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## REVIEW ARTICLE

### SCIENCE AND ADVOCACY: A REVIEW OF EDUCATION, RACE AND EMPLOYMENT IN RHODESIA

By M. W. Murphree (Ed.), B. J. Dorsey, G. Cheater and B. D. Mothobi.  
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S. H. IRVINE\*

This is potentially the most important publication in Rhodesian race relations since the landmark study in 1962 by Rogers and Frantz, entitled *Racial Themes in Southern Rhodesia*.<sup>1</sup> Now, as then, officials in industry and government service must try to read it, above all for its efforts at fact finding. As an added incentive, the title, *Education, Race and Employment in Rhodesia*, contains three of the most emotive words in the language used by whites in Rhodesia. It is also open-ended, suggesting relationships rather than describing them; and, as in all good advertising copy, the viewers' familiarity with the labels guarantees preliminary investigation of the latest brand name, whatever the content or size of the package. One would hate to miss anything, indeed, in such a large one, just in case its five-hundred-odd pages written during the past five years should prove radical, important, comforting, discomfiting or exasperating. Unreasonably, perhaps, this particular product manages to embody, at times, all of these descriptors. How does it do this, and in what context?

#### Origins and Scope

Professor Murphree, editor and contributor, tells the reader twice in the space of four pages (5, 9) what the context is. There can be no doubt about the origins and methods of the study or the reason for it. A study of employment opportunities for African school leavers at Form 4 and Form 6 level was commissioned by the Association of Round Tables in Central Africa, under the directorship of the Professor of Race Relations at the University of Rhodesia. The project was funded by Rhodesian Industry and by donations from Round Table Clubs around the world (V). It began in 1969 with the appointment of Dr. B. J. Dorsey (Mrs. Murphree). Her work was to be a study of school leavers. Later on, a study of employment opportunity was added, and carried out by G. Cheater and B. D. Mothobi.

<sup>1</sup>Rogers, Cyril A. and Frantz, Charles. *Racial Themes in Southern Rhodesia*: Yale University Press, New Haven, 1962.

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The whole project then came under the overall direction of Professor Murphree. To explain how the work was carried out is to indicate, among other things, how far one can generalise from the results. Hence, a short non-technical explanation of the methods and range of the enquiry is given now.

The school-leavers study (SLS) is in two parts. The first polls a *population*. This consists of all potential school leavers in Forms 4 and 6 in African schools in Rhodesia at the end of 1971. From self-report questionnaires piloted two years previously incorporating, and learning from, work done prior to that in West, East and Central Africa,<sup>2</sup> information was sought from all male and female students available in these classes. The initial harvest of material produced aspirations for future employment; expectations of achieving occupational goals; perceptions of the desirability of a range of jobs from the highest to the most menial; and preference for working conditions. Also built in was a survey of family size, circumstances and structure. All these responses from the students themselves were supplemented by access to the results obtained by them in 'O' level and 'A' level examinations held at the end of 1971. From this mass of data gleaned from some 2500 respondents, a base for follow-up work was secured; and possibilities for comparison and study of the inter-relationships of the material were (and still are) very great indeed.

The second part of the SLS took place six months into 1972. All of the students were sought out once again. Nine out of ten were able to participate in the follow-up exercise. They were asked whether or not they were employed, or still at school. They also provided post-examination perceptions of their career prospects and gave views, if they had a job, on how it came about that they had been successful and others not. The whole, then, was a large survey, using the tools of the social scientist.

One hopes, parenthetically, that the barebones of this large-scale enterprise do not permit the reader to discard some of the flesh of the achievement. The organisation, drive and administration of such a venture command both respect and admiration. In making the population available for the study, the African Division of the Ministry of Education demonstrates its consistent generosity of spirit in allowing large scale work of this kind to proceed at considerable expense of time and effort. Not everywhere in the world is such freedom allowed. The data base is, thereby, a legacy of which the director can be justly proud. One need hardly mention, of course, that he and his associates now have an obligation to see that future use of the data base

<sup>2</sup>See, particularly, references listed in the book under the names of Foster, Hicks, Mitchell and Irvine.

neither allows commercial exploitation nor threatens the privacy of the respondents.

