34	65	9	10	b(4)
011 Surveyor: Other	38	63	9	10	b(2)
046 Orthopaedic Mechanic and Surgical Appliance Maker (Not Factory)	38	63	9	10	b(2)
094 Statistician	40	62	9	10	b(2)
096 Designer (Industrial and Commerical Products)	40	62	9	10	b(2)
078 Author, Journalist and Related Writer	42	60	9	10	a,b(2)
082 Engineering Technician	42	60	9	10	b(2)
097 Interpreter, Translater	44	59	9	10	b(3)
098 Social Welfare Worker	44	59	9	10	a,b(3)
099 Professional, Technical and Related Worker N.E.C.	44	59	9	10	b,(3)
012 Surveyor: Surveying Technician	47	58	9	10	
131 Director of Companies	48	56	9	10	d
073 Articled Clerk (Attorney)	49	55	9	10	b(2)
124 Director, Manager and Working Proprietor: Financial Institutions and Insurance	49	55	9	10	b(2),d
076 Drawer, Sketcher of Posters	51	54	9	10	a
095 Librarian, Archivist	52	53	9	10	b(4)
081 Draughtsman	52	53	9	10	a,b(4)

TABLE 3.1 Continued

Population Census Occupational Title with Census Code Number Population Census 1960: Vol.8, No.1 (A 2.1)	R 1)	$\hat{X}_1$ 2)	D_1 3)	D_2 4)	Notes*
125 Director, Manager and Working Proprietor: Real Estate	52	53	9	10	d,b(4)
163 Stockbroker, Dealer in Shares	52	53	9	10	a,b(4)
061 Clergyman, Priest	56	52	9	10	a,b(3)
080 Musician, Dancer, Singer	56	52	9	10	b(3)
091 Articled Clerk (Accountant), etc.	56	52	9	10	b(3)
121 Director, Manager and Working Proprietor: Mining and Quarrying	59	51	9	9	b(4), d
122 Director, Manager and Working Proprietor: Manufacturing, Construction, Gas, Water, and Sanitary Services	59	51	9	9	b(4), d
123 Director, Manager,and Working Proprietor: Wholesale and Retail Trade (Excluding Working Proprietor)	59	51	9	9	a,b(4),d
128 Director, Manager and Working Proprietor: Business Services	59	51	9	9	b(4),d
075 Painter, Sculptor	63	49	9	9	b(3)
077 Window Dresser, Interior Decorator	63	49	9	9	b(3)
079 Actor (Theatrical, Music Hall)	63	49	9	9	b(3)
085 Technical Assistant: Other	66	48	9	9	b(4)
165 Auctioneer, Sworn Appraisor, Valuator, (Diamonds, etc.)	66	48	8	9	b(4)
171 Manufacturer's Agent, Representative	66	48	8	9	b(4),e
568 Inspector, Clerk of Works	66	48	8	9	b(4),g
129 Director, Manager and Working Proprietor: Other Service Industries	70	47	8	9	b(2),d
162 Estate Agent	70	47	8	9	a,b(2)
062 Missionary	72	46	8	9	b(3)
083 Agricultural, Silvicultural and Horticultural Technician	72	46	8	9	b(3)
172 Commercial Traveller	72	46	8	9	b(3),e
063 Religious Worker (Not Ordained)	75	44	8	9	b(6)
120 Director, Manager and Working Proprietor: Forestry and Fishing (Excluding Farmer and Farm Worker)	75	44	8	9	b(6),d
161 Insurance Agent	75	44	8	9	a,b(6)
166 Market and General Commision Agent	75	44	8	9	b(6)
167 Agent: Other N.E.C.	75	44	8	9	b(6)
037 Health and Food Inspector	75	44	8	9	a,b(6)
048 Healer (Nature Curing, etc.)	81	43	8	9	b(5)
084 Laboratory Technician (Not Medical or Dental)	81	43	8	9	b(5)
127 Director, Manager and Working Proprietor: Catering and Accommodation Services	81	43	8	9	b(5),d
241 Shift Boss (Mining)	81	43	8	9	b(5)
164 Salesman - Business Services	81	43	8	9	b(5)

TABLE 3.1 Continued

Population Census Occupational Title with Census Code Number Population Census 1960: Vol.8, No.1 (A 2.1)	R 1)	$\hat{X}_1$ 2)	D_1 3)	D_2 4)	Notes*
033 Dental Mechanic	86	42	8	9	b(3)
126 Director, Manager and Working Proprietor: Transport, Storage and Communication	86	42	8	9	b(3),d
240 Mine Captain, Overseer	86	42	8	9	b(3)
049 Laboratory Technician (Medical or Dental)	89	40	8	9	
141 Bookkeeper, Accountant (Not Chartered)	90	39	8	8	a
145 Clerk	91	38	8	8(7)	a, b(2)
423 Diamond Cutter and Polisher	91	38	8	7	a,b(2)
571 Linotype Operator	93	35	8	7	
160 Working Proprietor, Wholesale and Retail Trade	94	34	8	7	
038 Vermin Exterminator	95	33	8	7	
260 Deck Officer, Pilot (Ship)	96	32	8	7	b(4)
424 Jewel Setter (Diamond Setter)	96	32	8	7	b(4)
425 Goldsmith and Silversmith	96	32	8	7	b(4)
981 Political Party Organiser	96	32	8	7	b(4)
196 Salesman, Shop Assistant: Other Related Worker N.E.C.	100	31	7	7	g
244 Mining: Timberman (Shaft)	101	30	7	7	b(3)
261 Engineer Officer (Ship)	101	30	7	7	b(3)
577-578 Engraver, Photo-engraver, Etcher	101	30	7	7	b(3),c
039 Disease Preventer	104	29	7	7	b(2)
426 Precious Metal Worker	104	29	7	7	b(2)
294 Air Traffic Controller	106	28	7	7	b(2)
573-576 Machine Minder (Printing)	106	28	7	7	b(2),c
142 Cashier, Teller	108	27	7	7	b(3)
421 Precision Instrument Maker and Repairer	108	27	7	7	b(3)
572 Stereotyper, Electrotyper	108	27	7	7	b(3)
525 Mechanic: Other and Related Worker N.E.C.	111	26	7	7	b(6)
527 Assembler	111	26	7	7	b(6)
570 Compositor, Type Setter	111	26	7	7	b(6)
640-645 Brewer, Wine Maker, Mineral Water Maker	111	26	7	7	b(6),c
812 Hoist Operator	111	26	7	7	b(6)
971 Photographer and Related Camera Worker	111	26	7	7	b(6)
144 Office Machine Operator	117	25	7	7	b(6)
420 Watch Maker and Repairer	117	25	7	7	b(6)
433 Pattern Maker (Metal)	117	25	7	7	b(6)
522 Air Conditioning and Refrigeration Mechanic	117	25	7	7	b(6)
961-964 Launderer, Dry Cleaner and Related Worker	117	25	7	7	b(6)
978 Instructor, Trainer, Coach (Personal)	117	25	7	7	b(6)
143 Stenographer, Typist	123	24	7	6	b(12)

TABLE 3.1 Continued

Population Census Occupational Title with Census Code Number Population Census 1960: Vol.8, No.1 (A 2.1)	R 1)	$\hat{X}_1$ 2)	D_1 3)	D_2 4)	Notes*
147 Clerical Worker N.E.C.	123	24	7	6	b(12)
242 Miner (Stoper, Developer, Shaft Sinker, etc.)	123	24	7	6	a,b(12)
270 Driver (Steam Loco, Electric Railcar)	123	24	7	6	a,b(12)
422 Other Worker in Precision Instruments	123	24	7	6	b(12)
432 Toolmaker, Die Setter, etc.	123	24	7	6	b(12)
521 Radiotrician, Electronic Mechanic	123	24	7	6	b(12)
532 Electrician and Related: Domestic Appliances	123	24	7	6	b(12)
579 Bookbinder/Cutter/Ruler	123	24	7	6	b(12)
871 Foreman (So Stated) N.E.C	123	24	7	6	b(12)
290 Transport and Communication: Inspector, Supervisor	123	24	6	6	b(12)
511 Electrician, Electrical Wireman (Construction)	123	24	6	6	a,b(12)
146 Receptionist	135	23	6	6	b(3)
201 Farmer	135	23	6	5(6)	a,b(3)
761 Musical Instrument Maker	135	23	6	5	b(3)
431 Fitter and Turner	138	22	6	5	b(10)
246 Mining: Banksman, Onsetter, Cageman, etc.	138	22	6	4	b(10)
191 Shop Assistant (Wholesale and Retail Trade)	138	22	6	4	a,b(10)
453 Mechanic - Repairman: Aircraft	138	22	6	4	b(10)
464 Coppersmith, Tinsmith, Platesmith	138	22	6	4	b(10)
514 Electrician (Aircraft)	138	22	6	4	b(10)
524 Mechanic - Repairman: Office Machinery	138	22	6	4	b(10)
620-623 Miller, Grinder, Other Workers in Grain and Related Products	138	22	6	4	b(10),c
861-862 Stevedore and Dock Worker N.E.C.	138	22	6	4	b(10),c
974-976 Professional Sportsman, Performing Artist, Jockey	138	22	6	4	b(10),c
245 Mining: Reduction Worker (Amalgamator, Cyanider)	148	21	6	4	b(10)
251 Other Worker in Mining and Quarrying N.E.C.	148	21	6	4	b(10)
331-339 Spinner, Weaver, Knitter, Dyer and Related Worker	148	21	6	4	b(10),c
513 Electrician (Telephone)	148	21	6	4	b(10)
516 Other Electrician and Electrical Worker N.E.C.	148	21	6	4	b(10)
528 Other Electrical Worker N.E.C.	148	21	6	4	b(10)
821-823 Rigger (Construction, Ship and Other)	148	21	6	4	b(10),c
901 Policeman, Detective (Private)	148	21	6	4	b(10)
979 Other Service Worker in Entertainment and Sport N.E.C.	148	21	6	4	b(10)

TABLE 3.1 Continued

Population Census Occupational Title with Census Code Number Population Census 1960: Vol.8, No.1 (A 2.1)	R 1)	$\hat{X}_1$ 2)	D_1 3)	D_2 4)	Notes*
984 Other Service Workers N.E.C.	148	21	6	4	b(10)
352 Upholsterer and Related Worker: Other	158	20	6	4	b(11)
483 Boilermaker	158	20	6	4	b(11)
491 Electro-plater	158	20	6	4	b(11)
515 Armature/Coil Winder	158	20	6	4	b(11)
725 Vulcaniser, Attendant and Retreader	158	20	6	4	b(11)
872 Supervisor (So Stated) N.E.C.	158	20	6	4	b(11)
972 Undertaker and Embalmer	158	20	6	4	a,b(11)
973 Other Workers in Undertaking (Not Undertaker)	158	20	6	4	b(11)
751-753 Photographic Darkroom Worker	158	20	5	4	b(11),c
774-776 Paper Products Worker	158	20	5	4	b(11),c
803 Compressor Operator	158	20	5	4	b(11)
250 Alluvial Diamond Digger	169	19	5	4	b(9)
289 Guard, Ticket Examiner, Barrier Attendant	169	19	5	4	b(9)
484 Reinforcing Steel Worker	169	19	5	4	b(9)
512 Auto-electrician	169	19	5	4	b(9)
526 Linesman, Cable Joiner	169	19	5	4	b(9)
567 Water Borer Driller, Well Sinker	169	19	5	4	b(9)
690-693 Pulp and Paperworker (Not Paper Products)	169	19	5	4	b(9),c
907 Messenger of the Court, Deputy Sheriff	169	19	5	4	b(9)
951-953 Barber, Hairdresser, etc.	169	19	5	4	b(9),c
193 Canvasser, Demonstrator (Commercial)	178	18	5	4	b(3),g
247 Mining: Other N.E.C.	178	18	5	4	b(3)
391 Blast Furnaceman	178	18	5	4	b(3)
211 Farm Manager	181	17	5	3	b(8)
461 Sheetmetal Worker	181	17	5	3	b(8)
481 Structural Steel Worker	181	17	5	3	b(8)
501-503 Tool Grinder, Saw Doctor, etc.	181	17	5	3	b(8),c
610-615 Decorator of Glass and Pottery Products	181	17	5	3	b(8),c
631-635 Baker, Confectioner, Sweetmaker and Related Worker	181	17	5	3	b(8),c
731-732 Machine Operator and Process Worker (Plastic Products)	181	17	5	3	b(8),c
983 Hospital Orderly, Ambulance Man/Driver	181	17	5	3	b(8)
243 Quarryman, Sandpit Worker	189	16	5	3	b(8)
392-395 Other Metal Furnaceman, Temperer	189	16	5	3	b(8),c
403 Moulder (Hand or Machine)	189	16	5	3	b(8)
540 Vehicle Body Builder (Wood/Composite)	189	16	5	3	b(8)
441-443 Assembler and Machine Erector, etc.	189	16	5	3	b(8),c
452 Mechanic-Repairman: Diesels	189	16	5	3	b(8)
533 Shipwright (Wood), Boat Builder	189	16	5	3	b(8)
580-583, 585 Glass Blower, Grinder, Finisher, etc.	189	16	5	3	b(8),c

TABLE 3.1 Continued

Population Census Occupational Title with Census Code Number Population Census 1960: Vol.8, No.1 (A 2.1)	R 1)	$\hat{X}_1$ 2)	D_1 3)	D_2 4)	Notes*
034, 036 Nurse and Nursing Aid	197	15	5	3	b(13),c
455 Mechanic: Other	197	15	5	3	b(13)
302 Radio Communication Operator	197	15	4	3	b(13)
341-348 Tailor, Cutter, Furrier and Related Worker	197	15	4	3	b(13),c
482 Shipwright	197	15	4	3	b(13)
492 Dip Plater and Related Worker	197	15	4	3	b(13)
500 Locksmith	197	15	4	3	b(13)
562 Slater, Tiler - Roof	197	15	4	3	b(13)
680-687 Distiller, Batchstill and Other Still Operator	197	15	4	3	b(13),c
741-746 Tanner, Dresser and/or Fellmonger	197	15	4	3	b(13),c
762-763 Musical Instrument Tuner and Other Worker in Musical Instruments N.E.C.	197	15	4	3	b(13),c
903 Traffic Inspector/Officer (Except S.A.R. & H.)	197	15	4	3	b(13),c
977 Projectionist, Film Revisor	197	15	4	3	b(13)
223 Sorter, Grader of Agricultural and Pastoral Products (Agriculture Only)	210	14	4	3	b(15)
401 Blacksmith	210	14	4	3	b(15)
404, 411-413 Core Maker, Wire and Pipe Drawers	210	14	4	3	b(15),c
419 Metal Worker N.E.C.	210	14	4	3	b(15)
434 Other Machining and Toolsetting Worker	210	14	4	3	b(15)
454 Mechanic (So Stated)	210	14	4	3	a,b(15)
463 Plumber, Drain Layer, Pipe Fitter	210	14	4	3	a,b(15)
471-475 Welders and Cutters	210	14	4	3	b(15),c
485 Underframe Maker, Body Builder	210	14	4	3	b(15)
504 Other Metal Worker N.E.C.	210	14	4	3	b(15)
586-589 Potter and Related Clay Worker	210	14	4	3	b(15),c
704-709 Tobacco Preparer and Tobacco Products Worker	210	14	4	3	b(15),c
802 Pump Attendant/Operator N.E.C.	210	14	4	3	b(15)
902 Fire Officer, Fire Fighter, Member of Fire Brigade N.E.C.	210	14	4	3	b(15)
921-925 Housekeeper, Cook, etc.	210	14	4	3	b(15),c
202 Market Gardener	225	13	4	3	a,b(7)
462 Panelbeater	225	13	4	3	b(7)
486 Other Metal Plate and Structural Metal Worker	225	13	4	3	b(7)
534 Shopfitter	225	13	4	3	b(7)
591-595 Glass Furnace Worker	225	13	4	3	b(7),c
701 Machine Operator (Chemical)	225	13	4	3	b(7)
702 Other Worker in Chemicals	225	13	4	3	b(7)
900 Policeman, Detective (Public)	232	12	3	3	a,b(10)
235 Fisherman	232	12	3	2	b(10)

TABLE 3.1 Continued

Population Census Occupational Title with Census Code Number Population Census 1960: Vol.8, No.1 (A 2.1)	R 1)	$\hat{X}_1$ 2)	D_1 3)	D_2 4)	Notes*
399 Roller, Roll Turner, Mill Steel Roller, etc.	232	12	3	2	b(10)
353-360 Mattrass and Pattern Makers, Machinists	232	12	3	2	b(10),c
402 Hammersmith, Forgeman, etc.	232	12	3	2	b(10)
451 Mechanic-Repairman: Moter Vehicles and Motor Cycles	232	12	3	2	b(10)
552 Spray Painter and Panel Beater (So Stated)	232	12	3	2	b(10)
770-773 Stone Cutter and Carver	232	12	3	2	b(10),c
790 Other Production Worker N.E.C.	232	12	3	2	b(10)
813 Other Lifting Equipment Operator	232	12	3	2	b(10)
293 Station Foreman, Signalman	242	11	3	2	b(7)
531 Carpenter, Joiner, Etc.	242	11	3	2	a,b(7)
561 Tiler - Wall and Floor	242	11	3	2	b(7)
781-782 Match Worker, Machinist and Other N.E.C.	242	11	3	2	b(7),c
811 Crane Operator	242	11	3	2	b(7)
904 Prison Warder, Gaoler	242	11	3	2	b(7)
908 Service Worker: Other Related Worker N.E.C.	242	11	3	2	b(7)
194 Hawker, Newsvendor, Pedlar	249	10	3	2	b(15),g
224 Farming: Family Worker (Relatives)	249	10	3	2	b(15)
225 Gardener, Groundsman	249	10	3	2	b(15)
266 Engineroom Rating, Fireman and Oiler, Marine Driver	249	10	3	2	b(15),g
295 Traffic Controller, Dispatcher, N.E.C.	249	10	3	2	b(15)
350 Production Process Worker: Furniture	249	10	3	2	b(15)
532 Block Floor Layer	249	10	3	2	b(15)
538-539 Woodwork Machine Operator N.E.C. and Cooper	249	10	3	2	b(15),c
560 Stonemason	249	10	3	2	b(15)
563 Painter and Paper Hanger: Other Related Worker N.E.C.	249	10	3	2	b(15)
564 Builder (So Stated)	249	10	3	2	b(15)
565 Builder Foreman, Overseer	249	10	3	2	b(15)
650-657, 660-667, 670-676 Other Workers in Food	249	10	3	2	b(15),c
720, 722-723 Machine Operator (Rubber Products)	249	10	3	2	b(15),c
938 Other "Lower Routine" Services	249	10	3	2	b(15)
221 Farm Foreman	264	9	3	2	b(10)
541 Furniture Polisher, French Polisher	264	9	3	2	b(10)
542 Other Woodworker N.E.C.	264	9	3	2	b(10)
551 Spray Painter (Not Construction)	264	9	2	2	b(10)
553 Signwriter	264	9	2	2	b(10)

TABLE 3.1 Continued

Population Census Occupational Title with Census Code Number Population Census 1960: Vol.8, No.1 (A 2.1)	R 1)	$\bar{X}_1$ 2)	D_1 3)	D_2 4)	Notes*
555 Other Painter Etc. N.E.C. (Paperhanger)	264	9	2	2	b(10)
558 Bricklayer	264	9	2	2	a,b(10)
726 Other Worker in Rubber Products N.E.C.	264	9	2	2	b(10)
804 Boiler Attendant/Fireman	264	9	2	2	b(10)
905 Watchman	264	9	2	2	b(10)
222 Driver of Mechanical Vehicles or Farm Implements	274	8	2	2	b(8)
226 Farm Labourer	274	8	2	2	b(8)
351 Production Process Worker: Motor Vehicles	274	8	2	2	b(8)
380-383 Other Leather Products N.E.C.	274	8	2	2	b(8),c
535 Cabinet Maker	274	8	2	2	b(8)
559 Plasterer	274	8	2	2	b(8)
569 Other Building Worker N.E.C.	274	8	2	2	b(8)
805 Other Stationary Engine or Related Equipment Operator N.E.C.	274	8	2	2	b(8)
265 Deck Rating, Hand, Barge Crew Member, etc.	282	7	2	1	b(13),g
361 Other Textile, for Products, etc. N.E.C.	282	7	2	1	b(13)
550 Painter (Construction)	282	7	2	1	b(13)
554 Glazier	282	7	2	1	b(13)
710-712 Worker in Cane, Wicker, Bamboo, etc.	282	7	2	1	b(13),c
724 Tyre Builder	282	7	2	1	b(13)
801 Stationary Engine Operator (So Stated)	282	7	2	1	b(13)
863 Porter (Transport - Not Hotel)	282	7	2	1	b(13)
873 Apprentice (So Stated) N.E.C.	282	7	2	1	b(13)
906 Lifesaver/Guard	282	7	2	1	b(13)
914 Ranger	282	7	2	1	b(13)
931-933 Domestic Worker	282	7	2	1	b(13),c
941 Waiter, Wine Steward	282	7	2	1	b(13)
239 Forestry Worker: Other N.E.C.	295	6	2	1	b(10)
292 Yard Inspector, Shunter	295	6	2	1	b(10)
323 Worker in Transport and Communication Occupation N.E.C.	295	6	2	1	b(10)
566 Fence Erector	295	6	2	1	b(10)
370-371 Shoe Repairer, Cobbler, Shoe Maker	295	6	1	1	b(10),c
536 Sawer (Saw Mill)	295	6	1	1	b(10)
795-796 Packer and Labler	295	6	1	1	b(10),c
841-842, 851-853 Material-handling Equipment Operator	295	6	1	1	b(10),c
911 Caretaker, Doorkeeper, Guardsman	295	6	1	1	b(10)
942 Barman, Head Barman	295	6	1	1	a,b(10)
280 Chaffeur	305	5	1	1	b(7)
291 Checker	305	5	1	1	b(7)
301 Telephone and Telegraph Operator	305	5	1	1	b(7)
313 Deliveryman	305	5	1	1	b(7)

TABLE 3.1 Continued

Population Census Occupational Title with Census Code Number Population Census 1960: Vol.8, No.1 (A 2.1)	R 1)	$\hat{X}_1$ 2)	D_1 3)	D_2 4)	Notes*
321 Conductor (Bus and Tram)	305	5	1	1	a,b(7)
372-378 Footwear - Sewer, Cutter Machinist	305	5	1	1	b(7),c
936 Page, Porter (Hotel), Hall Porter, Usher	305	5	1	1	b(7)
282 Lorry, Van, Bus, Truck Driver, Tractor Driver (Not Farm)	312	4	1	1	a,b(4)
379 Other Footwear Factory Operative	312	4	1	1	b(4)
833 Other Earth-moving and Construction Machinery Operator N.E.C.	312	4	1	1	b(4)
913 Cloak/Baggage/Bedding/Linen Room Attendant	312	4	1	1	b(4)
195 Petrol Filling Station Attendant	316	3	1	1	a,b(10),g
271 Fireman (Loco)	316	3	1	1	b(10)
281 Taxi Driver	316	3	1	1	a,b(10)
311 Postman	316	3	1	1	a,b(10)
312 Messenger	316	3	1	1	b(10)
322 Lift Attendant	316	3	1	1	a,b(10)
831-832 Road Grader/Scraper/Roller and Concrete Mixer Operator	316	3	1	1	a,b(10),c
880 Labourer in Mining and Quarrying	316	3	1	1	b(10)
912 Church Warden	316	3	1	1	b(10)
915-919 Cleaner and Related Worker N.E.C.	316	3	1	1	b(10),c
883 Labourer in Electricity, Gas, Water and Sanitary Services	326	2	1	1	
881 Labourer in Manufacturing	327	1	1	1	b(7)
882 Labourer in Construction	327	1	1	1	b(7)
884 Labourer in Commerce	327	1	1	1	b(7)
885 Labourer in Transport and Storage	327	1	1	1	a,b(7)
886 Labourer in Communications	327	1	1	1	b(7)
887 Labourer in Government, Provincial and Local Authorities N.E.C.	327	1	1	1	b(7)
888-891 Labourer (Industries Not Stated)	327 (333)	1	1	1	b(7),c

Notes*

a. One, or one of a group, of 47 occupational titles used in deriving the socio-economic index from predictors of the CASS prestige ratings (see Tables 2.1, 2.2 and 2.3).

b. The number in parenthesis following the letter b refers to the number of occupational titles which share a common rank by virtue of sharing a common value for $\hat{X}_1$.

c. Occupational title classifications are combined due either to insufficient numbers for computation in one or more classification or convenience of combining some "very like" occupational titles under one title - sometimes both.