The other thrust of the book is a study of the employment climate into which these same African school-leavers were cast in 1972. To bring this about two of the authors, Cheater and Mthobi, conducted an entirely different sort of enquiry. They examined, in as much detail as they were able, the employment and organization practices of seven different Rhodesian companies and they had partial reference to at least seven more. The employment prospects study (EPS) took place in one local-government organization and in six manufacturing companies. Secondary industry was the focus, as distinct from primary producers such as mining, agriculture or forestry. Appropriately, the industrial sectors chosen corresponded to those in which the school leavers hoped, in the main, to seek employment. (159). The largest firm employed 2500 Africans and the smallest just under 500, this being the unit size for which comprehensive personnel policies and records would seem not so much a question of managerial style but more a matter of efficiency and ultimate profitability (180). The research team solicited facts and opinions from management and labour, black and white. They consulted personnel records whenever these were made available: and records were not always (182, 218, 219) available for various reasons. From detailed, close-grained analyses of case materials a picture — a collage, more accurately — emerges about organizational structure; personnel services; job analysis and description; recruitment, selection and training; and assessment of work performance in these seven companies (Ch.12). In addition, comparisons are offered with studies of employment policies and practices elsewhere (Ch.11), including Britain and other African countries. Finally, the authors devote considerable attention to constraints on managerial decisions, including the conditions generated by Republican government policies and reactions of other governments to them; trade unionism and legislation; and collectivism in managerial thinking (236-245; Ch.14). This part of the book is an exercise in industrial anthropology: and one in which, it seems, the investigators became participant observers.

### **Approach and Scale**

Hence, the SLS and the EPS represent two different aspects of the total enterprise that asks, in effect, what have African school leavers got to offer the prospective employers and how do employers treat them? We have just seen that the two different parts of the question are dealt with in entirely different ways. Murphree (3) thinks that the difference of approach is essentially the difference between an objective (SLS) and a subjective (EPS) method. He errs in that distinction, since both are subjective and empirical. The content of a questionnaire, after all, even if distributed to a population

of a country (a census form) will reflect the judgment of the people who put it together, using whatever technical aids they think fit. The EPS approach consists of interviews; but a questionnaire is a mechanised interview that fails to benefit, as every university teacher of social analysis methods is quick to point out, from the dynamics of interchange in personal interviews. Given, then, that both approaches are fact-finding and reflect the judgments of persons, how far is it safe to generalise from either, or both?

The real differences between the two parts of the research lie first in the *scale* of individual responses to the questions asked. The SLS produced answers from 67 secondary schools with total enrolments of 2500<sup>(a)</sup> Form 4 and 200 Form 6 students. And these represent the total population at risk. Sampling errors are, therefore, non-existent and reporting can be done in percentages, fractions or ratios. The follow-up achieved response from nine out of ten of the population, so that mis-interpretations from this part of the work are, likewise, almost impossible to credit to sampling bias. On the other hand, the EPS reports material gathered from only seven companies, each of which, as a unit of measurement, harbours a cluster sample of employees affected by individual company policy. The manpower force covered by the study totalled 5200 African and 630 European workers. It may seem, to the observer, that seven companies look rather thin compared with a whole population of schools and the students in them. In a sense that is a fair judgment, as long as it realised that scale *by itself* is no criterion of valid interpretation of data. Freud and Piaget conducted, really, detailed *microcosmic* studies involving many observations on few individuals. Gallup polls conduct single observations over many individuals and, hence, produce *macrocosmic* studies. Few will deny the validity of some of Freud's propositions; and even fewer the robustness of Piaget's formulation of developmental stages. And Gallup polls, although they can be devastatingly correct, deserve all the criticism they get if their oracles pose the wrong question or draw the wrong conclusions in New York, London, or Enkeldoorn. No demarcation need be made between the studies on grounds of objectivity. Instead, differences in scale should be noted. Far more crucial is the observation that *micro* and *macro* approaches are each capable of yielding universal truths. Either approach will do as long as interpretation of the findings is consistent with the chosen frame of reference.

One is now free to examine, with Professor Murphree, the findings of the book. While each section contains its own summarising chapter, Murphree summarises it all, handily, at the end. He draws conclusions and makes recommendations. As his conclusions may give rise to some debate, it is useful, in the next section, to go to the pages of the book itself for the facts.

(a) I have rounded out totals and used approximations throughout, since these make no difference to the comparisons made and ratios calculated later on.

Before that happens though, one should be aware of the structure of the book, since no one can summarise adequately its richness of detail. In the text above, there are over a hundred tables, all but thirteen from the school leavers study. In the appendices, amounting to 150 pages, the SLS questionnaires are reproduced in full and 190 tables, give or take a few, all of them from the SLS, assail the curious reader. The tables alone, about three hundred give the reader full value for money. They would be priceless, indeed, were one not occasionally surprised by a total that will not verify (Table 7.19) and two tables reporting the same data that show discrepancies (Tables 7.24, 7.25). Additionally, a pity this, a great deal of part two (Chs. 3, 4, 5 and 6) reads like an academic exercise. Much material that is of interest to judges of academic merit has no place in a book for the general reader.<sup>(b)</sup> The book is also out of balance, since of 480 pages, 325 are devoted to SLS findings; and much of them have little or no relevance to Murphree's message. One wishes that he had severely summarised SLS findings of real relevance, sandwiched them in between parts one, three and four, and produced a book two hundred pages long. Alternatively, he could have boldly inserted his conclusions after his introduction, and consigned parts two and three to technical report status. In effect, there are two or three publications here. The introduction and concluding chapter form a non-technical report of some significance, ideal for busy officials. Part two is a separate research report, much of which stands on its own without benefit of help from the other parts. Part three is also a technical report, but its more anecdotal reporting makes it easier going than the annotated tabular form of Dr. Dorsey's style.

### **The School Leavers Study**

Although the reporting, balance and editing of the text all might have benefitted from the advice of an external reader, what can external readers make of the facts? First, the SLS tabulates information provided by the school leaving population. From this one notes that more than eight out of ten males and nine out of ten females had very high hopes of embarking on clerical, technical or professional careers. (127) Teaching and medicine were strongly represented. As we are dealing with a population survey, the percentages reported have no error because of sampling, and figures given can be taken as finite. These students are, moreover, said to be a small proportion of their age group (73). Dr. Dorsey quotes 3.8 percent aged 15-19 in secondary schools, but gives no source. Hence, as they are a very small sector of their age-group — just how small we shall demonstrate later — these uniformly high hopes are not unreasonable. Next, these students, as a group, ranked a

<sup>(b)</sup> Part 2 and the appendices are, in effect, Dr Dorsey's doctoral thesis.

range of occupations available to them in Rhodesia according to the prestige of the occupation, and according to their preferences, and according to the hopes they had for themselves. When the results were compared, the prestige rankings were very similar to those for other groups in Africa.<sup>3</sup> And all of these were closely allied to similar rankings done around the world. They were not alone, or unique, in their estimates of the prestige of occupations. Nevertheless, what the students *as a group* considered the prestige of occupations to be could be predicted almost perfectly from knowledge of the group's preference for employment (121). What they hoped for, in the way of employment, predicted *average* prestige rankings almost as accurately (127). For all that, if one had known the group's assessment of the financial reward of each job, one could have predicted the group's prestige rating well-nigh perfectly. At this point we should note that association does not imply cause. Knowing the prestige rating by the group, we could predict almost perfectly the group's perceptions of financial reward for the same job list, its preferences and its aspirations. We know that, for the group, all of these are closely intertwined, but of individual differences in these perceptions almost nothing is reported and that, it seems, is a crucial question that the author's conclusions themselves seem to beg.<sup>4</sup>