TABLE 3.1 Continued

d. Includes workers in both private and public undertakings. Excludes workers who exercise primarily professional functions. Farmers and farm managers are classified elsewhere as are working proprietors in the wholesale and retail trade.

e. The education variable X_3 includes approximately 1 500 lesser workers (Census codes 192-196).

g. The education variable X_3 is derived as a weighted mean of the appropriate X_3 proportion from major occupational groupings as defined in Table 4.2 (see Chapter 4).

More probing comparative analysis among occupations can be contemplated because the index is constructed from actual proportion values of three variables in a uniform mathematical way so that the substantive values of the socio-economic index conform to the characteristics of an interval scale of measurement in that the units (of measurement) are equal and of course it presupposes both nominal and ordinal scales. This introduces the possibility of two important types of statement: the difference between occupations can be stated in determinate numbers of units of the index scale and ratios of difference between values on the index scale can be calculated. The latter type of statement is not to imply that the values of the socio-economic index conform to or have the characteristics of a ratio scale. An index value of 40 cannot be said to reflect twice as much socio-economic "occupational prestige" as a value of 20 because zero is arbitrary, but differences between values on the index scale can be treated as ratios because the point of no difference provides an "absolute zero". As an example then we can say that the difference in the socio-economic index between an undertaker (20) and a medical or dental laboratory technician (40) is twice as much as the difference between an undertaker (20) and a ship's engineering officer (30). More simply we could say that an undertaker is 20 points below a laboratory technician on the scale and a ship's engineering officer 10 points below which gives at the same time the direction of the ratio difference between occupations just discussed.

When comparing the positions of occupations on the ranking

scale or differences among values of the index it should always be recalled that what is being manipulated are estimates of "occupational prestige" which derive from the sum of weighted income (X_2) and education (X_3) variables. The weights are constants but income and education vary showing a differential impact on the determination of any particular index value and its relative ranking. Statements of the rank or mathematical manipulation of the values of the index scale do not, therefore, allow differentiated statements concerning the influence of either income or education in any one substantive value or among a number of substantive values of the scale. The index scale is merely an estimated, unitary expression of stratification emphasising income and education among a complex set of status attributing criteria - nevertheless, within the confines of the meaning of the index, scrutiny of the values for income and education variables in Table 2.4 will reveal the relative determination of any particular index value by either variable. This comparison is really only nominal but will explain some anomalies of occupational equivalence occasioned by unexpectedly high or low earnings and/or education in some jobs.

The numerical rank of a value and corresponding occupational title of the socio-economic index is the most detailed reflection of order that can be achieved. However, a value of the index, say 20, which is ranked 158th and corresponds to the occupation undertaker tells one little about the distribution of the scale among occupations and among people in these occupations without a great deal of laborious scrutiny of Tables 3.1 and 2.4 (i.e. if the decile scales described below were not included in Table 3.1). In order to simplify access to the distribution of the scale two decile scales have been fitted to the data and are shown in Table 3.1. The first decile scale (D_1) is a scale based on the distribution of the socio-economic index scale ($\hat{X}_1$) among 333 occupational titles. This is a most simple procedure requiring only the categorization of rank ordered occupations into 10 sequential and equal decile intervals: that is, a decile scale value of 10 shows that the socio-economic index of a particular occupation is higher than 90% of the index values corresponding to all occupational titles ranked in Table 3.1; similarly a decile scale value of 2 shows that a particular index value is higher than 10% and lower than 80% among the occupational

titles recorded. The second decile scale (D_2) is a population decile scale: that is, a scale of the distribution of the socio-economic index scale in the population from which the index is derived and as such provides a population norm for the interpretation of the index values. Therefore, a decile scale value of 7 shows that 60% of economically active White male workers are employed in occupations with a lower socio-economic index than one falling at the seventh interval of the decile scale and 30% of that population in occupations above that level.

The socio-economic index scale intervals for each of the decile scales can be read off from the appropriate columns in Table 3.1. The decile scales are, however, independent of each other and while the decile levels D_1 and D_2 are immediately apparent in the table for any particular occupational title the index intervals are often dispersed and hence difficult to perceive at a glance; these intervals are shown for convenience at Table 3.2. We have emphasised an irregularity in Table 3.2 which is apparent in reading the decile scales at Table 3.1, namely that the limits of the index intervals for each of the decile scales do not always coincide with discrete values for the index: in order to maintain a clear picture (of whole numbers) the limits of the intervals have been manipulated in cases where decile levels overlap with values of the index scale to fit either the rank order of the index scale or the categorization of occupations made in the following chapter. The loss of accuracy occasioned by this exercise is very small.

The decile scale showing the distribution of index values among 333 occupational titles reveals quite clearly that socio-economic index values are not evenly distributed among occupational titles. More occupations are concentrated at the lower levels of the index scale than at upper levels. The index intervals contract rather sharply from the seventh decile (D_1) (reading Table 3.2 from top to bottom) to the second decile in a uniform pattern which changes slightly at the first decile where the range of index values for the least prestigious 10% of occupations broadens slightly. The range of the index scale for the decile scale from the seventh to the first decile is 31-1 ($\hat{X}_1$). Only 30% of all occupations, therefore, are distributed in the range 81-32 of the index scale where each of the decile levels 8,9 and 10 reflect intervals

of 15 or 16 points of the index scale. The finding is not unexpected: the upper reaches of socio-economic status are shared by fewer occupational titles than the lower reaches which describes, among occupations at any rate, the usual pyramid of status distributions – fewer at the top, more at the bottom.

TABLE 3.2

INTERVALS OF THE SOCIO-ECONOMIC INDEX SCALE ($\hat{X}_1$) FOR VALUES (INTERVALS) OF THE SCALE OF THE OCCUPATION DECILE SCALE (D_1) AND THE POPULATION DECILE SCALE (D_2)

Decile Values	$\hat{X}_1$ Intervals for D_1	$\hat{X}_1$ Intervals for D_2
10	81-66	81-52
9	65-49*	51-40
8	48-32	39-38*
7	31-24*	37-25
6	23-20*	24-23*
5	19-16*	23-23*
4	15-13	22-18
3	12-10*	17-13
2	9- 7*	12- 8
1	6- 1	7- 1

* Overlap of decile scale with discrete values of the socio-economic index. See text for explanation.

The decile distribution of the population (D_2) tends to reinforce this model with some qualifications. Twenty percent of the economically active White males (ninth and tenth deciles) "monopolise" the upper 41 points of the index scale (range 81-1). The eighth decile has a very narrow range for the index scale and the 10% of the population here is made up exclusively of clerical workers (clerks, bookkeepers). Both the sixth and fifth deciles of the population decile scale have narrow ranges for the index scale: the sixth decile contains something of a mixed bag of occupational types among the population at 24-23 points on the index scale including some skilled manual, supervisory

as well as clerical workers; the fifth decile is comprised almost exclusively of farmers. The 40% of the population at the lower levels of the decile scale are spread over slightly more index values than are actual occupational titles but the picture revealed by the population decile scale is broadly similar to the picture revealed by the index decile scale.

The rank order of occupations (in terms of their corresponding socio-economic index values) and the distributions of the socio-economic index among occupations and the appropriate population are of essentially limited use because the former is widely dispersed and is a weak analytical tool and the latter reflect more or less heterogeneous categories. It is true that the interval characteristics of the socio-economic scale allow quite sophisticated analysis, but this would only really be appropriate for very specialised applied research. The data, in the form in which it is presented in this chapter, can best be used in an *ad hoc* fashion when comparisons between particular or among small groups of occupations are necessary. The seeds of more fruitful use of the socio-economic index and its distribution are, however, contained in the Table 3.1. The end of most research into stratification is to distribute a population on some or other status criterion in a meaningful, functional and manipulatable way. With respect to occupational prestige these qualifications to the stratification of a population are of the utmost importance because occupation by definition has meaning far beyond its ostensible purpose which is not accounted for by simply arraying on one or other unidimensional scale. It is now our intention to attempt a meaningful categorization of occupations which will stratify the working male population in a functional way for the purpose of furthering applied research in occupational stratification in South Africa.

CHAPTER 4

RANK ORDER OF OCCUPATIONAL GROUPINGS

The aim of this chapter is to settle on (and to justify) some set of internally coherent categories of occupations in some uniform way which reflects a substantive hierarchy among the categories - occupational groupings. That is to say, the endeavour is to provide a classification such that the appropriate population filling a wide range of occupational titles can be stratified in a meaningful and empirically known and refutable way. The problem occasioned by this attempt arises (in this paper) simply because the sought categories of an extremely complex variable, occupational prestige, cannot be educed on the strength of an unidimensional variable — socio-economic status of occupations (defined in a certain way). We wish, therefore, to commit ourselves to argue in a general, deductive fashion about the categorization of occupational titles within social status congeries and then by mathematical means to stratify the occupational categories in terms of the socio-economic index (for all occupations).

The above does not disclaim the arguments advanced for the socio-economic index as an estimator of occupational "prestige" - percentage "excellent" and "good" ratings on the CASS prestige scale - it merely states the limitations of a narrowly defined instrument to inductively determine a widely applicable set of analytical categories. The problem of an occupational classification remains because a meaningful categorization of a stratification variable - occupation - is sought where the adhibition of an interval scale of measurement to the given range of occupational titles does not finally subsume all the nominal properties related to stratification which differentiate some occupations from others. For example, it might be instructive to learn that a boilermaker and an undertaker share a common value of the socio-economic index, but it is unlikely, however, that this single property is sufficient to prompt classification of both in a category of occupations which must be generally relevant (this is not to question the

cumulative nature of scales of measurement but to indicate the disjunctive aspect of the exercise - a reading on a medical thermometer does not reveal the sex of a patient). The consequence then of viewing occupations as a social stratification variable (and not only some social variables of occupation) is that their classification is subject to the complete spectrum of social judgement which has to be interpreted by the social analyst and because no ready measure of these variables is available in the present case. Intuitive and subjective decisions have often to be made.

It will be left to the individual reader of this paper to convince him/herself that the alternative method of classifying occupations by stratifying on the basis of greater or lesser intervals of a mathematically unidimensional, compound numerical scale is of little analytic efficacy. To write a commentary on any such distribution of categories would be extremely laborious as well as trite and a brief scrutiny of the content of Table 3.1 should be sufficient to reveal to the interested reader that however the scale of the socio-economic index (of ranked occupations) is reduced into intervals of units the resulting categories of such a classification are in most cases so heterogeneous that independent social effects would be difficult to recognise. There are some exceptions within possible categories: for example, "professionals" fall at the top of the scale but are not unmixed; farmers and clerks each dominate a level of the population decile scale though not with a perfect fit. In rejecting this mode of stratifying a population among categories of occupations is not to deny its usefulness for other purposes in stratification research, e.g. studies of status consistency, crystallisation and congruence, etc. Our own purpose for a classification is to aid in studies of occupational mobility in a defined population which will become more explicit as we proceed.

We have at our immediate disposal a classification of major groupings of occupations as they appear in the 1960 Population Census and which are replicated in detail at Table 2.4 (together with corresponding values of the socio-economic index for each detailed occupational title). This classification is thought to be inadequate for the purpose

of stratifying a population in occupational prestige terms, as is shown below, but as it is the one most widely known (and probably used) in South Africa and as the number of categories is not large it can be used to demonstrate the ranking problem for the purpose of this chapter. Table 4.1 shows the socio-economic index values for the nine major groupings of occupations described in the Census ranked in order of the index value high to low. These index values are derived from Table 2.4 by taking the weighted (by number of incumbents) means of the predictor variables of the index (income and education) for each major occupational grouping and substituting them in the socio-economic index equation (this is, of course, permissible because the proportions used conform to the characteristics of an interval scale of measurement). So far we have done no more than to distribute the census classification of occupations on the index scale and to arrange them in rank order which is a logical exercise following on the rank ordering of specific occupational titles in the Census. This rank ordering of Census major occupational groupings for economically active White males in South Africa based on the socio-economic index is very similar to the rank ordering of the same groupings for the same population in Natal achieved by Close (1968: 71-72, Table 7) using a different measure of occupational status (Beroepstatuspunt): the order of clerical workers and miners, etc., is the only difference in the two rankings where Close's score places them fifth and fourth respectively against our index order which places them fourth and fifth respectively. This equitable fit of a particular classification of occupations derived in different ways from the whole and a part of the same data does not, however, persuade that the classification is a good one in terms of a meaningful stratification of the population.

The professional grouping is a very wide category and although the social definition of professional occupations is in itself a wide one (and the category reflects this adequately), to use this as part of a classification without some differentiation would be to employ a very blunt analytical tool. The category which includes administrators, executives and managers is a vexing one: not only are functions not separated but the level of employment and responsibility are masked by categorisation. This appears to be a generic problem at this level of

stratification and will be seen to qualify our own classification below.

TABLE 4.1

RANK ORDER OF MAJOR OCCUPATIONAL GROUPS CLASSIFIED IN THE POPULATION CENSUS BASED ON THE SOCIO-ECONOMIC INDEX SCALE CONSTRUCTED FROM THE CASS SURVEY

Major Group : Occupations Population Census, 1960: Vol.8, No.1 (A 2.1)	X_2 1)	X_3 2)	$\hat{X}_1$ 3)
Professional, Technical and Related Worker	70	80	63
Administrative, Executive and Managerial Worker	79	49	50
Sales Worker	55	42	39
Clerical Worker	40	40	33
Miner, Quarryman and Related Worker	63	12	26
Farmer, Fisherman, Hunter, Lumberman and Related Worker	38	19	21
Craftsman, Production Process Worker and Labourer N.E.C.	32	12	16
Service, Sports and Recreation Worker	18	16	14
Worker in Transport and Communication	25	4	10

1) Percentage of males with incomes R2 000 or more (not adjusted for age).
2) Percentage of males having graduated from high school (excludes "diploma with Standard 9 or less").
3) Socio-economic index for the Major Group.

A decision by the Census authorities to differentiate this large category of workers can only be beneficial to all who make use of census data. Sales Worker is a category which includes occupations notable in the "selling process" but does not differentiate the active functionary (e.g. insurance agent) from the passive routine role (e.g. shop assistant). Clerical workers are included in what is probably the most homogeneous category among the occupational groupings of the Census: as will become apparent below, any attempt to differentiate among clerical workers is likely to result in minimal returns. The category that includes miners and quarrymen is relatively homogeneous but is a somewhat specialised classification and only of interest in so far as it describes a specific sector of industrial workers. Again, though farmers are included in a category with other workers, the effect of these workers in numerical

terms is marginal and the classification is reasonably homogeneous except, of course, that no differentiation between large and small scale farmers is attempted. This latter qualification is admittedly a difficult one to meet. The very large category including craftsmen, production process workers and labourers is probably the most unwieldly classification in the Census (even though it is sub-categorised among different industries): levels of skill and responsibility are undifferentiated and analytically one represents a highly skilled artisan and a common labourer in the same breath. The final two categories, service workers on the one hand, and workers in transport and communication on the other, overlap to a considerable extent in that many service workers are found in the latter category. It would be advantageous, therefore, to reclassify these occupations into two or more categories which reflect more homogeneously the job descriptions implied.

The Census major occupational groupings and their socio-economic "prestige" ranking are not without interest as they sketch in broad outline the occupational structure among White males in the Republic. In Table 4.1 the expected pre-eminence of professional over managerial workers is clearly shown as is their prestigious ranking in the total structure. Salesworkers rank above clerical workers which has become a common feature in developed economies in recent years. The occupation of miner among White males is very well remunerated and they fill an unexpectedly high rank among occupational groups. In the distribution at Table 4.1 manual workers rank above non-manual service occupations and the non-manual moeity in transport and communications. This is somewhat consistent with modern trends in the western world but as we will show below not as clearly demarcated as the groupings above suggest. Significantly, White farmers in South Africa fall one rank below the median rank among the nine groupings and not at or near the bottom rank as in the United States - this means that farmers and their offspring can be both upwardly and downwardly mobile in the occupational structure if and when they move off the land.

While generally informative, the Census major categories of occupations often obscures as much as it reveals about important

particular aspects of an occupational structure. We have commented in more than one place above about some short-comings of this classification to which we might add three lacunae: no provision is made to isolate owners especially in small commerical, service and technical businesses - in fact, these are difficult to locate even in the Census detailed occupations; working proprietors (together with owners and executives) are an important if not strategic occupational group in any analysis of stratification where a society lays store on private ownership and should, therefore, be classified separately; and, the group of occupations which include high management as well as production and technical control workers which is often the avenue or status passage out of manual occupations warrants some separate treatment as a stratification opportunity. These various criticisms of the Census classification of the occupational structure into nine major groups are not idly made but in point of fact serve to introduce an alternative classification which we think will serve the purposes of stratification research (and possibly industrial research) more adequately. It is, in our experience, necessary to approach the question of occupational classification with humility and a due regard for the classifications extant as the final result is always a compromise.

Among very many classifications of occupations, two, both with a scaled ranking component and both associated with occupational mobility research, present themselves as models to be emulated for our purpose: the first and more recent classification is by Goldthorpe and Hope (1974: 134-143) associated with the Oxford Studies in Social Mobility; the second, and the one with which this paper is associated, is by Blau and Duncan (1967: 27) derived from Duncan in Reiss (1961: 155) in America. The British classification is the longer (with 36 categories) and more comprehensive and is fitted in strict order to an occuaptional scale; the American classification is shorter (17 categories) and while not strictly ordered on an occupational scale is closely linked with the American scale (Duncan) of the socio-economic index. The classification of occupational categories to be ranked on the scale of the socio-economic index in this study can be referred to as the CASS Survey Classification of Occupational Groupings. These groupings were devised ten years ago

on the more or less intuitive basis of what would serve stratification research best among White South Africans - i.e., the focus of the 1966/67 CASS Survey. The categories of the classification were designed, and have been used, as a list against which occupations of respondents in the CASS Survey were coded (for computing). The occupational groupings from the CASS Survey are presented below in the form in which they were originally conceived and in the order that was originally and intuitively thought to correspond with the White male occupational structure in the Republic.

CASS SURVEY CLASSIFICATION OF OCCUPATIONAL GROUPINGS
(Original List)

Professional (including Headmasters, Academics)

High Executives, Managing Directors, High Administrative - large public and private firms

Salaried Lower Professional (Magistrates, Prosecutors, Social Workers, Salaried Accountatnts and Auditors, Teachers, Scientists and Research in Organisations

Lower Executive and Administrative - large public and private firms

Semi-professional (Nurses, Therapists, Advanced Technical, Draughtsmen, Specialised Non-Craft Associated with Professional, Computer Programmers, Research Assistants, etc.)

Owners and Executives - small commerce and service

Owners and Executives - small technical

Farmer

Production Managers, Technical Executives, Works' Foremen, Inspectors (e.g. of health)

Clerical, etc. - Senior

Working Proprietor (small commerce and service)

Representatives, Agents, Salesmen, etc.

Clerical, etc. - Less Senior

Routine Non-manual Medium Status - Storemen, Policemen, Traffic Officers, etc.

Manual Foremen and High Craft - e.g. Toolmaker

Artisans/Craft (excluding Construction)

Artisans/Craft (Construction - Plumber, Bricklayer, etc.)

Lower Routine Non-manual (Counter Assistants, etc.)

Semi-skilled Machinists, Operatives, Drivers, etc.