An important finding is the difference between the population's expressed *hopes* for future employment and what its members *expect* that future to be. They also commented on employment conditions. Whereas the students invariably hoped for professional jobs, fully a quarter did not respond to the question on what they expected (131). This might indicate that dreams were seen to be modifiable by circumstances that were very real indeed. Three out of five preferred (and, one supposes, expected) to work for the government; one out of five preferred a large European firm (132). Salary and security of tenure accounted for almost half the replies to a question on employment conditions (132). The only other reasons for employer choice to gain more than ten percent of responses were "good conditions" and "helping others". Finally, three out of every four expected to work in towns. In short, large employers of school-leaving Africans were seen as the main avenue for personal ambitions, which, for many indicates secure, well-paid, urban-based employment.

<sup>3</sup>See Hicks, R. E. Similarities and differences in occupational prestige ratings. *African Social Research*, 1967, 3, 206-227. Hicks significantly reviews all the African findings and compares these with European ratings of occupation in Zambia.

<sup>4</sup>For an examination of job conditions, preferences and school certificate results for 1966 'O' Level Shona students, using an individual differences approach see Irvine, S. H. The dimensions of vocational preference and prestige in an African elite group in *The World Yearbook of Education*, 1969, Eds. Lauwerys, J. A. and Scanlon, D. G. Evans Bros. London, 1969, 319-332. In this study (324 ff) Irvine points out that there were at least eight different dimensions of job evaluation among the Shona group and that there are wide individual differences in the way that these are perceived. Later work showed that job preference correlated with tests and school certificate results.

Management in particular, will be grateful to note that popular belief, held by two out of three, in the protestant ethic of hard work as the key to occupational success. (134). Social skills and influence — or how you get on with those who matter — was considered paramount by one in five. Disappointingly for educators, perhaps, was the finding that only one in twelve considered intelligence and education as the basis for achievement in a job.

### **The High-Level Manpower Pool (HLMP)**

So much for the school leavers' perceptions, as a group, of the free enterprise world of work. How did external examinations judge their performance in the captive world of school? What, if anything, can be deduced from their results as indications of a potential HLMP? First, at Cambridge 'O' Level, nearly eight out of ten achieved a division one or two pass and half of these had division one ratings. If one uses this level of achievement as a very strict criterion of immediate HLMP availability, then about 1800 would qualify, in the ratio three males for every female. This figure takes no account of mature students who gain 'O' level qualifications by correspondence or night-school. By the Ministry of Education's criteria for Form 6 entry, one out of every seven 'O' level candidates qualified (135).

In Form 6, about 180 were eligible for the Higher Level certificate, and three out of four qualified for it.

These results, by themselves, suggest that HLMP can expect to increase by at the very least 2000 Africans annually. An impressive and compelling statistic to all employers, without making any comparisons with Europeans.

### **Advocacy versus Science**

If the writers had let that statistic stand, drawing some simple conclusions, and had then moved on to the empirical questions — of how Africans, thus qualified, performed in the world of work, not only in Rhodesia, but in Nigeria, Kenya and in self-inflicted exile overseas, a compelling analogue might have resulted. Instead, Dr. Dorsey (137) and Professor Murphree insist that these results are comparable with local European results in "content and quality" (295). But can Professor Murphree and Dr. Dorsey infer this from the facts? My feeling is that they cannot. The argument against their conclusion must be presented much later, however. Meantime, to the facts.

The 1969 census allows us to examine the age groups from which the African and European school leavers of 1971 emerged. The distribution of African ages is wider than for Europeans. However, our best estimate (by weighted average) is that Form 4 Africans came from an age group of one hundred and three thousand. Comparable Europeans, Asians and Coloureds



contributed to an age group of five thousand, of which only one tenth were non-white. Form 6 Africans came from a total eighty-two thousand in the age group; and the comparable European, Asian and Coloured age group was forty-two hundred.

The SLS study shows that 2400 Africans were in Form 4. This is 2,3 percent. of the age group, or nearly five in every two hundred. It shows that 180 Africans were in Form 6. This is 0,002 percent. of the age group, or two in every thousand. There were 4300 non-African Form 4 students in 1971. This is nearly nine out of ten of the age group. In Upper 6, there were 700, or one in every six of the non-African age group. A further 1200 Europeans were in 6M, seeking university entry. In all, nearly two out of every five on the European system were seeking university entrance.

The logical inference from these facts, for employers, has nothing to do with comparability of 'O' level results. The sober and compelling inference is that if a job were advertised in 1972 requiring Form 4 education as a minimum — ignore 'O' levels for the moment — then this requirement would include ninety percent of Europeans in the age group and it would exclude ninety percent of Africans. If a job required Form 6 education, the ethnic restrictions on the employer's choice, through availability of school places are even more severe.

However, the incontestable scientific conclusions of the SLS are as follows:

1. Although Africans represent two percent of their age group at Form 4 level, they constitute one third of the total HLMP coming on to the employment market-place.
2. Conversely, nine out of ten Europeans are involved in contributing to the Form 4 HLMP of the age group.
3. While university entry is sought by two out of every five Europeans for whom places are available, school provision for Africans narrows the probability to two in every thousand Africans in the age-group.
4. The aspirations of African school-leavers are high; and so are their hopes.

In short, opportunity on the basis of probability is not identical for all races. That is the scientific conclusion. The advocate can do with that information what he pleases. One must add, almost as a scientific postscript, that considerable information is given about the relationship of socio-economic status and family variables of size, composition and structure, to aspirations and academic achievement. As in a previous study of these indices at the

end of primary schooling in 1962,<sup>5</sup> hardly any association resulted at all. Yet these facts are extremely important for those who advocate comparisons with European achievement and motivation as if no difference in theory existed. The lack of association is a strange phenomenon. It does not correspond with findings in European-North-American studies where correlations with such social variables and achievement are pronounced and definable. Can one, then, argue for African data *as if* theories of achievement and motivation are universals? I doubt it, but the closure of this argument must await some further reporting of facts. The end of the review takes it up more fully.

### What Happens After Form Four?

In the follow-up study, concerned like a previous one in Mashonaland in 1967<sup>6</sup> with the employment on further education status of Form 4 and Form 6 African students, the salient facts are these. Five out of every ten failed to find either work or schooling; a quarter continued their education; one in ten found a job;<sup>(c)</sup> and nothing at all was heard from one in eight of the school population surveyed in 1971 (150). If one held a Division One pass at 'O' level, there was a 50-50 chance of further schooling, a forty percent chance of unemployment and a one in ten chance of a job (151). For all that, the school leavers' hopes of achieving their career goals, even if they were unemployed, remained surprisingly buoyant among males, although less so among females (153).

Of those who did find employment, slightly less than half found themselves in low-level jobs for which their schooling was of no account (156). Only twelve out of two hundred and fifty males were registered as apprentices; and nineteen were said to be technicians. One in five was a clerk, and one in eight an uncertified teacher (157). More than half the total of fifty females who found jobs were absorbed as teachers or nurses' aides.

When jobs were found, nearly four out of ten needed 'O' levels in some combination. Over half of the employed found work in large or small European-run firms. A further quarter worked for the government (158). Relatives and friends played a major role in placing about half of the lucky

<sup>5</sup>See Irvine, S. H. Towards a rationale for testing attainments and abilities in Africa. *British Journal of Educational Psychology*, 1966, **36**, 24-32, especially page 27. A fuller, detailed account is available in Irvine's Ph.D. thesis (1964) available in the University of Rhodesia Library.

<sup>6</sup>Irvine, S. H. A five-year follow-up of Secondary school selection procedures in Central Africa, 1962-1967. *British Journal of Educational Psychology*, 1968, **38**, 203-211, page 210.

(c) In 1967, from 280 respondents, two in five were in school, one in seven had a job, almost a half were unemployed. These results are within sampling error of the 1971 study.

ones. One job in seven was found by walking and asking, and one in eight by filling out applications to companies (159).