Unskilled Manual

Scrutiny of this profile of occupational groupings will reveal that an attempt has been made to meet the criticisms already made of the Population Census classification. More especially we have tried in this classification to extend the range of categories or groupings at the middle and lower levels of non-manual occupations which are often neglected as to differentiation and categorised as a heterogeneous grouping. There remain many imperfections: the higher professional groups might well have been classified as "self-employed" and "salaried"; no differentiation between the public and private sector has been allowed; the question of economically active owners in large concerns and the size of the component of individual ownership has been neglected; size of operation corresponding to type of occupational category has not been considered and service occupational types are possibly not as readily identifiable in the routine non-manual categories as they might be.[1] However, the classification as a compromise is a workable one in most cases given the small size of the White South African labour pool and the somewhat awkward representation of occupational types in the national census.

Comparing the twenty occupational groupings of the CASS Survey Classification with the classification in Britain by Goldthorpe and Hope (*loc.cit.*), which is a collapsed version of their scale (and with 36 categories they are able to operate in this way), indicates the limitations of the former to exhaust the field in the way accomplished by the latter. The shortcomings include those mentioned in the last paragraph and further, in comparison, we can be seen to have not been able to accommodate technical, supervisory and skilled specific occupations in the same way as a broader classification. It should, however, be recognised that the CASS list of groupings is designed with a view to coding only ca. 1 500 survey respondents while the Oxford Mobility Sample reached a size of 9 457 respondents - a potential of three times as many cases per category in the Oxford sample assuming an even distribution.

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1) In the actual classification of individual occupations in survey research in the Centre these imperfections have been corrected to some extent by judicious departure from a classification procedure based strictly on the descriptive limits of each category.

The CASS occupational classification compares well with the Blau and Duncan (*loc.cit.*) ranking of seventeen occupational categories (by socio-economic status). The comparison is made immediately below in the order that the American categories are ranked (American on left; CASS categories on right) :

Blau and Duncan Occupational Classification	CASS Occupational Classification
Professionals Self-employed Salaried	Professional Salaried Lower Professional Semi-professional
Managers	High Executives, Managing Directors, and Administrative Lower Executive and Administrative Production Managers, etc. (c)
Salesmen, Other	Representatives, Agents, Salesmen, etc.
Proprietors	Owners and Executives - small commerce, services and technical (c) Working Proprietor (c)
Clerical	Senior Clerical Less Senior Clerical
Salesmen, Retail	Lower Routine Non-manual (a)
Craftsmen Manufacturing) Other)	Manual Foreman and High Craft (c) Artisans/Craft (Manufacturing and Other) Artisans/Craft (Construction) Semi-skilled Manual (c)
Service	Routine Non-manual Lower Routine Non-manual (a)
Labourers Manufacturing) Other)	Unskilled Manual (b)
Farmers	Farmer
Farm Labourers	Unskilled Manual (b)

(a); (b) Overlapping category.
(c) Poor comparison.

At the points of poor comparison (c) it can be seen that while we have three categories of proprietors these are somewhat specialised and probably fragmentary compared with the American "proprietor" category which is likely to be more inclusive, but we appear to cater more exclusively for the supervisory and semi-skilled manual occupations. There are not many White farm labourers in South Africa. Our classification for the purposes of this paper is fixed as above except that it could be collapsed or combined in places (and as will happen some categories may not be filled).

This ends the role of the intuitive component in the endeavour to rank order occupational groupings; we now pass to the area where some evaluative judgements have to be made in the embodiment of these groupings even at the risk of introducing subjective bias.

TABLE 4.2

DETAIL OF THE RANK ORDER BASED ON THE SOCIO-ECONOMIC INDEX OF THE CASS SURVEY CLASSIFICATION OF OCCUPATIONAL GROUPINGS

(Other details pertaining to occupational titles can be read off from Tables 2.4 and 3.1 by matching the Census codes preceeding each occupational title)

Census Code and Occupational Title According to CASS Survey Occupational Groupings Census 1960 CASS Survey 1966/67	Socio-Economic Index $\hat{X}_1$	Transform to CASS Prestige Scale T
Professional (including Headmasters, Academics)	75	82
001 Architect	76	82
003 Civil Engineer	77	83
004 Mechanical Engineer	77	83
005 Electrical Engineer	76	82
006 Mine Engineer	77	83
007 Chemical Engineer	77	83
008 Other Engineer	76	82
031 Medical Practitioner, Specialist	81	84
032 Dentist	80	84
051 Professor, Lecturer, Teacher (excluding schools)	77	83
061 Clergyman, Priest	52	73
070 Judge, Magistrate, Public Prosecutor	79	83
071 Advocate, Barrister	79	83
072 Attorney, Conveyancer, Lawyer, Solicitor	79	83
090 Accountant (Chartered), Auditor	77	83
092 Actuary	67	78

TABLE 4.2 Continued

Census Code and Occupational Title According to CASS Survey Occupational Groupings Census 1960 CASS Survey 1966/67	Socio-Economic Index $\hat{X}_1$	Transform to CASS Prestige Scale T
Salaried Lower Professional	70	80
002 Quantity Surveyor	72	80
010 Land Surveyor	66	78
011 Surveyor: Other	63	77
015 Chemist (not Pharmacist)	74	81
016 Physicist	73	81
017 Geologist	77	83
018 Physical Scientist N.E.C.	75	82
021 Veterinarian	73	81
022, 023, 024, 025 Biologist, Botanist, Zoologist, Bacteriologist, Bio-chemist	67	78
026 Other Biologist	70	80
027 Biologist: Agronomist, Silviculturist, Horticulturist	65	78
040 Pharmcist, Dispensing Chemist	72	80
041 Optometrist, Optician	72	80
052 Teacher, Inspector of Schools (Primary and Secondary)	72	80
053 Vocational Teacher, Instructor, Nurse Tutor	71	80
054 Teacher, Instructor (Cultural and Other Education)	65	78
062 Missionary	46	71
093 Economist	65	78
094 Statistician	62	76
095 Librarian, Archivist	53	73
097 Interpreter, Translater	59	75
098 Social Welfare Worker	59	75
Semi-Professional	52	73
012 Surveying Technician	58	75
033 Dental Mechanic	42	68
034, 036 Nurse and Nursing Aid	15	53
039 Disease Preventer	29	61
042 - 044 Occupational Therapist, Physiotherapist, Masseur	67	78
045 Radiographer	68	79
046 Orthopaedic Mechanic and Surgical Appliance Maker	63	77
047 Medical Auxilliaries N.E.C.	65	78
048 Healer	43	69
049 Laboratory Technician (Medical or Dental)	40	67

TABLE 4.2 Continued

Census Code and Occupational Title According to CASS Survey Occupational Groupings Census 1960 CASS Survey 1966/67	Socio-Economic Index $\hat{X}_1$	Transform to CASS Prestige Scale T
063 Religious Worker (Not Ordained)	44	70
073 Articled Clerk (Attorney)	55	74
074 Worker in Other Legal Occupation	71	80
075 Painter, Sculptor	49	72
076 Drawer, Sketcher of Posters	54	74
077 Window Dresser	49	72
078 Author, Journalist and Related Writer	60	76
079 Actor	49	72
080 Musician, Dancer, Singer	52	73
081 Draughtsman	53	73
082 Engineering Technician	60	76
083 Agricultural, Silvicultural and Horticultural Technician	46	71
084 Laboratory Technician (Not Medical or Dental)	43	69
085 Other Technical Assistant	48	72
091 Articled Clerk (Accountant) etc.	52	73
096 Designer (Industrial and Commerical Products	62	76
099 Professional, Technical and Related Workers N.E.C.	59	75
269 Aircraft Pilot, Navigator and Flight Engineer	66	78
<u>High and Lower Administrative, Executive and Managerial Personnel</u>	49	72
101 - 102 Legislative (Elected) and Administrative (Appointed)	74	81
120 - 131 Director, Manager and Working Proprietor:		
120 Forestry and Fishing	44	70
121 Mining and Quarrying	51	72
122 Manufacturing, Construction, Gas, Water and Sanitary Services	51	72
123 Wholesale and Retail Trade (Excluding Working Proprietor)	51	72
124 Financial Institutions and Insurance	55	74
125 Real Estate	53	73
126 Transport, Storage and Communication	42	68
127 Catering and Accommodation Services	43	69
128 Business Services	51	72
129 Other Service Industries	47	71
131 Director of Companies	56	74
163 Stockbroker, Dealer in Shares	53	73
240 Mine Captain, Overseer	42	68

TABLE 4.2 Continued

Census Code and Occupational Title According to CASS Survey Occupational Groupings Census 1960 CASS Survey 1966/67	Socio-Economic Index $\hat{X}_1$	Transform to CASS Prestige Scale T
241 Mine Shift Boss	43	69
981 Political Party Organiser	32	63
Representatives, Agents, Salesmen	46	71
161 Insurance Agent	44	70
162 Estate Agent	47	71
164 Salesman - Business Services	43	69
165 Auctioneer, Sworn Appraiser, Valuator	48	72
166 Market and General Commission Agent	44	70
167 Other Agent N.E.C.	44	70
171 Manufacturer's Agent, Representative	48	72
172 Commercial Traveller	46	71
972 Undertaker and Embalmer	20	57
Senior Clerical	38	66
141 Bookkeeper, Accountant (Not Chartered)	39	67
142 Cashier, Teller	27	60
Less Senior Clerical	36	65
143 Stenographer, Typist	24	59
144 Office-machine Operator	25	60
145 Clerk	38	66
146 Receptionist	23	59
147 Clerical Worker N.E.C.	24	59
Working Proprietor (Small Commerce and Services)	34	64
160 Working Proprietor, Wholesale and Retail Trade	34	64
Farmer	22	58
201 Farmer	23	59
202 Market Gardener	13	51
211 Farm Manager	17	55
221 Farm Foreman	9	45
224 Family Worker	10	47
Production Managers, Technical Executives Works' Foremen, Inspectors (e.g. of Health)	46	71
037 Health and Food Inspectors	44	70
038 Vermin Exterminators	33	63
568 Inspector, Clerk of Works	48	72

TABLE 4.2 Continued

Census Code and Occupational Title According to CASS Survey Occupational Groupings Census 1960 CASS Survey 1966/67	Socio-Economic Index $\hat{X}_1$	Transform to CASS Prestige Scale T
Manual Foreman and High Craft	22	58
420 Watchmaker and Repairer	25	60
421 Precision Instrument Maker and Repairer	27	60
422 Other Worker in Precision Instruments	24	59
423 Diamond Cutter and Polisher	38	66
424 Jewel Setter (Diamond Setter)	32	63
425 Goldsmith and Silversmith	32	63
426 Other Precious Metal Worker	29	61
431 Fitter and Turner	22	58
432 Toolmaker, Die Setter, etc.	24	59
433 Pattern Maker	25	60
434 Other Machine and Toolsetting Worker	14	52
441 - 443 Assembler and Machine Erector	16	54
871 Foreman (So Stated) N.E.C.	24	59
Artisans/Craft (Manufacturing; Other)	18	56
Specialised and Supervisory Mine Worker:		
242 Miner	24	59
243 Quarryman, Sandpit Worker	16	54
244 Timberman (Shaft)	30	62
245 Reduction Worker	21	58
246 Banksman, Onsetter, etc.	22	58
247 Other N.E.C.	18	56
270 Driver - Railway Engine	24	59
271 Fireman (Loco)	3	26
451 Mechanic - Motor Vehicles and Cycles	12	50
452 Mechanic - Diesel	16	54
453 Mechanic - Aircraft	22	58
454 Mechanic (So Stated)	14	52
455 Other Mechanic	15	53
461 Sheetmetal Worker	17	55
462 Panelbeater	13	51
464 Other Sheetmetal Worker	22	58
483 Boilermaker	20	57
491 Electro-plater	20	57
492 Dip Plater and Related Worker	15	53
500 Locksmith	15	53
501 - 503 Tool Grinder, Saw Doctor, etc.	17	55
504 Other Metal Worker N.E.C.	14	52
512 Auto Electrician	19	56
513 Electrician (Telephone)	21	58
514 Electrician (Aircraft)	22	58
515 Armature/Coil Winder	20	57

TABLE 4.2 Continued

Census Code and Occupational Titles According to CASS Survey Occupational Groupings Census 1960 CASS Survey 1966/67	Socio-Economic Index $\hat{X}_1$	Transform to CASS Prestige Scale T
516 Other Electrician and Electrical Worker N.E.C.	21	58
521 Radiotrician, Electronic Mechanic	24	59
522 Airconditioning and Refrigeration Mechanic	25	60
523 Mechanic - Domestic Appliances	24	59
524 Mechanic - Office Machinery	22	58
525 Other Mechanic and Related Workers N.E.C.	26	60
526 Linesman	19	56
527 Assembler (Electrical and Electronic)	26	60
528 Other Electrical Worker N.E.C.	21	58
535 Cabinet Maker	8	43
536 Sawer/Sawmill	6	36
538 - 539 Woodworking Machine Operator N.E.C.	10	47
540 Vehicle Body Builder	16	54
541 Furniture, French Polisher	9	45
542 Other Woodworker N.E.C.	9	45
570 Compositor, Typesetter	26	60
571 Linotype Operator	35	65
572 Stereotyper, Electrotyper	27	60
577 - 578 Engraver, Photo-engraver, Etcher	30	62
579 Bookbinder, Cutter, Ruler	24	59
761 Musical Instrument Maker	23	59
872 Supervisor (So Stated) N.E.C.	20	57
Artisan/Craft (Construction)	14	52
463 Plumber, Drainlayer, Pipe Fitter	14	52
471 - 475 Welders and Cutters	14	52
481 Structural Steel Worker	17	55
482 Shipwright	15	53
484 Reinforcing Steel Worker	19	56
485 Underframemaker, Body Builder	14	52
486 Other Metal Plate and Structural Metal Worker	13	51
511 Electrician, Electrical Wireman (Construction	24	59
531 Carpenter, Joiner, etc.	11	48
532 Block Floor Layer	10	47
533 Shipwright, Boat Builder	16	54
534 Shopfitter	13	51
550 Painter (Construction)	7	40
558 Bricklayer	9	45
559 Plasterer	8	43
560 Stonemason	10	47
561 Tiler - Wall and Floor	11	48
562 Slater, Tiler - Roof	15	53

TABLE 4.2 Continued

Census Code and Occupational Title According to CASS Survey Occupational Grouping Census 1960 CASS Survey 1966/67	Socio-Economic Index $\hat{X}_1$	Transform to CASS Prestige Scale T
563 Related Workers (Building)	10	47
564 Builder (So Stated)	10	47
565 Builder Foreman, Foreman, Overseer	10	47
566 Fence Erector	6	36
567 Water Borer Driller, Well Sinker	19	56
569 Other Building Worker N.E.C.	8	43
Routine Non-manual	13	51
260 Deck Officer, Pilot (Ship)	32	63
261 Engineer Officer (Ship)	30	62
290 Transport Inspector, Supervisor	24	59
292 Yard Inspector, Shunter	6	36
293 Station Foreman, Signalman	11	48
294 Air Traffic Controller	28	61
295 Traffic Controller, Dispatcher N.E.C.	10	47
301 Telephone and Telegraph Operator	5	34
302 Radio Communications Operator	15	53
900 Policeman, Detective (Public)	12	50
901 Policeman, Detective (Private)	21	58
902 Fire Officer, Fighter and Member of Brigade N.E.C.	14	52
903 Traffic Inspector, Officer	15	53
904 Prison Warder, Gaoler	11	48
907 Messenger of the Court, Deputy Sheriff	19	56
971 Photographer and Related Camera Worker	26	60
978 Sport Instructor, Trainer, Coach (Personal)	25	60
Lower Routine Non-manual	15	53
191 Shop Assistant (Wholesale and Retail Trade)	22	58
193 Canvasser, Demonstrator (Commercial)	18	56
194 Hawker, Newsvendor, Pedlar	10	47
196 Related Commercial (Shop) Workers N.E.C.	31	62
223 Sorter, Grader (Agricultural Only)	14	52
280 Chauffeur	5	34
281 Taxi Driver	3	26
289 Guard, Ticket Examiner, Barrier Attendant	19	56
291 Checker (Transport)	5	34
311 Postman	3	26
312 Messenger	3	26
313 Deliveryman	5	34
321 Conductor (Bus and Tram)	5	34

TABLE 4.2 Continued

Census Code and Occupational Title According to CASS Survey Occupational Groupings Census 1960 CASS Survey 1966/67	Socio-Economic Index $\hat{X}_1$	Transform to CASS Prestige Scale T
322 Lift Attendant	3	26
323 Worker in Transport and Communications N.E.C.	6	36
905 Watchman	9	45
906 Lifesaver/Guard	7	40
908 Other Related Service Workers	11	48
911 Caretaker, Doorkeeper, Guardsman	6	36
912 Church Warden	3	26
913 Cloak/Baggage, etc. Attendant	4	33
914 Ranger	7	40
921 - 925 Housekeeper, Cook, etc.	14	52
936 Page, Porter, Usher	5	34
938 Other Lower Routine Service	10	47
941 Waiter, Wine Steward	7	40
942 Barman, Head Barman	6	36
951 - 953 Barber, Hairdresser, etc.	19	56
961 - 964 Launderer, Dry Cleaner and Related	25	60
973 Workers in Undertaking (Not Undertaker)	20	57
977 Projectionist, Film Revisor	15	53
979 Other Service Worker in Entertainment, Sport, N.E.C.	21	58
983 Hospital Orderly, Ambulanceman/Driver	17	55
984 Other Service Workers N.E.C.	21	58
Semi-skilled Manual	11	48
222 Driver of Mechanical Vehicles or Farm Implement	8	43
250 Alluvial Diamond Digger	19	56
251 Other Worker in Mining and Quarrying N.E.C.	21	58
265 Deck Rating/Hand, Barge Crew and Boatman	7	40
266 Engine Room Rating, Fireman and Oiler, Marine Driver	10	47
282 Driver: Lorry, Van, Bus, Truck, Tractor (Not Farm)	4	33
331 - 339 Spinner, Weaver, Knitter, Dyer and Related Worker	21	58
341 - 348 Tailor, Cutter, Dressmaker, Milliner Hatmaker	15	53
350 Upholsterer (Furniture)	10	47
351 Upholsterer (Motor Vehicles)	8	43
352 Other Upholsterer	20	57
353 - 360 Mattrass and Pattern Makers, Machinists	12	50
361 Other Textile, for Products, etc. N.E.C.	7	40

TABLE 4.2 Continued

Census Code and Occupational Title According to CASS Survey Occupational Groupings Census 1960 CASS Survey 1966/67	Socio-Economic Index $\hat{X}_1$	Transform to CASS Prestige Scale T
370 - 371 Shoe Repairer, Cobbler, Shoe Maker	6	36
372 - 378 Footwear - Cutter, Laster, Sewer, Machinist	5	34
379 Other Footwear Factory Operatives	4	33
380 - 383 Other Leather Products and Leather Products N.E.C.	8	43
391 Blast Furnaceman	18	56
392 - 395 Other Metal Furnaceman, Temperer	16	54
399 Roller, Roll Turner, Mill Steel Roller, etc.	12	50
401 Blacksmith	14	52
402 Hammersmith, Forgeman, etc.	12	50
403 Moulder (Hand or Machine)	16	54
404 - 413 Coremaker, Wire and Pipe Drawers	14	52
419 Metal Worker N.E.C.	14	52
551 Spray Painter (Not Construction)	9	45
552 Spray Painter and Panelbeater (So Stated)	12	50
553 Signwriter	9	45
554 Glazier	7	40
555 Other Painter, etc. N.E.C. (Paperhanger)	9	45
573 - 576 Machine Minder (Printing)	28	61
580 - 585 Glass Blower, Grinder, Finisher, etc.	16	54
586 - 589 Potter and Related Clay Worker	14	52
591 - 595 Glass Furnace Worker	13	51
610 - 615 Decorator of Glass and Pottery Products	17	55
620 - 623 Miller, Grinder, Other Worker in Grain and Related Products	22	58
631 - 635 Baker, Confectioner, Sweet Maker and Related Worker	17	55
680 - 687 Distiller, Batchstill and Other Still Operator	15	53
690 - 693 Pulp and Paper Worker (Not Paper Products)	19	56
701 Machine Operator (Chemist)	13	51
702 Other Worker in Chemicals	13	51
704 - 709 Tobacco Preparer and Tobacco Products Maker	14	52
710 - 712 Worker in Cane, Wicker, Bamboo, etc.	7	40
720 - 723 Machine Operator (Rubber Products)	10	47
724 Tyre/Band Builder	7	40
725 Vulcaniser, Attendant and Retreader	20	57
726 Other Worker in Rubber Products N.E.C.	9	45
731 - 732 Machine Operator and Process Worker (Plastic Products)	17	55

TABLE 4.2 Continued

Census Code and Occupational Title According to CASS Survey Occupational Groupings Census 1960 CASS Survey 1966/67	Socio-Economic Index $\hat{X}_1$	Transform to CASS Prestige Scale T
741 - 746 Tanner, Dresser and/or Fellmonger	15	53
751 - 753 Photographic Darkroom Worker	20	57
762 - 763 Musical Instrument Tuner and Other Worker in Musical Instruments N.E.C.	15	53
770 - 773 Stone Cutter and Carver	12	50
774 - 776 Paper Products Maker	20	57
790 Other Production Worker N.E.C.	12	50
801 Stationary Engine Operator (So Stated)	7	40
802 Pump Attendant/Operator N.E.C.	14	52
803 Compressor Operator	20	57
804 Boiler Attendant/Boiler Fireman	9	45
805 Other Stationary Engine or Related Equipment Operator	8	43
811 Crane Operator	11	48
812 Hoist Operator	26	60
813 Other Lifting Equipment Operator	12	50
821 - 823 Rigger (Construction, Ship and Other)	21	58
831 - 832 Road Grader/Scraper/Roller and Concrete Mixer Operator	3	26
833 Other Earth-moving and Construction Machinery Operator N.E.C.	4	33
841 - 853 Material-handling Equipment Operator	6	36
873 Apprentice (So Stated) N.E.C.	7	40
Unskilled Manual	3	26
195 Petrol Filling Station Attendant	3	26
225 Gardener, Groundsman	10	47
226 Farm Labourer	8	43
795 - 796 Packer and Labler	6	36
861 - 862 Stevedore and Dock Worker N.E.C.	22	58
863 Porter (Transportation - Not Hotel)	7	40
880 Labourer - Mining and Quarrying	3	26
881 Labourer - Manufacturing	1	21
882 Labourer - Construction	1	21
883 Labourer - Electricity, Gas, Water, etc.	2	24
884 Labourer - Commerce	1	21
885 Labourer - Transport and Storage	1	21
886 Labourer - Communications	1	21
887 Labourer - Government, Provincial and Health Authorities N.E.C.	1	21
888 - 891 Labourer - Services and Not Stated	1	21
915 - 919 Cleaner and Related Worker N.E.C.	3	26
931 - 933 Domestic Worker	7	40

TABLE 4.2 Continued

Census Code and Occupational Title According to CASS Survey Occupational Groupings Census 1960 CASS Survey 1966/67	Socio-Economic Index $\hat{X}_1$	Transform to CASS Prestige Scale T
Ungrouped Occupations	19	56
640 - 645 Brewer, Wine Maker, Mineral Water Maker, etc.	26	60
650 - 657; 660 - 667; 670 - 676 Other Workers in Food	10	47
974 - 976 Professional Sportsman, Performing Artist, Jockey	22	58

The detailed occupational titles of the Population Census have to be allocated to the defined classification of occupational groupings. The majority of titles can be allocated on the basis of fitted description and conventional practice. In other cases more subjective decisions are undoubtedly made, especially in cases which are marginal and where different people would assign the item to different groupings. The only way to describe the procedure is to present the results of the allocation exercise. This is accomplished at Table 4.2 which shows the detail of the rank ordering of the CASS Survey occupational groupings. This distribution of groupings is simplified in Table 4.3 for easy access by the reader to the rank order of occupational groupings. The content of the occupational groups shown at Table 4.2 was devised without reference to values of the socio-economic index corresponding with the several occupational titles. The allocation was made on the basis of the coding of occupations conventions employed in the CASS Survey. The results have not been tampered with in the subsequent light shed on particular occupations by the socio-economic index and they stand as originally classified. In retrospect, however, it is clear that in some cases (especially where the incumbents of a "misplaced" occupational title are numerous) more clear-cut occupational groupings could have been achieved by manipulating the socio-economic index as a partial criterion - that is, strategic

shifts of certain occupational title among occupational groupings. The fact that this is not done here is dependent on the use to which the rank order of groupings is to be put in the CASS Survey which is a "given" in our case. This is not to imply that the classification cannot be improved or manipulated (see next chapter) and no doubt this will be attempted at some future time either by CASS or some other interested body if sufficient merit is accorded our attempt.