The school leavers also reported their perceptions of the job market. The workers said they would change work given a better job eight times out of ten. Not, one might add, a comforting thought for labour or management. One out of seven thought their opportunities were limited by discriminative practices and only one in twenty blamed sanctions (161). Of the unemployed, one in four thought that the jobs just did not exist; one in six considered that they did not have the experience or skills for jobs required; one in seven blamed discriminative practices.

To sum up, of 2500 African school leavers in 1971, 650 were still in school, 1250 were out of work, and only 300 found jobs, half of which took no account of their education. As my own study of Mashonaland school leavers demonstrated the same pattern in 1967 during a period of sharp industrial expansion, one is forced to conclude that unemployment, for African school leavers with Form 4 schooling, is a serious, long-term problem. This is a frightening finding for anyone who believes that countries unable to generate employment for the youth of their dominant population sectors risk a climate of violent social change.

### **The Employment Situation Study**

The detailed research for this part of the book was conducted by Cheater and Mthobi in just seven firms. At the beginning of the review, it was pointed out that the ability to generalize from results is not always a function of the size or scale of the investigation. Before deciding about how confident one can be about the authors' conclusions, one must, as before, examine the facts. The research is reported under headings that include organizational structure; performance assessment; and managerial decisions and belief systems. In addition, a comparative framework for the research is provided.

### **Organization Structure**

In the seven firms surveyed, Cheater found that, in managerial roles, there was one African for every six Europeans. In technical and highly skilled jobs there was one African for every eleven Europeans. In supervisory positions, Africans outnumbered Europeans four to one, while in semi-skilled and unskilled categories *all* the workers were African (213). The writers conclude (218) that discrimination in employment practices exists; and that the reasons for these practices are obscure. They state" . . . It is a fundamental fact of the Rhodesian employment situation, as indicated by this research, that there are European-held and African-held jobs and negligible overlap between

the two." (217). They also conclude that not much change in the state of affairs has occurred in recent years (218).

In commenting on the authors' claims, one has to remember that discrimination exists only when persons with equal probabilities of success on the job do not have an equal chance of being hired. First, it seems, one has to establish, empirically, that persons of similar backgrounds educationally, although of different ethnic groups, can succeed equally well. When this is established, discrimination on the basis of variables irrelevant to the production of success can be alleged. We shall examine the empirical evidence later on.

More telling, perhaps, than the statement about the kind of job a person holds in industry being almost perfectly predictable from knowledge of his ethnic group, is the report, by Cheater, of the almost complete absence of personnel records among low-level (and hence African) personnel. In this same area he found that, although records existed for higher level personnel, these 'staff' records could not be made available (219). Now, if records for African personnel do not exist, no possibility of systematic performance assessment is possible. And hence, no *evidence* on the performance of different ethnic groups on the same task can be recorded. Moreover, if records of high level personnel exist but are private documents, such empirical evidence as might exist on employee performance will not see the light of day. The *Catch 22* scenario of access to records that do not exist but no access to records that do exist would be funny if it were not so distressing, scientifically. It seems, to this observer, that efficiency, if nothing else, demands that questions of effectiveness on the job be answered.

### **Job Description**

To answer questions on job effectiveness, information about jobs and those who work at them is needed. Procedures for obtaining information include the use of job descriptions and classification. The case studies showed that only one company used job descriptions for all of its employees. Two firms confined job descriptions to clerical, supervisory, technical and management (CSTM) jobs. Four had no system of job description whatsoever (220).

Sometimes, when job descriptions were altered, Africans were admitted to job categories previously held by Europeans. If this happened, the rate for the job became very much lower than it had been (225).

### **Assessing Work Performance**

An efficient personnel policy will seek to have record keeping, job description and assessment all working together to provide data for management decisions. Fair assessment usually results from observations made by people

trained to observe, given clearly stated criteria for success or failure. The record, according to the research, is hardly flattering to management. In semi-skilled or labouring jobs (SSOL) measures of work performance existed in only one company. In all other companies, save one, CSSTM performance was evaluated by supervisors. In that company no assessments were made at all (230, 231). Where systems existed, all had shortcomings, particularly in areas of communication between supervisors and employees and in the all-important area of training in methods of appraisal.