TABLE 4.3

RANK ORDER OF CASS OCCUPATIONAL GROUPINGS

CASS Occupational Group[a]	$\hat{X}_1$
Professional	75
Salaried Lower Professional	70
Semi-Professional	52
High and Lower Managers, Executives and Administrators[b]	49
Representatives, Agents, Salesmen, etc.	46
Production Managers, etc.	46
Senior Clerical	38
Less Senior Clerical	36
Working Proprietor	34
Farmer	22
Manual Foreman and High Craft	22
Artisan/Craft (Manufacturing and Other)	18
Artisan/Craft (Construction)	14
Lower Routine Non-manual	15 } 14[c]
Routine Non-manual	13 }
Semi-skilled Manual	11
Unskilled Manual	3

a) Two groups "Owners and Executives - Small Commerce and Service" and "Owners and Executives - Small Technical" excluded from the distribution because detailed occupational titles are not available in the Census.

b) The high and lower groupings are combined because they cannot be distinguished in the Census.

c) See text for discussion on this part of the distribution.

If we turn to Table 4.3 (which is a collapsed categorical version of Table 4.2) it will be easier to discuss the distribution of hundreds of occupational titles among "twenty" occupational groupings. The clear-cut distinction between the rank order of all professionals above all managers, executives and administrators is more apparent than real. The values of the education predictor for the latter group are almost standard and they are low, which can be argued to be a function of the Census classification of this group in the appropriate Census table - a gross classification. So, even though the within-group distributions of the socio-economic index confirm the result for these four occupational groupings it remains unlikely that the higher echelons among managers, executives and administrators can be ranked below semi-professionals and unlikely that they can be ranked below all salaried lower professionals. The position of owners and executives in smaller enterprises is a vexing one as these are not clearly differentiated in the Census. This problem is left for the following chapter where we will employ additional information in an attempt to place them.

Below professionals and managers we find two groups on a socio-economic par - sales workers and what one might think of as "systems manipulators" at the middle level (production managers, technical executives, works' foremen, inspectors, etc.). These two groups probably reflect the growing importance of commerce and industry in South Africa and it is likely that in common with other developments in the western world that they have superceded the clerical occupational function in recent historical time. Clerical workers, however, outrank the group known as working proprietors who approach the manual fringe in the distribution (note that manual/non-manual occupations are not mutually exclusive). Farmers, manual foremen and high craft occupations occupy the ranks which for the greater part separate "white-collar" occupations from "blue-collar" and routine non-manual (mostly service type) occupations. They have a common position on the scale of the socio-economic index but it can be observed that in terms of index units they are closer to the manual part of the distribution than to the enhanced white-collar occupations. The manual occupations reveal an expected picture descending in rank through skilled, semi-skilled

and unskilled with artisans in manufacturing ranking higher than artisans in construction. Routine non-manual occupations deserve separate discussion.

From Table 4.3 it is observed that the two groupings of routine non-manual occupations, taken together, fall below high craft occupations (part of a category) and skilled manual occupations in manufacturing; they share a common rank with skilled occupations in construction, and they fall above the ranks of semi-skilled and unskilled manual occupations. Taken separately we have the anomaly that the lower routine non-manual category of occupations falls above the category routine non-manual (which was conceived of as a more prestigious grouping than the former) in the ranking of the classification. The observation that some manual occupations rank higher than some white-collar (routine non-manual) occupations is consistent with findings in other studies of occupational ranking in western countries and probably points to changes occuring in the occupational structure among Whites in South Africa. The unexpected rank order of the two categories of routine non-manual occupations requires explanation. Fortunately, this is easily accomplished. Shop assistants in wholesale and retail trade were allocated according to our original conception, to the occupational grouping "lower routine non-manual" of which group they make up 34% of the total number of job incumbents. The corresponding value of the socio-economic index for this occupational title is 22, which together with the substantial weight within the grouping accounts for the unexpected direction of the difference in ranking between the two routine non-manual groups. This is, for example, one of the areas of the distribution of occupational groupings where it might seem wise to have re-allocated an occupational title: however, the difference is caused more by a difference in the educational variable than by income differences, the former being less reliable than the latter, and with due regard for our foregoing discussion on these matters we have allowed the anomaly to stand. Unless research is specifically oriented to routine non-manual occupations these two occupations can be combined for most purposes.

TABLE 4.4

PERCENTAGE DISTRIBUTION OF OCCUPATIONAL TITLES CONTAINED IN THE CENSUS OF POPULATION (FOR WHICH INCOME DATA ARE REFLECTED) WITHIN CASS OCCUPATIONAL GROUPINGS BY DECILE OF SOCIO-ECONOMIC INDEX (D_1)

CASS Occupational Group	Total	Decile									
		10	9	8	7	6	5	4	3	2	1
Professional	100,0	89,2	10,8								
Salaried Lower Professional	100,0	88,0	10,9	1,1							
Semi-professional	100,0	3,4	77,7	11,4	2,6		4,9				
High and Lower Managerial, Executive and Administrative	100,0	0,9	73,1	26,0							
Representatives, Agents, Salesmen	100,0			99,0		1,0					
Production Managers, etc.	100,0			100,0							
Senior Clerical	100,0			92,3	7,7						
Less Senior Clerical	100,0			88,7	11,2	0,1					
Working Proprietor	100,0			100,0							
Farmer	100,0					87,8	4,6	0,5	7,1		
Manual Foreman and High Craft	100,0			2,2	28,1	55,3	4,3	10,1			
Artisan/Craft (Manufacturing)	100,0			0,4	31,0	25,7	9,9	4,7	21,9	1,3	5,1
Artisan/Craft (Construction)	100,0					19,8	2,1	18,5	32,7	27,2	
Routine Non-manual	100,0			1,2	3,7	8,2	0,8	7,4	53,5	15,0	10,2
Lower Routine Non-manual	100,0				2,7	42,4	13,8	3,0	1,2	7,0	29,9
Semi-skilled Manual	100,0				6,0	5,8	8,6	12,7	14,9	17,8	34,2
Unskilled Manual	100,0					1,5			6,6	8,4	83,6

Two further tasks are immediately suggested by the presentation of a rank order of occupational groupings: a comparison of the CASS ranked classification with the variety of classifications current in the literature (we have briefly referred to only two so far) and some more objective evaluation of the classification and its content than has yet been attempted. We forego the opportunity to attempt the former task in this paper as it will be laborious and probably a sufficient undertaking for a separate paper. Also, as we intend following this paper with a series on occupational mobility in South Africa, comparative work might be better placed as an essay to introduce the classification which will be employed as the orienting instrument in these studies. For the latter task we might with profit return to the decile scales constructed on the basis of occupations and population as they are distributed on the scale of the socio-economic index - the criterion of the rank order of the CASS occupational classification.

In the process of reclassifying census occupational titles into a more meaningful set of stratified "sociological" categories there have undoubtedly been gains but the reclassification of CASS classification of occupational groupings does not reflect a set of mutually exclusive categories in terms of their occupational prestige. Turning to the distribution of occupational titles within each occupational grouping, based on the scale of the socio-economic index, and shown in percentages at each decile level of the scale in Table 4.4 we become aware that the distribution among occupations of socio-economic status is not as definitive as it would appear from the grouped distribution in Table 4.3. Table 4.4 can be read in two ways: along the rows and down the columns (and, of course, both simultaneously). Reading along the columns the distributions tend to break down into a fourfold pattern. Professional occupations monopolise the highest socio-economic status jobs followed closely by those occupations categorised as semi-professional and the managerial grouping. In this grouping of four occupational categories the spread of the status among jobs is somewhat curtailed. The second section of the pattern includes salesworkers, production managers, clerical workers and working proprietors, all of which groups share by and large the eighth

decile interval of socio-economic status. Theoretically then there are many jobs among these five occupational groupings which would carry a similar status and mobility in this part of the pattern would tend to be horizontal rather than vertical. Thirdly, farmers, manual foremen and high craft workers, as we have shown before, reflect distributions which show only somewhat greater status of occupation but which are also narrower in range than the routine non-manual categories, and also narrower than some of the manual occupations. Taking manual and routine non-manual as the final block in the pattern we see that they monopolise the lower moeity of the distributions. The range of the status distribution in each grouping, however, is wide (except for unskilled jobs) and theoretically there is much room for both horizontal as well as vertical mobility within the five groupings, excluding unskilled workers.

While reading across the rows in Table 4.4 we are reading the variation within each occupational grouping and comparing this simultaneously with other groupings. Reading down the columns of the table we can compare the percentage of occupations (percentage to the base of the number of people in each grouping) in each grouping which share a common level on the decile scale. For example, at the sixth decile it can be seen that many foremen and high craft workers share a similar interval of the index scale as farmers; this is true to a lesser extent among artisans and routine non-manual occupations (the latter being combined) and only marginally so among semi- and unskilled manual workers.

The pattern for the economically active male population considered as a decile scale of the socio-economic index independently of their classification into <u>particular occupations</u> (but relating, of course, to their socio-economic occupational status on the scale) is similar to the previous one. This set of distributions is shown at Table 4.5. All higher professionals and over 99% of salaried professionals fall at the top level of the decile scale while 65% of semi-professionals are at the ninth level and so are over 90% of managers, executives, administrators, higher sales workers and production managers. Approximately 90% of clerical workers fall within the eighth interval of the decile scale. All working proprietors are at the

seventh interval but they share this level with incumbents to a greater or lesser extent from ten other groupings in the classification. Most farmers and to a lesser extent foremen and high craft workers fall at the median value of the population scale. Artisans in manufacturing show a bimodal distribution about the sixth level and the fourth-third level. A small majority of artisans in construction are located at the second level of the population decile. Most routine non-manual workers are recorded at the fourth-third level with a substantial proportion at the lowest decile (25%-35%). Semi-skilled manual workers tend toward the lower pole of the distribution increasing in percentage frequency from the third to the first level. Most unskilled manual workers are at the bottom of the decile distrubution.

The collapsed scale of the socio-economic index which is the criterion of the rank order of the CASS occupational groupings classification does not then reflect an unequivocal hierarchy of stratification among the occupational titles to be found in the Population Census of 1960. (This, of course, would apply with roughly equal force to all similar exercises). Given the need to collapse the scale into a manageable number of categories the most that can be claimed is that the occupational groupings have inherring within their several definitions a modicum of internal consistency and meaningful sociological face validity. Although the chance of a horizontal placement "along" the scale is high when occupational mobility occurs, especially among some adjacent categories, we are now in a position to show that movement along the scale has a high probability of being vertical for very many of the several occupations within each grouping. The advantages of ranking are capped by the desirable characteristics of the interval scale of measurement which is a property of the scale of the socio-economic index: we can say, therefore, not only how many units of the scale separate one grouping from another but make comparative statements about the proportionate distance separating one occupational grouping from another at any point on the collapsed scale.

TABLE 4.5

PERCENTAGE DISTRIBUTION OF THE MALE POPULATION IN EMPLOYMENT (FOR WHOM INCOME DATA ARE AVAILABLE) IN CASS OCCUPATIONAL GROUPINGS BY THE POPULATION DECILE SCALE (OF THE SOCIO-ECONOMIC INDEX — D_2)

CASS Occupational Group	Total	Decile									
		10	9	8	7	6	5	4	3	2	1
Professional	100,0	100,0									
Salaried Lower Professional	100,0	99,7	0,3								
Semi-professional	100,0	65,0	27,5		2,6				4,9		
High and Lower Managerial, Executive and Administrative	100,0	9,1	90,6		0,3						
Representatives, Agents, Salesmen	100,0		99,0					1,0			
Production Managers, etc.	100,0		96,1		3,9						
Senior Clerical	100,0			92,3	7,7						
Less Senior Clerical	100,0			88,6	0,2	11,2					
Working Proprietor	100,0				100,0						
Farmer	100,0						87,7		5,2	7,1	
Manual Foreman and High Craft	100,0				6,7	23,6	55,3		14,4		
Artisan/Craft (Manufacturing)	100,0				5,1	26,2	0,1	29,1	30,9	3,4	5,2
Artisan/Craft (Construction)	100,0					19,8		1,7	18,8	51,6	8,1
Routine Non-manual	100,0				4,9	6,3		2,7	44,9	16,0	25,2
Lower Routine Non-manual	100,0				2,7			50,1	9,1	2,9	35,2
Semi-skilled Manual	100,0				6,0			7,7	19,4	25,0	41,9
Unskilled	100,0							1,5		11,5	87,0

In the following chapter we will discuss some adjustments to the ranking of the scale of the CASS classification of occupational groupings, and some necessary additions (for our purposes) to it, so as to enable its most facilitatious use as an overall criterion for occupational mobility research among White males in South Africa.

CHAPTER 5

TOWARD A RANK-ORDER OF OCCUPATIONAL GROUPINGS AS A CRITERION FOR THE MEASUREMENT OF INTRA- AND INTER-GENERATIONAL OCCUPATIONAL MOBILITY AMONG WHITE MALES

The CASS Survey of 1966/67 was designed not only as a study of the prestige rating of selected occupations but as a national survey of social stratification among Whites in South Africa, one aspect of which is directed at the question of occupational mobility. We are in the enviable situation then of drawing both the orienting criterion or definition of the occupational structure and occupational inflow and outflow charts required for mobility studies from the same data source. The study of occupational mobility is not the only applied field in which ranking of occupational prestige (and a scale such as the socio-economic index) is relevant, though it is, one way or another, a necessary requirement in that without a substantive hierarchy of occupational stratification, mobility can only be treated as a nominal variable: the purpose of this chapter is to render the foregoing CASS rank order of occupational groupings in a form sufficient for the purpose of studying occupational mobility among White males in South Africa as possible. Notwithstanding the fact that we proceed purposefully with our own immediate study in view, it is hoped that the present attempt will stimulate interest in occupational stratification in South Africa - especially with regard for the ramifications when this type of research is extended to all race groups of the society.

As far as the White group is concerned it might be argued that as the rank ordering of occupational groupings is determined by the scale of the socio-economic index based on that male population the rank order appearing in Table 4.3 of the foregoing chapter is necessarily unalterable and the most sufficient distribution of occupational groupings for present purposes. In general this is true to the extent that arbitrary manipulation of index values will negate the basis of ranking. At the same time, recalling an earlier discussion, the very act of classifying occupations independently of the specific index scale to fit notions of meaningful social categorisation means that the scale is

being applied as a measure at an abstracted remove (as well as a mathematical remove) from its empirical foundation. (Analogously: 1 000 readings on the farenheit scale can be presented in a number of summary mathematical forms by simple calculation; however, if summary statistics for the different ethnic groups represented among the 1 000 readings are required, then a series of independent procedures must be implemented before these statistics can be arrived at and unless the ethnic categories are absolutely mutually exclusive, comparative analysis will depend, to some extent, on a knowledge of the classificatory procedure). It is, therefore, justifiable to subject, as far as we can, the rank order (or level on the socio-economic index scale) of occupational groupings to an interrogative examination. In order to do so we will draw both on nominal and measurement data already presented in this paper and introduce two new comparative sources which will aid the decisions that have to be made.

TABLE 5.1

PERCENTAGE DISTRIBUTION OF THE ECONOMICALLY ACTIVE WHITE MALE POPULATION (FOR WHOM INCOME DATA ARE AVAILABLE IN THE CENSUS) AMONG CASS OCCUPATIONAL GROUPINGS RANKED ON THE SCALE OF THE SOCIO-ECONOMIC INDEX ($\hat{X}_1$)

CASS Occupational Group	$\hat{X}_1$	%	C%
Professional	75	3,7	3,7
Salaried Lower Professional	70	3,0	6,7
Semi-professional	52	3,5	10,2
High and Lower Managerial, Executive and Administrative	49	7,1	17,3
Representatives, Agents, Salesmen, etc.	46	2,6	19,9
Production Managers, etc.	46	0,4	20,3
Senior Clerical	38	0,9	21,2
Less Senior Clerical	36	15,0	36,2
Working Proprietor	34	2,2	38,4
Farmer	22	12,6	51,0
Manual Foreman and High Craft	22	5,7	56,7
Artisan/Craft (Manufacturing and Other)	18	11,8	68,5
Artisan/Craft (Construction)	14	9,2	77,7
Lower Routine Non-manual	15) 14	7,0	84,7
Routine Non-manual	13)	4,6	89,3
Semi-skilled Manual	11	8,3	97,6
Unskilled Manual	3	2,1	99,7
Ungrouped Occupations	19	0,3	100,0

Although it can be anticipated that the rank ordering of occupational groupings to emerge in this chapter will not deviate much from the order shown in Chapter 4, yet there are seven problem areas in the distribution that require attention. These are listed in no special order of priority below (for easy reference the content of Table 4.3 is reproduced, with additional material, at Table 5.1) :

1) Although we were unable to identify the occupational groups "owners and executives - small commerce and service" and "owners and executives - small technical" in the census list of detailed occupational titles, allowance has been made for them in our group classification and as they will feature as categories of both occupational recruitment and destination in future mobility charts it is necessary to accommodate them in a ranked classification.

2) Managers, executives and administrators are represented in the classification by a single category with the consequence that the socio-economic status of the higher echelons of this occupational type, normally regarded as substantial, is probably marked by the undifferentiated "census categorisation" and, therefore, understated. Our own classification makes an allowance for distinguishing higher and lower managerial, executive and administrative and evidence will be sought to place two separate categories of this occupational type in the rank order.

3) The occupational categories "representatives, agents, salesmen, etc." and "production managers, etc." share a level on the scale of the socio-economic index and, therefore, a rank on the order of occupational groupings. These might be further scrutinised to discover if other evidence does not suggest some superordination of one over the other.

4) Similarly, the coincidence of farmers and manual foremen and high craft might be resolved in some way.

5) The anomaly of the unexpected direction of the adjacent ranks between the two routine non-manual occupational categories

should be further discussed and rationalised. Fortunately, the difference in ranking is represented by only two units on the index scale and any adjustment will not be radical.

6) If the routine non-manual categories are combined this forces a tied rank with the artisan/craft (construction) occupational category which in turn will have to be modified, if possible.

7) Thought should be given to further collapsing the scale of the socio-economic index as well as to some conventional nominal break-downs of occupational classifications as these are often employed quite efficasiously in pure and applied stratification research.

How are these tasks to be accomplished?

We have at our disposal a number of endogenous sources and one comparable exogenous source. From within the CASS Survey we have ranked a selection of 97 discrete occupations deriving from a nationally sampled rating scale of the "prestige" of occupations - the dependent variable that the socio-economic index was constructed to estimate (see Chapter 1); the distribution of the decile scales of the socio-economic index among the groupings of the occupational classification at Chapter 4 provide, as we have already shown, a basis for comparison among occupational groupings and substantive descriptions of their socio-economic content; and the design of the CASS Survey allows us to marry income and education data with the defined occupational groups within which male respondents (in the survey) fall. These data can be arranged in similar manner to that of the corresponding census information according to CASS Survey occupational groupings and then computed as a scale of the socio-economic index by substitution in the already constructed equation - but not unequivocally as will shortly become apparent.

Six years separate the date of the census from the date of the CASS Survey and the income variable cut-off at R2 000 would no longer be applicable in real terms. As regards the survey itself only males from the range of respondents are represented in the data and only males

from urban centres while the census covers the whole Republic. Unfortunately, the income information elicited in the CASS Survey refers to family income and not personal income, which introduces a serious bias into this variable. The education variable will manifest the biases caused by the qualifications above except for the last as educational level refers to Personal Educational Level. The distribution arrived at in Table 5.2, which describes the rank order of CASS Survey occupational groupings along the scale of an amended socio-economic index is derived in the following way. The proportion of the income variable is fixed at the percentage of the male respondents in the CASS sample who correspond with families enjoying an income of R3 000 or more per annum: overall this represents 61% of the sample males as against 42% of economically active males in the population earning R2 000. It is necessary to increase the moiety on the income variable as family income is substantially higher than personal income and making the proportion equivalent to the national proprotion (based on personal income) will mean that far fewer sample cases will in fact receive a comparable personal income - by increasing the proportion (based on family income) we hope to come near a comparable level of the income indicator. The education level variable is expressed as the proportion of high school graduates as in Chapter 2. The overall sample proportion of the education variable is 49% which is substantially greater than the 29% among the total economically active male population. The qualifications concerning the use of CASS Survey material for an amended index scale stated at the beginning of this paragraph largely determine this discrepancy. We have not attempted to match proportions on educational level because the cut-off is an unequivocal one.

Independently of the 1966/67 CASS Survey, Market and Opinion Surveys (Pty.) Ltd. (MOS) conducted a survey on occupations commissioned by CASS during 1975. The sample was a national one and the design a panel of 1 026 persons. Occupational descriptions were coded (after lengthy consultation) into the CASS occupational groupings. Among other variables, the panel members can be distributed among the occupational groups according to their personal incomes and levels of education - unfortunately a sex break-down of the panel is not available.

TABLE 5.2

RANK ORDER OF CASS OCCUPATIONAL GROUPINGS ACCORDING TO "A SCALE" OF THE SOCIO-ECONOMIC INDEX (EQUATION) APPLIED TO CASS SURVEY INCOME AND EDUCATION VARIABLES CORRESPONDING TO THE GROUPINGS

CASS Occupational Group (CASS Survey)	Income 1)	Education 2)	$\tilde{X}_1$ 3)
Professional	93	100	81
High Managerial, Executive and Administrative	83	95	75
Lower Managerial, Executive and Administrative	95	88	75
Salaried Lower Professional	63	93	68
Semi-professional	64	94	68
Owners and Executives - Small Commerce and Service	91	71	65
Working Proprietor	87	65	61
Farmer	50	80	57
Production Managers, etc.	69	56	50
Owners and Executives - Small Technical	71	52	49
Representatives, Agents, Salesmen, etc.	72	49	48
Senior Clerical	69	52	48
Less Senior Clerical	42	57	42
Manual Foreman and High Craft	52	27	30
Artisans/Craft (Manufacturing and Other)	47	11	20
Lower Routine Non-manual	63	0	19
Routine Non-manual	32	16	18
Artisans/Craft (Construction)	33	3	12
Semi-skilled Manual	33	0	10
Unskilled Manual	32	0	10

1) Percentage in families showing income of R3 000 or more per annum.

2) Percentage of respondents having graduated from high school (i.e., Standard 10 and above).

3) Socio-economic index (amended).

The distribution of income and educational levels among the sample panel are distributed somewhat differently from the 1960 Population Census, as an intervening period of 15 years would lead one to expect. The cut-off for the income proportion, in order to compare with the cut-off made for the census distribution, is severely altered to a level of R7 200, and the proportion of high school graduates in the sample panel is 72% compared with 29% of economically active males in the 1960 Census. The proportion of panel members earning a personal income of R7 200 or above is 46% compared with 42% of economically active males earning R2 000 per

annum or above in the 1960 Census. How much these differences are attributable to the passing of 15 years and how much to the characteristics of the sample panel is not know. Nevertheless, on the basis above we have applied the equation of the socio-economic index to the MOS data to provide a "comparable" scale from which it is possible to rank the CASS occupational groupings which is shown in Table 5.3 below.

TABLE 5.3

RANK ORDER OF CASS OCCUPATIONAL GROUPINGS ACCORDING TO "A SCALE" OF THE SOCIO-ECONOMIC INDEX (EQUATION) APPLIED TO MOS SAMPLE PANEL INCOME AND EDUCATION VARIABLES CORRESPONDING TO THE GROUPINGS

CASS Occupational Group* (MOS Survey)	Income 1)	Education 2)	$\hat{X}_1$ 3)
Professional	81	99	76
High Managerial, Executive and Administrative	85	94	75
Salaried Lower Professional	51	98	67
Semi-professional	47	94	63
Lower Managerial, Executive and Administrative	64	82	62
Production Managers, etc.	62	74	57
Representatives, Agents, Salesmen, etc.	45	76	53
Working Proprietor	50	72	53
Senior Clerical	29	86	53
Less Senior Clerical	26	79	49
Farmer	45	68	49
Manual Foreman and High Craft	21	72	44
Owners and Executives - Small Commerce and Service	50	50	41
Artisan/Craft (Manufacturing and Other)	7	50	28
Routine Non-manual	10	48	28

*No sample panel cases - Owners and Executives - Small Technical
- Artisan/Craft (Construction)
- Unskilled Manual

*Insufficient panel cases - Lower Routine Non-manual
- Semi-skilled Manual

1) Percentage with personal incomes of R7 200 or above per annum (sex undifferentiated).

2) Percentage having graduated from high school (i.e., Standard 10 and above (sex undifferentiated)).

3) Socio-economic index (amended).

In the attempt to extend the classification of rank ordered occupational groupings and in some cases to rationalise the very rank order of the groupings derived in Chapter 4, we have arrived at an uncomfortable position. Because of a surfeit of sometimes indifferent and often contradictory evidence assembled above, we are in danger of using the same data (rank order distributions) in different qualifying ways to effect adjustments at various levels of the rank order "scale" of occupational groupings. That is, there is likely to be a tendency merely to affirm points of agreement among the several distributions as consequents of essential associations between occupational prestige and socio-economic status (an unstated functional effect) and then to enter special pleas for deviation at points of disagreement on the basis of the qualifications to comparability of supplementary information made above. It must, therefore, be understood that we proceed now with something less than a scientific argument where we draw more on circumstantial evaluation at various points on the scale we have erected rather than on measurement which is the criterion of that very scale. In mitigation of this lamentable philosophic departure we can only reiterate that changes to the scale will be minor and that the amended rank order of occupational groupings is designed to meet a specific "purpose at hand" - i.e., a criterion for the measurement of occupational mobility.

It is probably necessary to reiterate, for the last time, that the scale of the socio-economic index is a scale of measurement which represents "estimation" of a property of occupational stratification, "prestige" or standing, for which we have 97 rating scale values for corresponding occupations which cover something in excess of 50% of the economically active White male population. We might, therefore, begin by comparing a ranked order of the measure of occupational prestige of the original data grouped in the CASS classification with the rank order of the same classification derived from the census - although the latter is an estimate it covers "estimation" for all occupations and is a stronger tool for our purposes than the limited original information, nevertheless a comparison will reveal <u>in partial terms</u> the extent to which prestige and socio-economic status, the crucial variables of the index equation, have diverged in this extended

analysis. The comparison is shown at Table 5.4 and the detailed classification of the original 97 occupations is included at Appendix B.1.

TABLE 5.4

COMPARISON OF THE RANK ORDER OF THE PRESTIGE RATING OF CASS SURVEY OCCUPATIONAL TITLES GROUPED TO CORRESPOND WITH THE CLASSIFICATION OF OCCUPATIONAL TITLES FROM THE CENSUS RANKED ON THE SCALE OF THE SOCIO-ECONOMIC INDEX

CASS Survey Occupational Title (Prestige)	$\bar{X}\%$ 1)	Population Census Occupational Titles	$\hat{X}_1$ 2)
Professional	84	Professional	75
High Managerial, Executive and Administrative	70	Salaried Lower Professional	70
Salaried Lower Professional	65	Semi-professional	52
Semi-professional	52	High and Lower Managerial, Executive and Administrative*	49
Lower Managerial, Executive and Administrative	52	Representatives, Agents, Salesmen etc.	46
Owners and Executives*	40	Production Managers, etc.	46
Farmer	40	Senior Clerical	38
Manual Foreman and High Craft	37	Less Senior Clerical	36
Senior Clerical	34	Working Proprietor	34
Production Managers, etc.	33	Farmer	22
Less Senior Clerical	29	Manual Foreman and High Craft	22
Representatives, Agents, Salesmen, etc.	21	Artisan/Craft (Manufacturing and Other)	18
Artisan/Craft (Manufacturing and Construction)**	21	Artisan/Craft (Construction)	14
Routine Non-manual	16	Lower Routine Non-manual	15 } 14
Working Proprietor	15	Routine Non-manual	13 }
Semi-skilled Manual	11	Semi-skilled Manual	11
Lower Routine Non-manual	7	Unskilled Manual	3
Unskilled Manual	5		
*Not separated into commerce/service and technical - too few cases. **Grouped for convenience		*Not distinguishable on this distribution (Owners and Executives not available in the Census classification)	

1) Mean prestige rating expressed as the mean percentage of "excellent" and "good" ratings on the CASS prestige scale.

2) Population weighted (within group) mean of the socio-economic index.

This comparison reveals in general the shift in the intermediate levels of the rank order of occupational groupings: the direction of

shift is determined by whether prestige or prestige plus socio-economic status is taken as the initial orientation. Assuming the former, we see that socio-economic characteristics of occupations depress the ranks of farmers, manual foremen and high craft workers to the interstice between white-collar occupations and manual and routine non-manual occupations and alter the order of middle range white-collar occupations, almost reversing it in the case of representatives, agents, salesmen, etc. The upper echelons of professional and managerial workers remains steady when compared as a block of occupations though the census information clearly does not reflect the high prestige (and no doubt socio-economic level) of upper managerial workers. Likewise the block of manual and routine non-manual occupations maintain equitable comparison although the socio-economic standard of the lowest routine non-manual jobs has the effect of pushing them up in the rank order. The placing of working proprietor on the prestige scale is unreliable as only two very marginal occupations represent this grouping (see Appendix B.1). In prestige terms alone, owners and executives (small commerce, service and technical - three occupational titles in this distribution only) fall just below the professional and managerial occupational groupings in rank which is what might be expected but this is not unequivocally confirmed by the information at Tables 5.2 and 5.3. If we accept, as argued earlier, that development in the economy has provided a socio-economic push to some occupations allied with commerce and industry such as representatives, production and technical management, etc., then the limited rank order picture shown by grouping prestige ratings of occupations does not differ markedly from the socio-economic ranking with the exception of farmers which will be discussed at some length below.

More particularly we now turn to the problems isolated for our own purposes earlier in this chapter and begin to settle on a final "rank order" of occupational groupings - points in the measurement of occupational mobility. To begin at the end of our list of seven problems we anticipate a four or fivefold breakdown of the rank order of occupational groupings that will not be inconsistent with general nominal classifications of the occupational structure into a hierarchical social stratification pattern. This question was raised in Chapter 4 via the

decile distributions and we seek to confirm this view here and at the same time conserve the written word by considering the occupational groups in blocks rather than as twenty separate categories.

The first "natural" block of occupational groups has two major components reflecting professional and managerial type occupations which comprise 17,3% of the economically active White male population of the Republic at 1960 (professional = 10,2%; higher and lower managerial, executive and administrative = 7,1%: see Table 5.1). The rank ordering of occupational categories within this block on the census data places the three professional categories above "both" levels of managerial personnel - a hierarchy that is questioned above. In order to resolve the rank order of the five CASS occupational groupings at this level we can, as we shall do with other blocks of occupational groupings, compare the ranks as they appear in Tables 5.1, 5.2 and 5.3: Table 5.5 accomplishes this in abridged form, and the corresponding Block 5.5 shows the definitive rank order for this chapter. The first ranked occupational group is an invariable and expected placing. The second ranked group holds this position in the supporting surveys and is an expected resolution to half the problem of distinguishing level in the managerial component of the block. The rank order of 5 for the lower moiety of the original managerial grouping is less straightforward. Here the decision has been motivated more by the categorical link between salaried and semi-professional (3rd and 4th rank respectively) than any absolute indication of superordinate status of semi-professional over lower executive and administrative functions. Possibly the deciding factor here can be taken from the population decile scale in Chapter 4 which shows a far greater proportion of semi-professionals in the 10th decile than is the case for the managerial categories. The relative sizes of the two managerial groupings is not known and would require independent investigation to determine. The rank order at this level of the scale fits, for the last time, the corresponding groupings in the prestige scale at Table 5.4 which confirms, if nothing else, that it is easier to rank occupations and occupational groupings at the top than at other levels of the status hierarchy, except the very lowest.

TABLE 5.5

PROFESSIONAL AND MANAGERIAL OCCUPATIONAL GROUPINGS: COMPARATIVE RANKS FROM CENSUS (TABLE 5.1), CASS SURVEY (TABLE 5.2) AND MOS SURVEY (TABLE 5.3)

Occupational Group Ranked High to Low in Descending Order		
Population Census	CASS Survey	MOS Survey
Professional	Professional	Professional
Salaried Lower Professional	High Managerial, Executive and Administrative	High Managerial, Executive and Administrative
Semi-professional	Lower Managerial, Executive and Administrative	Salaried Lower Professional
High and Lower Managerial, Executive and Administrative	Salaried Lower Professional	Semi-professional
	Semi-professional	Lower Managerial, Executive and Administrative

BLOCK 5.5

DEFINITIVE CASS RANK ORDER

R	
1	Professional
2	High Managerial, Executive and Administrative
3	Salaried Lower Professional
4	Semi-professional
5	Lower Executive and Administrative

The next block of occupational group rankings – middle white-collar occupations — is more extended than is usual in an exercise of this kind and as a consequence, among other origins of consequence, difficult to rationalise. We have relied here quite heavily on the CASS scale of the socio-economic index for most of the ranks insinuating the "owner and executive" categories on equivocal evidence and ranked production managers, etc., above salesmen on comparative grounds. The comparative ranks and definitive CASS ranks among occupational groups can be seen at Table 5.6 and Block 5.6 respectively. This block, excluding the "owner and executive" categories, accounts for 21.1% of the

economically active White males in the Republic and is a substantial section of the working population (the percentage distribution at Table 5.1 cannot be exact as the last-named categories are included somewhere in the data).

TABLE 5.6

MIDDLE WHITE-COLLAR OCCUPATIONAL GROUPINGS: COMPARATIVE RANKS APPLIED TO CENSUS, CASS SURVEY AND MOS SURVEY (TABLES 5.1-3)

Occupational Group Ranked High to Low in Descending Order		
Population Census	CASS Survey	MOS Survey
Representatives, Agents, Salesmen, etc.	Owners and Executives (Commerce, Service)	Production Managers, etc.
Production Managers, etc.	Working Proprietor	Representatives, Agents, Salesmen, etc.
Senior Clerical	Production Managers, etc.	Working Proprietor
Less Senior Clerical	Owners and Executives (Technical)	Senior Clerical
Working Proprietor	Representatives, Agents, Salesmen, etc.	Less Senior Clerical
	Senior Clerical	Owners and Executives (Commerce, Service)
"Owners and Executives" Not Ranked	Less Senior Clerical	"Owners and Executives (Technical)" Not Ranked

BLOCK 5.6

DEFINITIVE CASS RANK ORDER

R	
6	Production Managers, Technical Executives, Foremen and Inspectors
7	Representatives, Agents, Salesmen, etc.
8	Owners and Executives (Small Commerce and Service)
9	Owners and Executives (Small Technical)
10	Senior Clerical
11	Less Senior Clerical
12	Working Proprietor

The ranking of production managers, etc., at the top of this block and just below executives and administrators is both logical and shown by comparison. Only the order in the CASS Survey places this grouping below the top and then not very far down. As salesworkers share the same value of the socio-economic index with lower type managers, etc., they fill the next, 7th, rank although, once again, comparative evidence does not clearly indicate that they should. We remain uncertain about the rank order of owners and executives in small concerns. In relative prestige terms (Table 5.4) they fall in rank just below the bottom of the professional/managerial block but the scale difference is 12 points which is substantial. The first of these two groupings enjoys a similar rank in the order of the CASS Survey groupings but the second is somewhat lower in rank though higher than sales and clerical groups. In the MOS Survey owners and executives (commerce and service) are ranked just above manual and routine non-manual groupings - a contrary finding. This vexing group of two has been placed at the 8th and 9th ranks because there is some evidence to suggest this but more because it fills a sizeable gap in the scale of the socio-economic index of 8 points between sales-workers and clerical workers. The balance of this block are equitably spaced on the original scale and they are left in place though there is a doubt about the ranking of working proprietor because this is represented by only one entry in the Census and the CASS Survey scale items indifferently represent this grouping. This block of occupational groupings is concentrated at the 8th decile of the socio-economic index among occupations but is stepped from the 9th to the 7th decile of the index relating to the population norms: i.e., production managers, etc., and salesworkers concentrate at the 9th decile, clerical at the 8th, and working proprietors at the 7th.

Although the two occupational groupings, farmer and manual foreman and high craft have an equivalent rank each with a value of 22 units on the index scale the "farmer group" is treated as an occupational "block" on its own. The placing of farmers at the rank just above manual foremen and high craft workers is a relatively easy decision to arrive at. This order is indicated in all the rank distributions we are using to formulate a final rank order: in prestige terms alone (Table 5.4) these groupings share contiguous ranks separated by only

3 index points and this situation is duplicated in the results of the MOS survey (Table 5.3); the order in the ranking from the CASS Survey occupational groups (Table 5.2) places farmers substantially above foremen and high craft workers with a large difference in index scores but this is accountable by the fact that the CASS sample is an urban one and urban-dwelling farmers are atypical in that they are often very wealthy and well-educated. It is therefore proposed that farmers be given the rank 13 and manual foremen and high craft workers the rank 14, the latter being part of the next subordinate block.

BLOCK: FARMERS

DEFINITIVE CASS RANK ORDER

R	
13	Farmer

We should not lose sight of the fact, however, that farmers as an occupational category are far from being homogeneous. They range in terms of operation from those performing executive and managerial functions in large agricultural syndicates or personally-held estates through the farmer comprising the backbone of the agricultural industry who runs his farm as an ongoing concern to the small scale farmer who is often marginal to the industry and supplements his income with alternative employment. Very large operators in the farming industry are clearly accorded more prestige than the position for the category farmer here allows; this can be verified in Chapter 1 from the rank order of occupational titles according to mean prestige rating where farmers with large farms score very much higher than farmers with small farms. Their situation is analogous to that of very high executives who in any commonsense view outrank many professional occupations (though this fact is often obscured in the process of categorization). It is, therefore, necessary when considering this top level of farmers to separate them from the group and associate them in terms of prestige with the professional and managerial group, probably with the broad category of high managerial, executive and administrative personnel.

As regards occupational mobility research this intercalory

rank of farmers between white-collar workers and blue- and grey-collar (routine non-manual) workers is a crucial one. It can be expected that farming families (12,6% of economically active White males in the distribution at Table 5.1) will place a disproportionate number of workers in first occupation origins and subsequent occupations at levels of the rank ordered groupings other than their originating pre-occupational level - this is likely to be occasioned by the size of the rural family and the tendency (by the nature of farming) for rural to urban migration.

This intermediate placing means that members of the farming community can theoretically be upwardly or downwardly mobile depending on whether they choose a passage leading to white-collar employment in the former case or a passage leading to blue- and grey-collar occupations in the latter. The census data employed here does not differentiate the extremes of prestige and socio-economic status enjoyed by farmers (the decile scales as they are constructed cannot show this either) and it is contended that outflow charts of occupational mobility based on the CASS Rank Order will be most instructive in the analysis of the effects of this group on the occupational structure (among Whites) as it has evolved over the last three generations. At a later date when we have studied the socio-economic distribution among farmers more closely we will be able to determine whether the findings on an outflow chart can be fitted deductively to the circumstances of farmers themselves - i.e., which farms produce which type of occupational migrant to the city.

In the rank order below farmers we deal first with a block which is designated as manual foremen and skilled artisans. This includes the groupings manual foreman and high craft, and the artisans/crafstmen in both manufacturing and construction. We leave the order of ranking unchanged as at Table 5.1 because in purely prestige terms (Table 5.4) and in our other distributions, this is indicated as shown at Table 5.7.

TABLE 5.7

MANUAL FOREMAN AND SKILLED ARTISANS: COMPARATIVE RANKS FROM CENSUS; CASS SURVEY AND MOS SURVEY (TABLES 5.1-3)

Occupational Group Ranked High to Low in Descending Order		
Population Census	CASS Survey	MOS Survey
Manual Foreman and High Craft	Manual Foreman and High craft	Manual Foreman and High Craft
Artisan/Craft (Manufacturing and Other)	Artisan/Craft (Manufacturing and Other)	Artisan/Craft (Manufacturing and Other)
Artisan/Craft (Construction)	Artisan/Craft (Construction)	[Artisan/Craft (Construction - No Sample Panel Cases]

BLOCK 5.7

DEFINITIVE CASS RANK ORDER

R	
14	Manual Foreman and High Craft
15	Artisan/Craft (Manufacturing and Other)
16	Artisan/Craft (Construction)

The rankings are, however, made on the basis of a narrow interval of the socio-economic index scale where either end does not exclude the immediately contiguous groupings in the adjacent blocks of occupations in a conclusive manner. This, the largest block of workers in the distribution (26,7%) constitutes a tight fit between farmers (dealt with above and not repeated here) and routine non-manual workers who, over both routine groupings, show an index value which equals that of artisans in construction (indeed one group of routine workers scores higher on the index scale). The argument for placing artisans in construction above routine non-manual workers will be taken up below when we discuss our particular classification of blocks at the lower end of the socio-economic index scale. Although only eight index units separate these three groupings in the foreman and skilled artisan block, the distribution within each (sizable) group on the population decile scale (Table 4.5) differentiates them substantially. Most manual foremen and

high craft workers are to be found at the sixth and fifth decile; artisans in manufacturing spread for 86% of their number from the sixth to the third decile; and a small majority of artisans in construction occur at the second decile level.

Manual foremen have been included in an essentially artisan/manual/blue-collar block of occupations because despite the non-manual connotation of the job it is assumed that the route or passage to this status is achieved via manual occupations. A further reason for differentiating artisans in construction from indexed equivalent non-manual workers is that it can be assumed that skilled construction workers can more easily move to manufacturing and that some will eventually move to foreman positions without undue effort. On the other hand it would appear plausible to suggest that routine non-manual workers are somewhat isolated from ready avenues of upward mobility and would, if they moved, have to move some distance to reach the bottom of the middle white-collar occupational block assuming no training to enter skilled manual occupations. This is a moot point, however, because it only goes some way to anticipate intra-generational mobility and says nothing concerning the chances of workers in the inter-generational phases.

We move now into the final leg of justifying and rationalising a rank order of occupational groupings. So far we have settled five of the problems set earlier and this last section will complete the task of presenting a collapsed version of the rank-ordered occupational grouping scale. We have yet to adequately argue the differences in rank between some artisans and some routine non-manual workers and the unexpected difference between the routine non-manual groups. The final block of occupational groupings includes two groups of routine non-manual occupations and semi-skilled manual workers: unskilled manual workers can be tagged on here for convenience sake as they undoubtedly fill the bottom occupational rank but normally they would consist of an exclusive group on their own. The question of the within occupational block ranking of groups cannot be decisively settled. The rank order of occupational groups in the MOS sample panel includes only one of the four groups in this lowest block of occupations. Table 5.8 describes the available rankings for the final block of occupational groups which

is referred to as routine non-manual and semi-skilled manual occupations.

TABLE 5.8

ROUTINE NON-MANUAL AND SEMI-SKILLED MANUAL COMPARATIVE RANKS FROM CENSUS; CASS SURVEY AND PRESTIGE RATINGS OF 97 OCCUPATIONAL TITLES (TABLES 5.1, 5.2 AND 5.4)

Occupational Group Ranked High to Low in Descending Order		
Population Census	CASS Survey	Prestige Rating
Lower Routine Non-Manual	Lower Routine Non-Manual	Routine Non-Manual
Routine Non-Manual	Routine Non-manual	Semi-skilled Manaul
Semi-skilled Manual	Artisan/Craft (Construction)	Lower Routine Non-Manual
Unskilled Manual	Semi-skilled Manual	Unskilled Manual
	Unskilled Manual	

The evidence is inconclusive: the CASS Survey material confirms the order of the rankings of the CASS occupational groupings in this block but places all routine non-manual workers above artisans in construction which we have already consigned to a rank above routine non-manual (indicating the very narrow range of socio-economic difference at this lower level of the scale); the prestige rating of 97 occupations shows a ranking between non-manual groups that is intuitively more acceptable but intersperses semi-skilled manual workers between the two. Our decisions here must of necessity be *ad hoc*. We are the prey of an interval of 5 units on the scale of the socio-economic index which corresponds with the placing of four occupational Groups: lower routine non-manual (15); artisan/craft (construction) (14); routine non-manual (13); and semi-skilled manual (11). One solution is to combine the routine non-manual groups (14) and argue that as they are functionally separate from skilled manual work, which combined would have a higher score on the scale (14 and 18), they can be ranked lower overall. The notion of combining the routine non-manual groups is a way out of our dilemma, but the reason for doing so is probably more complex than the one given above.

If we return to the decile scales of occupations and population in Chapter 4 we can observe a similar effect in both distributions: i.e., that taken together the routine non-manual groups in point of fact tend to break down into three groupings. The effect seems to be similar to the one allowed for by Goldthorpe and Hope (*loc.cit.*) when they consign service workers (i.e., routine non-manual workers) to three occupational groups:

p.139	(Rank 25)	Service Workers: Higher Grade (Cooks, Stewards, Hairdressers)
p.140	(Rank 28)	Service Workers: Intermediate Grade (Shop Salesmen and Assistants)
p.142	(Rank 34)	Service Workers: Lower Grade (Caretakers, Doormen, Guards and Attendants, Telephone Operators, Waiters, Barmen and Counter Hands).

The CASS occupational decile scale does not show as clear a picture as the population decile scale (and neither show as clear a picture as suggested above) but in the former we can discern a small number of occupations at the eighth and seventh decile; a large number of occupations in the lower routine non-manual group at the sixth decile (most of which describe the title "shop assistant") and a large group at the lower end of the scale. Three levels are more clearly delineated when the population decile scale is scrutinised: taking both distributions of the routine non-manual groups we find that a small "higher grade" of worker (in decile distribution terms) at the seventh and sixth deciles is distinctly demarcated from an "intermediate grade" at the fourth and third deciles which in turn are distinguishable from a "lower grade" concentrated more in the first than in the second decile level. Taken together the routine non-manual occupational groups represent 11,6% of the economically active White male population. It is possible, therefore, to regroup occupational titles into three categories though the higher grade service or routine non-manual group is likely to be small. For our own purposes of studying occupational mobility this is not feasible as the coded groups have already been determined. For the researcher in stratification in general such a breakdown will only be useful if particular emphasis on lower order occupations is desired: the small intervals of the scale of the

socio-economic index at the lower levels of the rank order are not generally amenable to fine distinctions.

The decision is, therefore, (for our purpose at hand) to combine lower routine non-manual and routine non-manual occupations as one occupational grouping and on the strength of the scale of the index for occupational groupings to place routine non-manual occupations in a rank above semi-skilled manual occupations. Block 5.8 describes formally the last section of the rank order of occupational groupings in this chapter.

BLOCK 5.8

DEFINITIVE CASS RANK ORDER

R	
17	Routine Non-manual
18	Semi-skilled Manual
19	Unskilled Manual

The question of the relative ranking of routine non-manual and artisan (construction) occupations (given that there is some virtue in ranking artisans in construction closer to artisans in manufacturing, all things being equal) can be partially resolved by recourse, once again, to the population decile scale at Chapter 4. The comparative range of the routine non-manual and artisans in construction occupations on this scale is different by only one decile level, though the distributions on the scale are very different indeed. There are more routine non-manual workers at the lower intermediate level of the scale than artisans in construction but the former show far more of their workers (in both groups) at the lowest first decile level than among the latter group. The decile distribution of occupational titles shows a similar effect with no artisans in construction falling at the first decile and a substantial number of routine non-manual occupations falling at this level in common with semi-skilled manual workers (leaving aside unskilled workers). We feel justified, therefore, to assign artisans in construction to a rank just above routine non-manual workers although they fall at the same level of the socio-economic index scale. Unskilled

manual workers clearly fall in the last rank of the occupational order both in terms of their low index value and their consistent placing in the lowest level of both occupational and population decile scales.

Table 5.9 sets out formally the rank order of CASS occupational groupings which will constitute the orienting criterion of the occupational structure within which we will attempt to measure intra- and inter-generational occupational mobility and to account in some measure for the independent influences on the process revealed in our findings. At the present time we can do no more than remark some of the features of the apparent and formalised occupational structure among economically active White males in South Africa extracted from census material as at 1960. If we look to Table 5.9 and the way we have collapsed the scale of occupational groupings in the course of this chapter portrayed at Table 5.10, the broad nature of the stratification of occupations, among Whites at any rate, is easily discernable. The professional and managerial group is clearly at the apex of stratified groups of occupations though the range of the stratification criterion is large and the distribution of the group tends to be bimodal with established professional and higher managerial occupations in the upper range and semi-professional and lower executive and administrative occupations at the lower end of the range. The percentage of the labour force in these groupings (17,3%) probably reflect a modern tendency in this part of the occupational structure as it compares very closely with the corresponding American category at 17,2% (Reiss, 1961: 155, Table VII-4) (the source of comparison below). In the middle white-collar group salesworkers supersede clerical workers in rank and obviously on the index scale which is also reflected in the American structure. It might be noted that the only indications we have of 'ownership occupations' fall at this secondary level and not at the top of the stratification distribution.

TABLE 5.9

RANK ORDER OF CASS OCCUPATIONAL GROUPINGS: A CRITERION FOR MEASUREMENT OF OCCUPATIONAL MOBILITY AMONG WHITES IN SOUTH AFRICA

Rank Order	CASS Occupational Group	Socio-Economic Index
1	Professional (Higher Professional including Headmasters and Academics)	75
2	High Managerial, Executive and Administrative (Large Public and Private Firms)	72⊕
3	Salaried Lower Professional (Magistrates, Prosecutors, Social Workers, Salaried Accountants and Auditors, Teachers Scientists and Research in Organisations, etc.)	70
4	Semi-professional (Nurses, Therapists, Advanced Technical, Draughtsmen, Specialised Non-craft associated with Professional, Computer Programmers, Research Assistants, etc.)	52
5	Lower Executive and Administrative (Including Lower Managerial all in Large Public and Private Firms)	49⊖
6	Production Managers, Technical Executives, Works' Foremen, Inspectors	46
7	Representatives, Agents and Salesmen	46
8	Owners and Executives (Small Commerce and Service)	42⊖
9	Owners and Executives (Small Technical)	41⊕
10	Senior Clerical	38
11	Less Senior Clerical	36
12	Working Proprietor (Small Commerce and Service)	34
13	Farmers (Excepting very large operators - see text)	22
14	Manual Foreman and High Craft (For example: Toolmaker)	22
15	Artisan/Craft (Manufacturing and Other)	18
16	Artisan/Craft (Construction)	14
17	Routine Non-manual	14
18	Semi-skilled Manual	11
19	Unskilled Manual	3

⊕ Values of the socio-economic index crudely interpolated.
⊖ Original value ascribed to combined group now ranked 2 and 5 respectively.

TABLE 5.10

BROAD CATEGORIES OF THE OCCUPATIONAL STRUCTURE

Broad Occupational Categories	Ranks.	Crude Intervals of X_1	%
Professional and Managerial	1-5	75-49	17,3
Middle White-Collar	6-12	46-34	21,1
Farmer	13	22	12,6
Manual Foreman and Skilled Artisans	14-16	22-14	26,7
Routine Non-Manual and Semi-Skilled Manual	17-18	14-11	19,9
Unskilled Manual	19	3	2,1
			99,7

There are approximately the same proportion of White farmers and farm-associated workers (excluding labourers) in South Africa as there are in the United States, but whereas farmers in South Africa enjoy very high occupational prestige and a tertiary placing in the socio-economic occupational distribution, American farmers are ranked near the bottom of the occupational scale. The patterns of mobility as regards rural to urban migration in the former case, as remarked earlier, will be radically different in direction compared with the patterns shown in Blau's and Duncan's work in the United States. The conception of a manual/non-manual distinction in the stratification of occupations is clearly not tenable among South African Whites which is true of most developed economies. Skilled manual workers are in general ranked above routine non-manual or service workers who in turn rank above semi-skilled manual or operative type occupations. It is, however, wise to recall that the differences between manual and routine non-manual occupations are small and that movement from one occupational group to another has a certain likelihood of being horizontal rather than vertical.

Unskilled manual workers comprise a very small proportion of economically active White males in South Africa (2,1%) which contrasts with approximately 12% of American labourers. The reason for this is

undoubtedly that Blacks in South Africa (not included in this distribution) perform these functions. It is, however, interesting to note that the other big discrepancy between the South African and American occupational structures occurs at the level of middle white-collar workers: comparing the two percentage distributions, 10% more South African Whites fall into this category (21,1) than do all workers in the United States (12,7); doubtless, an effect of occupational privilege among the White group in South Africa.

The presentation of a hierarchy of occupational groupings in Table 5.9 together with explanations of how the ranking was achieved accomplishes the stated aim of this chapter: that is, a substantive criterion for the measurement of the intra- and inter-generational occupational mobility among White males. Throughout the paper we have taken care to discriminate between the types of evidence and forms of argument employed at the various stages of our construction, to emphasise the restrictive conceptualisation of our measures and we have repeatedly stressed the nature of the population to which our findings refer. The critic must take these limitations into account when evaluating our presentation of prestige and socio-economic rank orders and he/she might, employing stringent standards of acceptance, claim that the application of this social science tool be limited to very specific status indicators in a very specific population. We should hardly disagree with such a stand as it is congruent with the qualifications to our own endeavours that have appeared throughout the paper. However, it should also be recognised that occupation, socio-economic factors and social status as they have appeared in a variety of societies in recent time manifest a consistent pattern (over a wide range of populations at different stages of economic development) with so little apparent variance that the inference must be one of commonality of social process articulating "modern" and "modernising" social entities. This raises the question of the meaning of an empirically substantiated rank order of occupational groupings first for stratification research in general and secondly, for the population in South Africa as a whole.

We may introduce the ensuing brief discussion on social stratification and population by stating and showing that empirical

determination of prestige among occupations has served merely to confirm in broad outline a considered "sociological judgemental" allocation of prestige among occupational groupings by CASS for the 1966/67 Survey; a fact which allows some satisfaction given that a part of the scientific enterprise is to provide refutable evidence for the confirmation or rejection of accepted wisdom. The conclusion to be drawn from the favourable comparison between the original order of the list of the CASS Survey Classification of Occupational Groupings (p.93) and the substantive Rank Order of CASS Occupational Groupings (Table 5.9) is the obvious one: that prestige of occupations (estimated by income and education variables) is so inextricably fused with social status in general that it can be regarded as an operational dependent variable of the stratification system which in its general impact is readily accessible to social scientists in the field. Hence the close fit between judgemental and empirically determined rank orders of occupational groupings (we return to the relationship between occupational prestige and social status below).

Nevertheless, the fit between judgement and empirical measure is not so close as to make the latter redundant (the judgemental order of the occupational classification was ranked at a time ten years from the present and in fact the order of groupings has been amended in the light of developments in the intervening period for research conducted by CASS). Predictably, both rank orders (judgemental and substantive) place professional and managerial occupational groupings above other occupations, the only difference in rank occurring between semi-professional and lower executive and administrative groupings where the latter falls below the former in the substantive order and not the other way around as in the judgemental listing. The comparison between the large block of middle white-collar occupational groupings is not as clear-cut: while the range of the ranks among the seven occupational groups in this block coincide (leaving aside farmers discussed below) the order of ranks is very different in each listing and this clarification among intermediately prestigious occupations justifies in large measure the very tedious procedure of empirical determination. Notably we show against judgemental rankings that occupational groups containing production managers and technical

executives etc., representatives, agents and salesmen appear higher in prestige ranking than at first expected and that owners and working proprietors are somewhat lower in the rank order on the empirical measure. The differentiation between senior and less senior clerical workers is narrower than anticipated.

White farmers are a special status group in South Africa which is reflected in our judgemental ranking of eighth in the occupational grouping order: but in pure prestige ranking terms we can be satisfied that different types of farmer (large and small farms) occupy very different prestige niches in the stratification system (see Tables 1.2 and 1.3). This range is reflected in the empirical data of the predictor variables (income and education) and the range of "prestige" qualifies this occupational group for a lower rank order than the "idealised conception of the successful farmer" would dictate. As mentioned earlier this is a very important finding for the measurement of occupational mobility given the history of rural to urban migration in South Africa.

At the lower end of the scale we have clarified the relative positions of the non-manual/manual occupations somewhat. Skilled manual occupations rank above non-manual occupations and semi-skilled manual (as well as unskilled manual) below non-manual occupations. The wide ranges of prestige within individual occupational titles among the various occupational groupings at this lower level require, however, that caution be exercised especially if close comparisons are contemplated (refined comparisons can be undertaken with the aid of the numerous tables showing the scale of the socio-economic index in this paper).

Notwithstanding some differences between judgemental and empirical determination of the rank order of the prestige of occupational groupings, the orders are sufficiently similar to make the point that prestige ratings of occupations reflect by and large evaluations of social status common to (White) society in South Africa. We can argue then that empirically determined scores of prestige of occupations can be accepted as indexes of social status or position within a system

of stratification. This connection (between occupations and social status) appears to be one of fairly common agreement among sociologists because occupation and measures of occupational prestige identifies or synthesises a number of other factors associated with social status, such as education, income (as our present study shows), life-style and community power, as well as the individual's or group's relationship to the means of production in the Marxian sense. Schlemmer (in the unpublished paper already referred to) deals at some length with theories of this relationship which will not be reflected here and we confine our treatment to a small selection of literature to make the point.

The list of authors who have accorded occupation a central place in the analysis of stratification is impressive. The following quotations represent typical arguments in this regard. Emile Durkheim (1947: 182) concluded that "In a general way, classes and castes probably have no other origin nor any other nature; they arise from the multitude of occupational organizations". Kahl and Davis (1955: 317-325), after conducting a factor analysis of all the variables commonly thought to relate to social and economic status were able to conclude that occupation was the one single index which could account most adequately for the total variance among all the selected factors. Runciman (1968: 25-61) argues that "to explain the distribution of occupations is largely to explain the social inequalities found in industrial societies ... Occupations are the mechanism by which the influences of natural endowment, upbringing and education are translated into differences of wealth, power, and prestige and the most significant moves which the individual can make in all three dimensions will be by means of a change from one occupation to another". Hodges (1964) claims that "Marketable skill and occupational talent are more and more the basic determinants of class placement. More than ever before, one's full-time occupational role and the skill with which he performs that role, determine a man's place in the socio-economic spectrum".

In the CASS Survey of 1966/67, prestige of occupations (the dependent variable in this paper) was one of a number of sociological indicators employed to illuminate social status differentiation among Whites in South Africa. Given then that occupation is inextricably

linked with the total stratification process which is suggested by the sources above as well as by favourable comparisons between judgements based on notions of social status and empirical determination of occupational prestige earlier, scaled measures estimating prestige ratings of occupational groupings appear as an index of social status in general. Given the weight of occupation among the elements making up social status (Kahl and Davis above) it seems safe to posit occupational prestige (the scale of the socio-economic index) both as an index of social status in general and as an operational dependent variable in particular. A simple way of saying this is that if you want to know a man's position in the stratification system, find out what his full-time occupations is; if you want to know how he achieved a certain position or social status in the society, discover how he came to occupy a particular occupation.

Finally we take up the issue of the scope of the sampling design and the consequent representation of our findings on occupational prestige and rank order of occupations and occupational groupings for the total population of South Africa. Clearly the issue of the general empirical and theoretical applicability of rank order of occupations based on a scale of the socio-economic index hangs on the fact that our work is based on a restricted urban, White sample in a population where at least four different communities can be identified and the sociological view, substantiated in many studies, that occupational prestige is a relatively constant cross cultural variable showing broad similarities among many different types of society at different stages of development which we commented on briefly at page four of this paper. Our argument will be that this study has a wider applicability than simply to the population from which the data was elicited; not without the reservation that this must be confirmed by empirical research if rank orders are to be used as a specific applied social science tool over the total population.

In spite of the inequitable share that Blacks (Africans, Coloureds and Indians) command in socio-economic and political spheres compared with Whites in South Africa, it is readily apparent that they participate (sometimes to a very high proportional degree) both

socially as well as occupationally in the developing urban industrialism of the country: that is, in a situation which has determined modern social status evaluations in most societies whether currently developed or not. Many Whites entered the urban community only during this century while many Coloureds have an urban tradition of much longer standing. The Indian community is currently the most urbanised group in the country. The bulk of unskilled manual workers in South Africa is African (though, of course, some have more prestigious occupations) and urban settlement together with a high incidence of labour migration to town has meant an increasing participation in industrial occupations. The ongoing prevalence of labour migration from rural areas ("homelands") is breaking down the dichotomous model of separate groups of rural and urban Africans and modern type aspirations are now not only widely held in African society but translated into experience if only at the bottom of the urban industrial ladder. If the rank order of occupational groupings derived from an urban White sample in South Africa accords with rank orders which have been found to be cross culturally and cross developmentally consistent elsewhere (which it does - see Chapter 4, pp.94-96), and non-sampled groups can be shown to be already participating in urban industrialism to a greater or lesser extent, then it can be anticipated that findings on occupational prestige, and by extension social status, can be generalised to a wider population than strict sampling design requires.

It is further likely that as the urban White community is the socially dominant one at present the status norms pertaining to occupations in this community will be the ones most readily accessible as a reference for other, subordinate, communities. This is not suggested as being in the same tradition as reference group theory (which has strong tones of legitimacy and emulation) whereby actors strive to become part of a group from which they are excluded, but rather as a known picture of what exists, especially in the occupational sphere, and what is possible, if mainly for Whites, under present political conditions. The reference is likely to be a community one where relative deprivation among different subordinate communities *vis-à-vis* the Whites portends the possibilities in the economic and political future.

In a recent work Schlemmer (1976) suggests that occupational mobility among Blacks, though remaining rigorously restricted, is an inevitable process in the face of shortages of White labour. Drawing from numerous sources Schlemmer (1976: 37-39) shows that patterns of (White) labour shortages will be accompanied by changes in the occupational structure, mostly at the semi-skilled and skilled manual level but not exclusively so, manifested as occupational advancement among other groups where the mobility will be differential favouring Indian and Coloured (in certain parts of the country) over African workers. While we concur with the conclusion expressed in this study that occupational advancement among Blacks will give rise to polarisation of political conflict between White and Black in the country (and not a process toward racial equality), the anticipated fact of upward occupational mobility lends something to the view that Blacks are increasingly being involved in the occupational structure in South Africa and therefore there is some likelihood that their perceptions of occupational prestige will be little different from consistent perceptions among other peoples including urban White South Africans.

This is not to suggest that the CASS rank order of occupational groupings can automatically be assumed in applied research among other groups in the country. Thinking particularly of Africans among Blacks, their occupational experience at the very bottom of the ladder in unskilled labour, lack of experience in commercial ownership and a background of subsistence farming incline one to be very cautious in anticipating perceptions of social status despite the reassurance to the contrary derived from the literature on this topic. In other words, while it might be safe to assume common perceptions among diverse groups of a simple model of occupational prestige (professional and managerial followed by other white-collar with subordinate manual) the embodiment of the order of ranks for a full range of occupational groupings can only be assessed by comparative research. It is essential that our contention that the rank order of occupational groupings presented in this paper has wider applicability than the population from which it was constructed be confirmed (and if refuted then reorganised to include the perceptions of all groups) if occupational mobility studies are to

be conducted for the total working population using a standard criterion of movement. Without comparative research on prestige ranking of occupations, occupational mobility studies, recently urged by Leonard Broom (1976) as a crucial tool for understanding the workings of South African society, will have to rely for their orientation either on a representatively curtailed study such as the present one or on data from the Population Census which we remarked on earlier in the paper and which is not always readily available or published in standard form for all "race groups".

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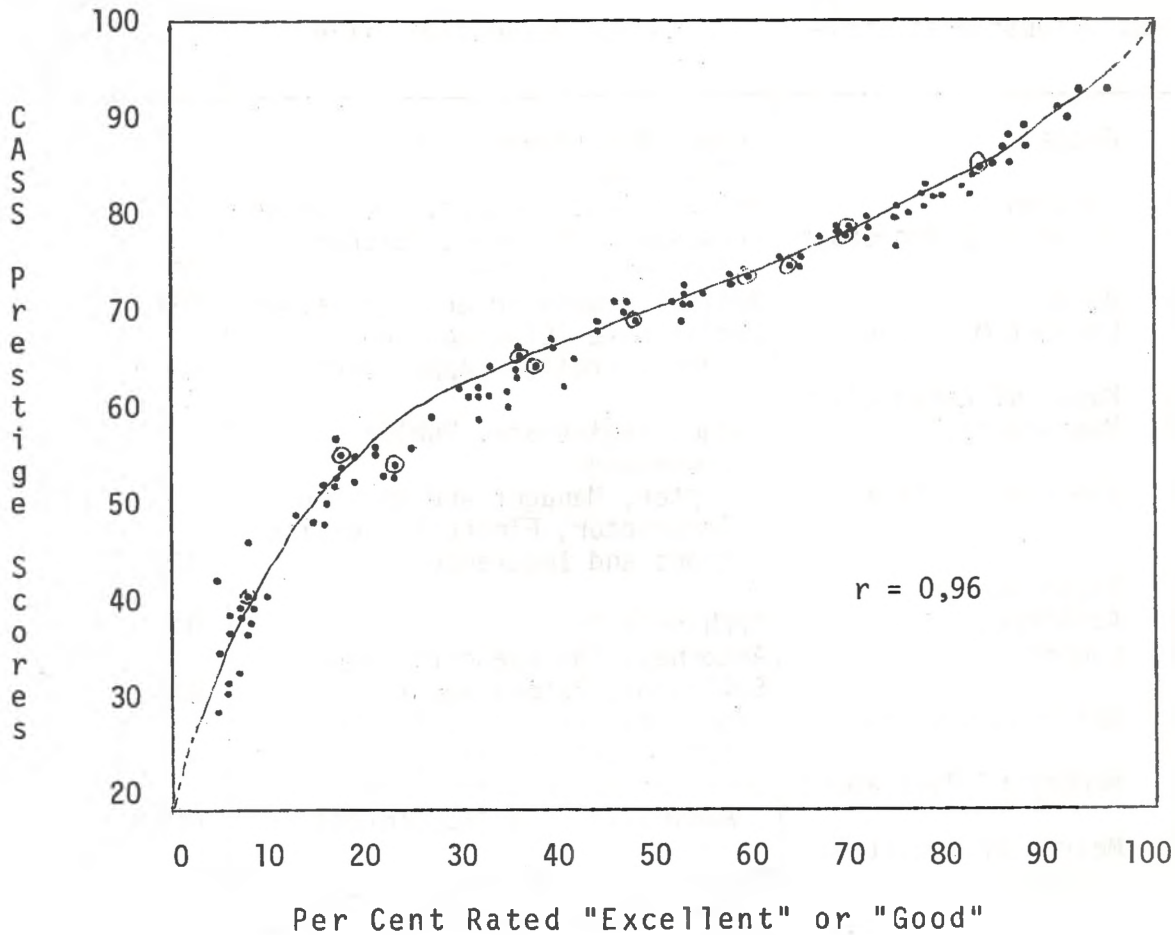
APPENDIX A

APPENDIX A.1



RELATION OF CASS PRESTIGE SCORE TO PER CENT "EXCELLENT" OR "GOOD" RATINGS FOR 114 OCCUPATIONAL TITLES IN THE CASS STUDY

APPENDIX A.2.1

POSSIBLE MATCHES BETWEEN CASS SURVEY OCCUPATIONAL TITLES AND CENSUS OCCUPATION CLASSIFICATION ON THE INCOME VARIABLE (SELECTED MATCHINGS SHOWN)

CASS Occupational Title	Census Occupation Title	Census Code	Matched Titles [X]
1 Judge	Judge, Magistrate, Public Prosecutor	070	
2 Surgeon	Medical Practitioner, Specialist	031	
3 University Professor	Professor, Lecturer, Teacher (University, etc.)	051	
4 Doctor	Medical Practitioner, Specialist	031	X
5 Cabinet Minister	Legislative (Elected) and Administrative (Appointed)	101-2	
6 Mayor of Large City			
7 Magistrate	Judge, Magistrate, Public Prosecutor	070	X
8 Chairman of Bank	Director, Manager and Working Proprietor, Financial Institutions and Insurance	124	
10 Psychologist			
10 Architect	Architect	001	X
10 Lawyer	Attorney, Conveyancer, Lawyer, Solicitor, Patent Agent	072	X
12 University Lecturer	Professor, Lecturer, Teacher (Universities, etc.)	051	X
13 Member of Parliament	Legislative (Elected) and Administrative (Appointed)	101-2	X
14 Matron of Hospital			
15 Engineer	Engineer: Civil, Mechanical, Electrical, Mine, Chemical	003-7	X
16 Dentist	Dentist	032	X
17 Chartered Accountant	Accountant (Chartered or Certificated), Auditor	090	X
18.5 Dominee	Clergyman, Priest (Predikant, Priester)	061	
18.5 Headmaster Boys' High School	Teacher, Inspector of Schools (Primary and Secondary Schools)	052	
20 Minister of Religion	Clergyman, Priest	061	X
21 Airline Pilot	Aircraft Pilot, Navigator and Flight Engineer	269	X
22 Headmaster Primary School	Teacher, Inspector of Schools (Primary and Secondary Schools)	052	
23 Owner of Big Factory			
24 Headmistress of Girls' High School			
25 Chemist	Chemist	015	X
26.5 Owner Big Dept Store			
26.5 Physiotherapist	Physiotherapist	043	X
28.5 City Treasurer, Big City			

APPENDIX A.2.1 Continued

CASS Occupational Title	Census Occupation Title	Census Code	Matched Titles X
28.5 Industrial Chemist			
30.5 Secretary, Head of Government Dept	Legislative (Elected) and Administrative (Appointed)	101-2	
32 High School Teacher	Teacher, Inspector of Schools (Primary and Secondary Schools)	052	X
33 Senior Admin. Officer, Municipal			
34 Manager, Farm Co-op			
35 Manager, Large Factory			
36 Farmer, Big Farm	Farmer	201	X
37.5 Indian Lawyer			
37.5 Town Clerk, Big City			
39 Manager, Big Department Store	Director, Manager: Wholesale and Retail Trade (Excluding Working Proprietor)	123	X
40 City Councillor			
41 Radio Announcer			
42 Social Worker	Social Welfare Worker	098	X
43 Opera Singer	Musician, Dancer, Singer	080	
44 Captain in Army			
45 Professional Golfer			
46 Nurse	Nurse and Nursing Aid	034	
47 Successful Actor	Actor (Theatrical, Music Hall)	079	
48.5 Health Inspector	Health and Food Inspector	037	X
48.5 Salesman in Business	Commercial Traveller	172	
50 Stockbroker	Stockbroker, Dealer in Shares	163	X
51 Bantu Minister			
52.5 Primary School Teacher	Teacher, Inspector of Schools (Primary and Secondary Schools)	052	
52.5 Diamond Cutter	Diamond Cutter and Polisher	423	X
54.5 Coloured Headmaster High School			
54.5 Draughtsman	Draughtsman	081	X
56 Building Contractor			
57 Commercial Artist	Commercial and Industrial Artist	076	X
58 Private Secretary			
59 Owner of Clothes Shop			
60 Air Hostess			
61 Reporter	Author, Journalist and Related Writer	078	X
62.5 Bantu High School Teacher			
62.5 Owner Small Engineering Workshop			
64 Secretary Trade Union			
65 Coloured High School Teacher			

APPENDIX A.2.1 Continued

CASS Occupational Title	Census Occupation Title	Census Code	Matched Titles X
66 Factory Foreman			
67 Bank Teller	Cashier, Teller	142	
68 Bookkeeper	Bookkeeper, Accountant (Not Chartered)	141	X
69 Apostolic Preacher	Religious Worker (Not Ordained)	063	
70 Chief Clerk in Office			
71 Dairy Technician			
72.5 Bank Clerk	Clerk	145	
72.5 Sergeant in Police	Policeman, Dectective (Public)	900	X
74 Electrician	Electrician, Construction, Motor Vehicles, etc.	511-14	X
75 Miss South Africa			
76 Mechanic	Mechanic (So Stated)	454	X
77 Estate Agent	Estate Agent	162	X
78 Typist	Stenograhper, Typist	143	
79 Cafe Owner			
80 Insurance Agent	Insurance Agent	161	X
81.5 Location Superintendent			
81.5 Hairdresser Female			
83 Train Driver	Driver and Fireman, Railway Engine	270	X
84 Clerk in Office	Clerk	145	X
85 Farmer with Small Farm	Farmer	201	
86 Supervisor of Building			
87 Bantu Foreman			
88 Bantu Policeman			
89.5 Motor Car Salesman			
89.5 Undertaker	Undertaker	972	X
91 Plumber	Plumber, Drainlayer, Pipe Fitter	463	X
92 Police Constable	Policeman, Detective (Public)		
93 Carpenter	Carpenter, Joiner, etc.	531	X
94 Miner	Miner (Stoper, Developer, Shaft Sinker, etc.)	242	X
95 Switchboard Operator			
96 Machine Operator (Factory)	Operator of Stationary Engines and Related Equipment	801	
97 Bricklayer	Bricklayer	558	X
98 Storeman			
99 Shop Assistant	Shop Assistant (Wholesale and Retail Trade)	191	X
100.5 Bulldozer Driver	Road-Grader/Scraper/Roller Operator	831	X
100.5 Bantu Carpenter			
102 Meter Reader			

APPENDIX A.2.1 Continued

CASS Occupational Title	Census Occupation Title	Census Code	Matched Titles [X]
103 Portuguese Market Gardener	Market Gardener	202	X
104 Barman	Barman, Head Barman	942	X
105 Truck Driver	Lorry, Van, Bus, Truck Driver, Tractor Driver (Not Farm)	282	X
106 Bus Conductor	Conductor (Bus and Tram)	321	X
107.5 Postman	Postman	311	X
107.5 Indian Waiter			
109 Taxi Driver	Taxi Driver	281	X
110 Bantu Truck Driver			
111 Railway Labourer	Labourer in Transport and Storage	885	X
112 Roadworker	Labourer in Transport and Storage	885	
113 Lift Operator,	Lift Attendant	322	X
114 Petrol Station Attendant	Petrol Filling Station Attendant	195	X

APPENDIX A.2.2

POSSIBLE MATCHES BETWEEN CASS SURVEY OCCUPATIONAL TITLES AND CENSUS OCCUPATION CLASSIFICATION ON THE EDUCATION VARIABLE
(SELECTED MATCHINGS SHOWN)

CASS Occupational Title	Census Occupation Title	Census Code	Matched Titles [X]
1 Judge	Jurist (Advocate, etc.)	070-74	
2 Surgeon	Medical Practitioner, Dentist, etc.	031-32	
3 University Professor	Professor, Teacher, etc.	051-54	
4 Doctor	Medical Practitioner, Dentist, etc.	031-32	X
5 Cabinet Minister	Public Administrative Officer	101-02 } 110 }	
6 Mayor of Large City			
7 Magistrate	Jurist (Advocate, etc.)	070-74	X
8 Chairman of Bank	Managerial Worker	120-31	
10 Psychologist			
10 Architect	Architect, Quantity Surveyor	001-02	X
10 Lawyer	Jurist (Advocate, etc.)	070-74	X
12 University Lecturer	Professor, Teacher, etc.	051-54	X
13 Member of Parliament	Public Administrative Officer	101-02 } 110 }	X
14 Matron of Hospital			
15 Engineer	Engineer: Civil, Mechanical, etc.	003-08	X
16 Dentist	Medical Practitioner, Dentist, etc.	031-32	X
17 Chartered Accountant	Chartered Accountant, etc.	090-91	X
18.5 Dominee	Other: Minister, Missionary, Journalist, etc.	061-63) 075-80) 092-99)	
18.5 Headmaster, Boys' High School	Professor, Teacher, etc	051-54	
20 Minister of Religion	Other: Minister, Missionary, Journalist, etc.	061-63) 075-80) 092-99)	X
21 Airline Pilot	Airline Pilot, Navigator, etc.	265-66) 269 }	X
22 Headmaster Primary School	Professor, Teacher, etc.	051-54	
23 Owner of Big Factory			
24 Headmistress of Girls' High School			
25 Chemist	Chemist, Physicist, etc.	015-18	X
26.5 Owner Big Department Store			
26.5 Physiotherapist	Medical Auxillaries (Pharmacist, Optometrist, etc.)	040-47	X
28.5 City Treasurer, Big City			

APPENDIX A.2.2 Continued

CASS Occupational Title	Census Occupation Title	Census Code	Matched Titles [X]
28.5 Industrial Chemist			
30.5 Captain in Air Force			
30.5 Secretary, Head of Government Dept	Public Administrative Officer	101-02) 110)	
32 High School Teacher	Professor, Teacher, etc.	051-54	X
33 Senior Administrative Officer, Municipal			
34 Manager Farm Co-op			
35 Manager Large Factory			
36 Farmer, Big Farm	Farmer, Market Gardener, etc.	201-11	X
37.5 Indian Lawyer			
37.5 Town Clerk, Big City			
39 Manager, Big Dept Store	Managerial Worker	120-31	X
40 City Councillor			
41 Radio Announcer			
42 Social Worker	Other: Minister, Missionary, Journalist, etc.	061-63) 075-80) 092-99)	X
43 Opera Singer	Other: Minister, Missionary, Journalist, etc.	061-63) 075-80) 092-99)	
44 Captain in Army			
45 Professional Golfer			
46 Nurse	Nurse, Midwife, etc.	034-36	
47 Successful Actor	Other: Minister, Missionary, Journalist, etc.	061-63) 075-80) 092-99)	
48.5 Health Inspector	Other Medical Services	033) 037-39) 048-49)	X
48.5 Salesman in Business	Other: Commercial Traveller, Pedlar, etc.	171-72) 192-96)	
50 Stockbroker	Insurance and Estate Agents, etc.	161-67	X
51 Bantu Minister			
52.5 Primary School Teacher	Professor, Teacher, etc.	051-54	
52.5 Diamond Cutter	Precision Instrument Maker, etc.	420-26	X
54.5 Coloured Headmaster High School			
54.5 Draughtsman	Draughtsman, Technician, etc.	081-85	X
56 Building Contractor			
57 Commercial Artist	Other: Minister, Missionary, Journalist, etc.	061-63) 075-80) 092-99)	
58 Private Secretary			
59 Owner of Clothes Shop			
60 Airhostess			

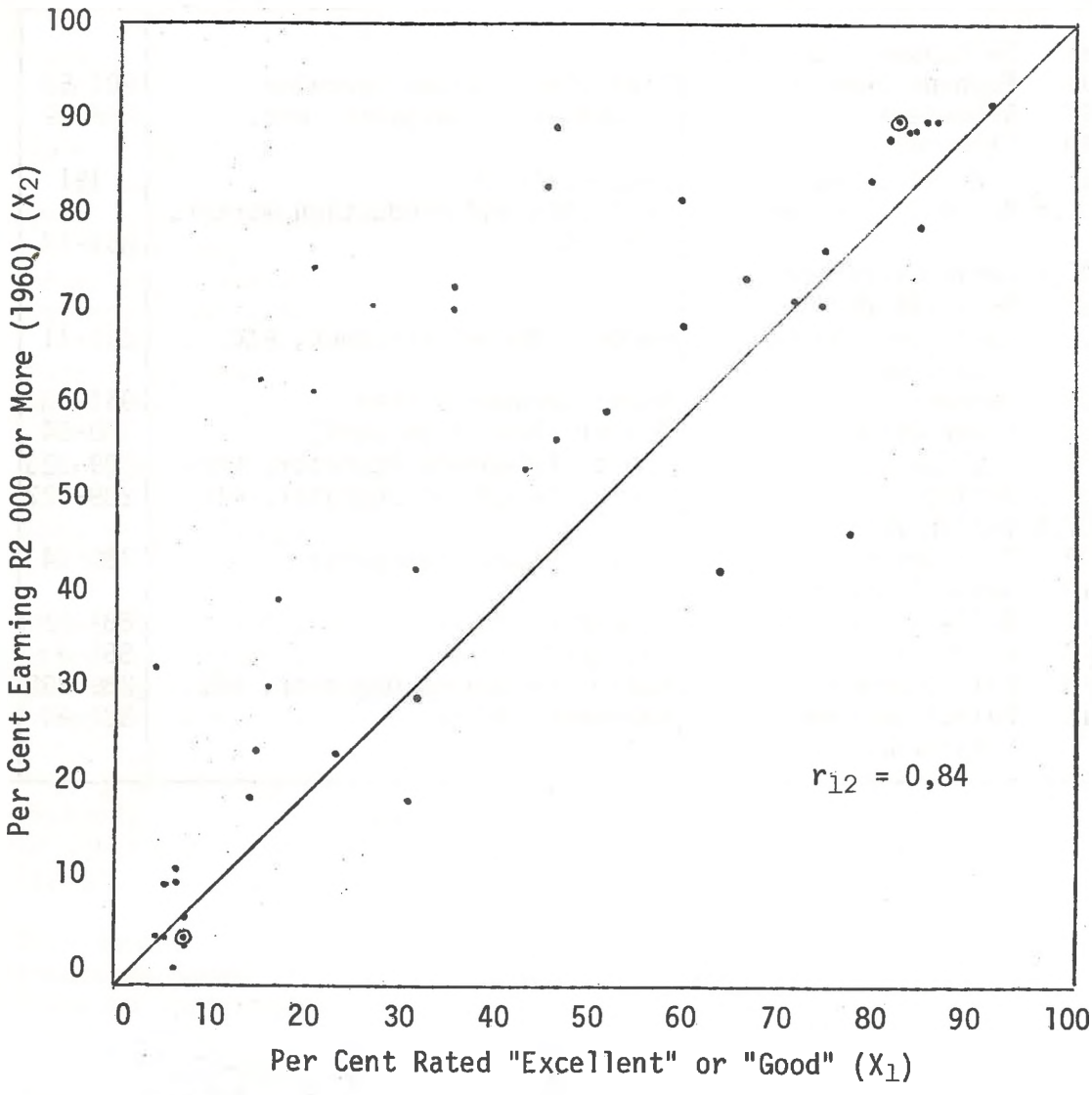
APPENDIX A.2.2 Continued

CASS Occupational Title	Census Occupation Title	Census Code	Matched Titles [X]
61 Reporter	Other: Minister, Missionary, Journalist, etc.	061-63) 075-80) 092-99)	X
62.5 Bantu High School Teacher			
62.5 Owner Small Engineering Workshop			
64 Secretary Trade Union			
65 Coloured High School Teacher			
66 Factory Foreman			
67 Bank Teller	Other: Cashier, Typist, etc.	141-44) 146-47)	
68 Bookkeeper	Other: Cashier, Typist, etc.	141-44) 146-47)	X
69 Apostolic Preacher	Other: Minister, Missionary, Journalist, etc.	061-63) 075-80) 092-99)	
70 Chief Clerk in Office			
71 Dairy Technician			
72.5 Bank Clerk	Clerk	145	
72.5 Sergeant in Police	Policeman, Fire Fighter, etc.	900-08	X
74 Electrician	Electrician, etc.	511-16	X
75 Miss South Africa			
76 Mechanic	Mechanic (Not Electrical)	451-55	X
77 Estate Agent	Insurance and Estate Agent, etc.	161-67	X
78 Typist	Other: Cashier, Typist, etc.	141-44) 146-47)	
79 Cafe Owner			
80 Insurance Agent	Insurance and Estate Agent, etc.	161-67	X
81.5 Location Superintendent			
81.5 Hairdresser Female			
83 Train Driver	Driver, Fireman (Railway)	270-71	X
84 Clerk in Office	Clerk	145	X
85 Farmer, Small Farm	Farmer, Market Gardener, etc.	201-11	X
86 Supervisor of Building			
87 Bantu Foreman			
88 Bantu Policeman			
89.5 Motor Car Salesman			
89.5 Undertaker	Other Service Worker	951-85	X
91 Plumber	Sheetmetal Worker, Plumber, etc.	461-64	X
92 Police Constable	Policeman, Fire Fighter, etc.	900-08	
93 Carpenter	Carpenter, Woodworker, etc.	531-42	X
94 Miner	Specialised Mining Occupation	242-47	X

APPENDIX A.2.2 Continued

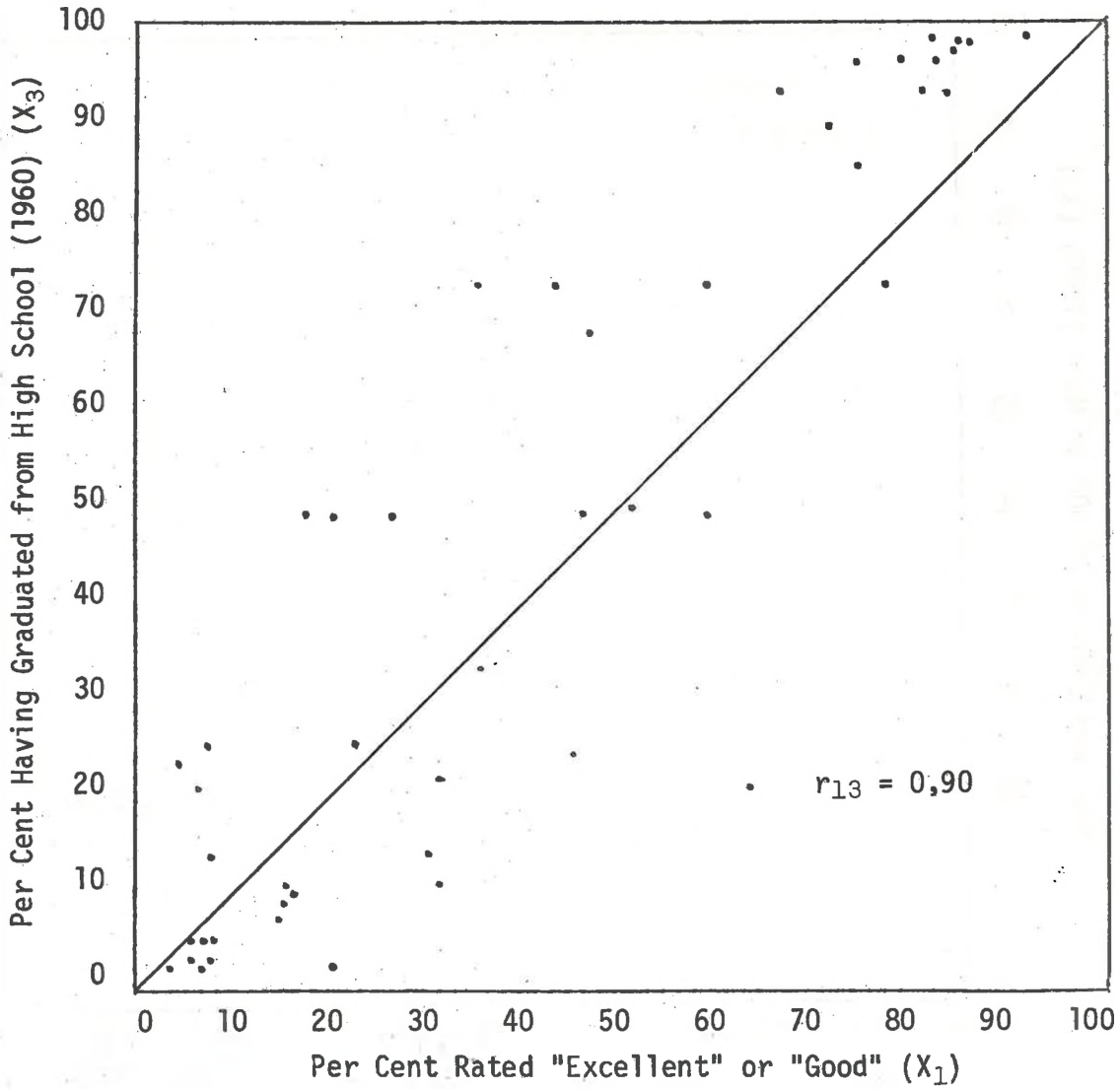
CASS Occupational Title	Census Occupation Title	Census Code	Matched Titles ☒
95 Switchboard Operator			
96 Machine Operator	Stationary Engine Operator	801-53	
97 Bricklayer	Bricklayer, Plasterer, etc.	558-69	X
98 Storeman			
99 Shop Assistant	Shop Assistant	191	X
100.5 Bulldozer Driver	Craftsman and Production Worker, N.E.C	861-73	X
100.5 Bantu Carpenter			
102 Meter Reader			
103 Portuguese Market Gardener	Farmer, Market Gardener, etc.	201-11	X
104 Barman	Other Service Worker	951-53	X
105 Truck Driver	Driver (Road Transport)	280-84	X
106 Bus Conductor	Guard, Telephone Operator, etc.	289-323	X
107.5 Postman	Guard, Telephone Operator, etc.	289-323	X
107.5 Indian Waiter			
109 Taxi Driver	Driver (Road Transport)	280-84	X
110 Bantu Truck Driver			
111 Railway Labourer	Labourer: Other	881-91	X
112 Roadworker	Labourer: Other	881-91	
113 Lift Operator	Guard, Telephone Operator, etc.	289-232	X
114 Petrol Station Attendant	Labourer, Other	881-91	X

APPENDIX A.3.1



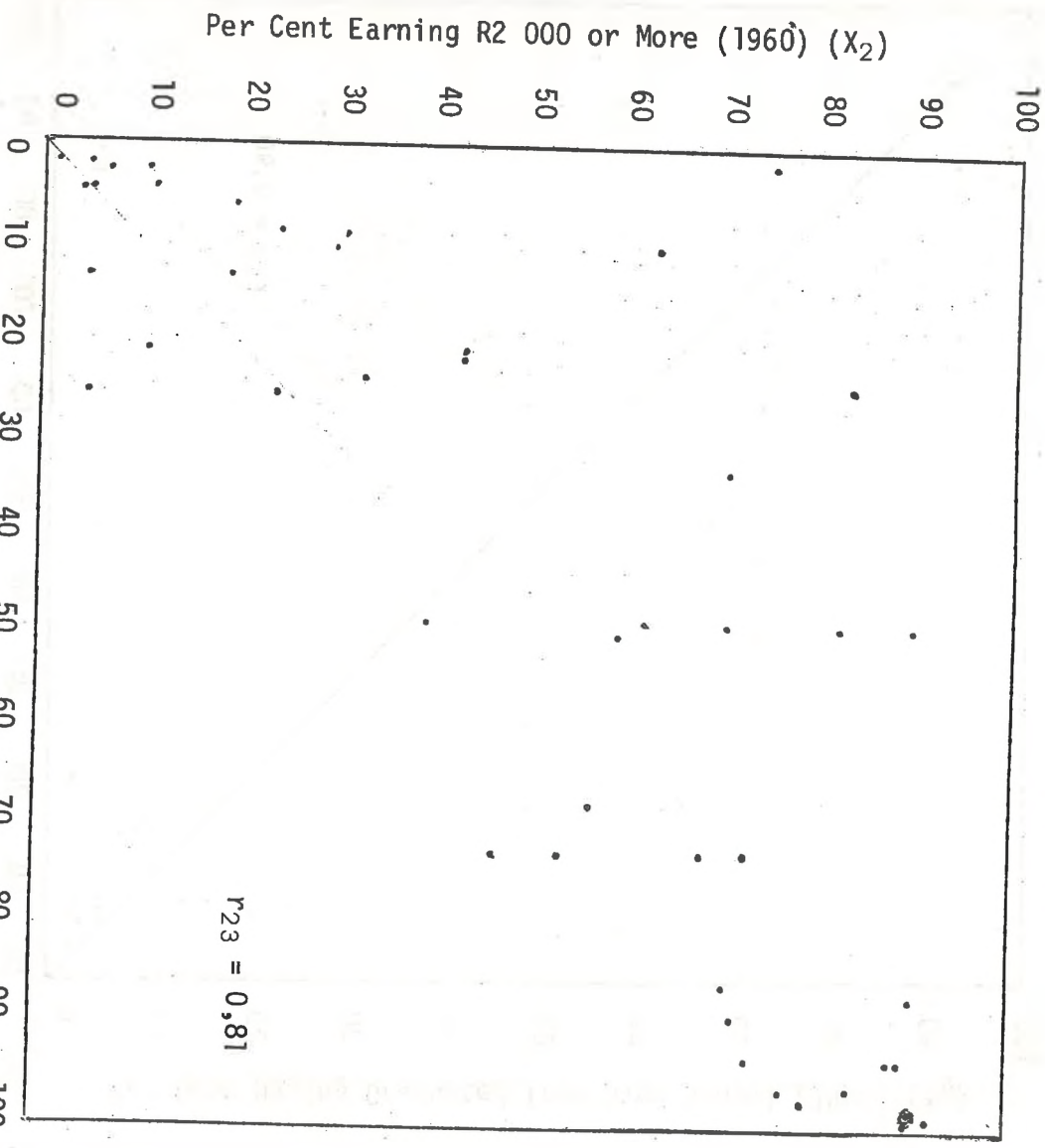
SCATTERGRAM SHOWING RELATIONSHIP BETWEEN PRESTIGE RATING AND INCOME ON 47 RELATED OCCUPATIONAL TITLES

APPENDIX A.3.2



SCATTERGRAM SHOWING RELATIONSHIP BETWEEN PRESTIGE RATING AND EDUCATION ON 47 MATCHED OCCUPATIONAL TITLES

APPENDIX A.3.3



SCATTERGRAM SHOWING RELATIONSHIP BETWEEN EDUCATION AND INCOME ON 47 MATCHED OCCUPATIONAL TITLES

APPENDIX A.4

ALTERNATIVE SOCIO-ECONOMIC INDEX FOR "ALL" OCCUPATIONAL TITLES AMONG THE ECONOMICALLY ACTIVE WHITE MALES IN SOUTH AFRICA CLASSIFIED IN THE POPULATION CENSUS 1960 (CLASSIFICATION DRAWN FROM THE EDUCATIONAL PREDICTOR VARIABLE)

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census, 1960: Vol.8, No.2 (A.3)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
Professional, Technical and Related Worker							
001 - 002 Architect, Quantity Surveyor	2 170	2 185	78	98	75	82	a
003 - 008 Engineer: Civil, Mechanical, etc.	7 498	7 490	89	94	76	82	a
010 - 012 Surveyor: Land, etc.	2 045	2 060	63	80	61	76	
015 - 018 Chemist, Physicist, etc.	2 221	2 224	79	97	75	82	a
021 - 027 Veterinarian, Biologist, etc.	1 325	1 336	69	90	68	79	
031 - 032 Medical Practitioner, Dentist, etc.	6 726	6 786	93	100	81	84	a
034 - 036 Nurse, Midwife, etc.	1 405	1 432	25	15	15	53	
040 - 047 Medical Auxilliaries	3 352	3 371	79	90	71	80	a
033 - 049 Other Medical Services	2 960	2 971	44	50	39	67	b
051— 054 Professor, Teacher, etc.	16 964	17 104	75	94	72	80	a
070 - 074 Jurist (Advocate, etc.)	4 784	4 814	83	99	77	83	a
081 - 085 Draughtsman, Technician, etc.	14 681	14 482	59	68	53	73	a
090 - 091 Chartered Accountant, etc.	6 039	6 084	70	97	72	80	a
061 - 099 Other: Minister, Missionary, Journalist, etc.	12 002	12 126	54	73	54	74	a,b
Administrative, Executive and Managerial Worker							
101 - 110 Public Administrative Officer	478	478	95	87	74	81	a,b
120 - 132 Managerial Worker	52 521	50 861	79	49	50	72	a
Clerical Worker							
145 Clerk	108 147	108 702	40	49	38	66	a
141 - 147 Other: Cashier, Typist, etc.	21 222	21 171	39	33	29	61	a,b

* For Notes, see p.166.

APPENDIX A.4 Continued

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census 1960: Vol.8, No.2 (A.3)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
Sales Worker							
160 Working Proprietor (Commerce)	18 010	16 979	61	29	34	64	
161 - 167 Insurance and Estate Agent, etc.	7 490	7 380	65	49	45	70	a
191 Shop Assistant	19 226	19 231	33	23	22	58	a
171 - 196 Other: Commercial Traveller, Pedlar, etc.	13 784	15 258	71	48	47	71	b
Farmer, Fisherman, Lumberman and Related Worker							
201 - 211 Farmer, Market Gardener, etc.	95 007	95 488	42	20	23	59	a
221 - 226 Farm Worker, etc.	9 953	12 873	6	15	9	45	
231 - 239 Other: Hunter, Fisherman	2 451	1 275	17	5	8	43	
Miner, Quarryman and Related Worker							
242 - 247 Specialised Mining Occupation	25 581	25 235	59	10	23	59	a
240 - 251 Other Mining Occupation	5 634	5 612	78	28	38	66	
Worker in Transport and Communications							
260 - 261 Deck Officer, Crew, etc.	2 092	2 131	32	21	21	58	
265 - 269 Aircraft Pilot, Navigator, etc.	607	611	71	86	66	78	a,b
270 - 271 Driver, Fireman (Railway)	10 863	11 113	45	1	14	52	a
280 - 284 Driver (Road Transport)	12 039	17 253	14	2	5	34	a
289 - 323 Other: Guard, Telephone Operator, etc.	31 394	31 868	24	4	9	45	a
Craftsman, Production Worker and Labourer N.E.C.							
331 - 339 Spinner, Weaver, etc.	697	669	41	17	21	58	
341 - 348 Tailor, Cutter, etc.	985	927	29	12	15	53	
350 - 361 Upholsterer, Textile Worker, etc.	1 704	1 705	26	6	11	48	
370 - 383 Shoemaker, Leather Worker, etc.	1 812	1 800	9	5	5	34	

APPENDIX A.4 Continued

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census 1960: Vol,8, No.2 (A.3)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
391 - 419 Furnaceman, Roller, Moulder, etc.	9 285	9 409	38	5	14	52	b
420 - 426 Precision Instrument Maker, etc.	2 788	2 678	57	24	30	62	a
431 - 443 Fitter and Turner, Toolmaker, etc.	34 212	34 163	44	14	21	58	
451 - 455 Mechanic (Not Electrical)	26 246	26 550	27	10	13	51	a
461 - 464 Sheetmetal Worker, Plumber, etc.	7 906	8 050	32	9	14	52	a
471 - 504 Welder and Other Metal Worker	14 912	15 094	42	7	16	54	b
511 - 516 Electrician, etc.	22 485	22 605	40	21	23	59	a
521 - 528 Mechanic (Radio, Household Appliances, etc.)	5 491	5 473	33	25	23	59	
531 - 542 Carpenter, Woodworker, etc.	21 341	21 384	23	8	11	48	a
550 - 555 Painter, Paperhanger, etc.	7 367	7 710	18	4	7	40	
558 - 569 Bricklayer, Plasterer, etc.	24 857	24 952	24	6	10	47	a
570 - 579 Compositer, etc.	6 762	6 705	45	20	24	59	
580 - 615 Glass and Clay Worker, etc.	1 038	1 040	33	9	15	53	b
620 - 623 Miller, Grinder, etc.	571	594	51	13	22	58	
631 - 635 Baker, Confectioner, etc.	1 131	1 116	36	11	7	55	
640 - 645 Brewer, Wine Maker, Mineral Water Maker, etc.	367	360	39	27	26	60	
650 - 676 Other Worker in Food	1 664	1 676	21	7	10	47	b
680 - 702 Chemical Worker	2 853	2 848	28	11	14	52	b
704 - 709 Tobacco Worker	138	160	18	17	14	52	
795 - 796 Packer and Labeller	167	167	10	7	6	36	
801 - 853 Stationary Engine Operator, etc.	15 432	15 503	24	4	9	45	b
710 - 873 Craftsmen and Production Workers N.E.C.	21 270	22 096	37	13	18	56	b
880 - 891 Labourer: Other and Mining and Quarrying	12 648	12 651	1(0,9)	1(0,7)	1	21	b,c

Population Census Occupational Title (Census Code Number Provided for Easy Reference) by Major Category Population Census, 1960: Vol.8, No.2 (A.3)	N Income Variable 1)	N Education Variable 2)	X_2 3)	X_3 4)	$\hat{X}_1$ 5)	T 6)	Notes*
Service, Sports and Recreation Worker							
900 - 908 Policeman, Fire Fighter, etc.	20 116	21 153	20	13	13	51	a
911 - 919 Caretaker, Cleaner, etc.	4 935	4 763	8	6	5	34	
921 - 942 Housekeeper, Domestic Servant, etc.	5 053	5 055	9	9	7	40	
951 - 985 Other Service Worker	10 851	10 855	25	25	20	57	

1) Total White males "in broad occupational categories" excluding categories of "no income" and "unspecified".

2) Total White males "in broad occupational categories" excluding "no standard" and "unspecified".

3) Per cent of males with incomes of R2 000 or more (not adjusted for age).

4) Per cent of males having graduated from high school (excluding "diploma with Standard 9 or less").

5) Socio-economic index.

6) Transform to CASS Prestige Scale (prestige scores).

*a) One, or one of a group, of 47 occupational titles used in deriving the socio-economic index from predictors of the CASS prestige ratings (see Tables 2.1, 2.2 and 2.3).

b) Census code numbering collapsed to include first and last code entry only.

c) Two occupational title classifications combined.

APPENDIX B

APPENDIX B.1

MEAN PRESTIGE RATINGS (PERCENTAGE "EXCELLENT" AND "GOOD" RATINGS ON THE CASS PRESTIGE SCALE) OF 97 CASS OCCUPATIONAL TITLES GROUPED TO CORRESPOND WITH CASS OCCUPATIONAL GROUPINGS SHOWING REPRESENTATION OF DETAILED TITLES WITHIN EACH GROUPING ACCORDING TO MATCHING WITH CENSUS OCCUPATIONAL TITLES

CASS Categories of Occupations by Occupational Title	CASS Prestige Rating (All Occupations)	Census Income Rating (Matched Occupations)	Census Educational Rating (Matched Occupations)
Professional (Including Headmasters, Academics)			
Judge	93		
Surgeon	96		
University Professor	91		
Doctor	92	93	100
Psychologist	83		
Architect	84	80	98
Lawyer	86	91	99
University Lecturer	83	90	94
Engineer	81	89	94
Dentist	82	91	100
Chartered Accountant	79	85	97
Dominee	77		
Headmaster, Boys' High School	78		
Minister of Religion	77	47	73
Headmaster, Primary School	74		
Mean Prestige Rating	84		
High Administrative, Executive and Managerial (Large Public and Private Firms)			
Cabinet Minister	87		
Mayor of Large City	86		
Chairman of a Bank	88		
Member of Parliament	82	91	87
Owner of Big Factory	71		
Owner of Big Department Store	69		
City Treasurer, Big City	69		
Secretary, Head Govt. Dept.	68		
Manager, Farm Co-operative	64		
Manager, Large Factory	62		
Town Clerk, Big City	64		
Manager, Big Department Store	59	83	49
City Councillor	59		
Stockbroker	46	90	49
Mean Prestige Rating	70		

APPENDIX B.1 Continued

CASS Categories of Occupations by Occupational Title	CASS Prestige Rating (All Occupations)	Census Income Rating (Matched Occupations)	Census Educational Rating (Matched Occupations)
Salaried Lower Professional			
Magistrate	85	91	99
Chemist	74	77	97
Industrial Chemist	71		
High School Teacher	66	74	94
Radio Announcer	57		
Social Worker	59	69	73
Opera Singer	58		
Primary School Teacher	47		
Mean Prestige Rating	65		
Lower Administrative, Executive and Managerial (Large Public and Private Firms)			
Captain, Air Force	69		
Senior Administrative Officer, Municipality	69		
Captain, Army	57		
Secretary, Trade Union	37		
Chief Clerk in an Office	29		
Sales Manager in a Business	52		
Mean Prestige Rating	52		
Semi-Professional			
Airline Pilot	74	71	86
Physiotherapist	71	72	90
Successful Actor	52		
Draughtsman	46	57	68
Commercial Artist	43	54	73
Reporter	35	73	73
Apostolic Preacher	40		
Professional Golfer	52		
Mean Prestige Rating	52		

APPENDIX B.1 Continued

CASS Categories of Occupations by Occupational Title	CASS Prestige Rating (All Occupations)	Census Income Rating (Matched Occupations)	Census Educational Rating (Matched Occupations)
Owners and Executives (Small Commerce, Service and Technical)			
Building Contractor	43		
Owner, Clothing Shop	39		
Owner, Small Technical Workshop	35		
Mean Prestige Rating	40		
Farmer			
Farmer, Big Farm	63	43	20
Farmer with Small Farm	17		
Mean Prestige Rating	40		
Production Managers, Technical Executives, Works' Foremen, Inspectors			
Health Inspector	51	60	50
Sergeant in Police	30	19	13
Location Superintendent	18		
Mean Prestige Rating	33		
Senior Clerical			
Bank Teller	32		
Bookkeeper	35	71	33
Mean Prestige Rating	34		
Working Proprietor (Small Commerce and Services)			
Cafe Owner	24		
Portuguese Market Gardener	6	10	20
Mean Prestige Rating	15		

APPENDIX B.1 Continued

CASS Categories of Occupations by Occupational Title	CASS Prestige Rating (All Occupations)	Census Income Rating (Matched Occupations)	Census Educational Rating (Matched Occupations)
Representatives, Agents, Salesmen, etc.			
Estate Agent	26	71	49
Insurance Agent	20	62	49
Motor Car Salesman	16		
Undertaker	22	24	25
'Mean Prestige Rating	21		
Less Senior Clerical			
Private Secretary	39		
Bank Clerk	32		
Clerk in an Office	17	40	49
Mean Prestige Rating	29		
Routine Non-Manual			
Supervisor of Building	22		
Police Constable	18		
Storeman	7		
Mean Prestige Rating	16		
Manual Foreman and High Craft			
Diamond Cutter	45	84	22
Factory Foreman	35		
Dairy Technician	31		
Mean Prestige Rating	37		
Artisans/Craft (Manufacturing and Construction)			
Miner	53	63	10
Electrician	31	43	21
Mechanic	31	30	10
Train Driver	20	75	1
Plumber	16	31	9
Carpenter	15	24	8
Bricklayer	14	19	6
Mean Prestige Rating	21		

APPENDIX B.1 Continued

CASS Categories of Occupations by Occupational Title	CASS Prestige Rating (All Occupations)	Census Income Rating (Matched Occupations)	Census Educational Rating (Matched Occupations)
Lower Routine Non-Manual			
Switchboard Operator	12		
Shop Assistant	4	33	23
Meter Reader	9		
Barman	7	4	25
Bus Conductor	6	11	4
Postman	7	3	4
Taxi Driver	7	6	2
Lift Operator	5	4	4
Mean Prestige Rating	7		
Semi-Skilled Manual			
Machine Operator Factory	15		
Bulldozer Driver	7	4	13
Truck Driver	5	10	2
Mean Prestige Rating	11		
Unskilled Manual			
Railway Labourer	6	0,5	1
Roadworker	5		
Petrol Station Attendant	4	4	1
Mean Prestige Rating	5		