### **Recruitment, Selection and Training**

No less important are the activities of recruitment, selection and training of personnel. So far the review has pointed to possible effects of a lack of apparatus in management procedure for resolving issues of efficiency on the job. In training, particularly, results can be observed that give useful information about individual success or failure. These give clues to future work performance. In fact, the only slender empirical evidence that occupational success cannot be predicted from ethnicity comes from this aspect of the report. First, though, a brief summary of findings.

While systematic advertising and canvassing of agencies for workers in the CSTM categories was almost always used, recruitment to SSOL jobs occurred largely at the factory gate, or through 'underground' social networks, or municipal agencies (222). Among the seven companies there were major policy differences, extending into the European sector (223). Firms also varied in their approaches to introducing African employees at the CSTM level. One case study of successful introduction of an African technical officer (224) is detailed. Although selection criteria are outlined in general terms (221) no account of technical procedures in personnel selection is given. Such procedures are probably in their infancy in the country, although the initial cost is more than returned in shorter training time and increased productivity.

The training of apprentices is crucial to secondary industry. Of the seven companies studied in depth, only four trained apprentices. Of these four only one trained Africans. Of an *additional* seven companies referred to in the report (224) only one offered apprentice training. Detailed case-studies on apprenticeship occur in another section of the report (246 ff). The writers assert that certain white artisans refuse to train African apprentices. They also judge that the Industrial Conciliation Act hinders African apprenticeship. One cannot, from this sector of the report, accept these findings as general to *all* industry. But industry must now ask how general this state of affairs is, since Cheater and Mothobi were unable to do so themselves.

One case study presents almost the only evidence in the whole book for African success in apprentice training. And in this study ethnic origin

proves irrelevant as a criterion of success or failure. One firm, in 1973, advertised openings for four apprentices. Of 240 applications received, one in twenty-four was from a European one in five from an Asian or Coloured. Three out of four were from Africans. Eventually, after applying internal selection procedures, five apprenticeships were offered, three African, one Coloured, one European. While the final selection ratio reflects the ratio of initial applications, we must conclude that competition is fiercer among Africans than among other ethnic groups for places available. The world of work parallels the world of education. While no progress reports on this intake were available, reports on the 1971 intake indicated satisfactory apprenticeship progress regardless of ethnic origin.

Similarly, Cheater (266) shows that all personnel chosen for one foreman/supervisory training course performed well. It was not possible to categorise a result as African or European on the basis of results. Again, ethnic origin was irrelevant in the training exercise.

Clearly, it would be rash to generalise from the training situation to the factory floor or the executive suite. If other evidence exists, however, it may not exist in these seven firms from accounts given by the research of their personnel record systems. From the findings of the study, one may conclude that individual differences will prove much more crucial to managerial decisions than ethnic differences. To state flatly that ethnic differences will not, in any work situation, prove to be a criterion for efficiency is to deny the scientific possibility on insufficient evidence. On the other hand, to practise management in such a way that ethnic differences seem to be a criterion without even the internal means of collecting evidence one way or the other is simply to invoke the possibility of management-labour disputes, social criticism, future political intervention, or all three. Industry itself has the means, and methods of testing its apprenticeship, training and on-the-job practices.

### **Managerial Decisions and Belief Systems**

Apart from the fact that only marginal evidence is reported to show that whites and blacks succeed equally well from similar educational bases, what are the stated reasons for recruitment patterns in the CSTM jobs? Mothobi and Cheater consider that quota systems may informally operate in some firms (237). This has the effect of maintaining a mixture of ethnic groups in certain job categories irrespective of efficiency. Managerial initiative or decisions are reported to have encountered considerable white resistance to the employment of blacks in CSTM positions (238) and to attempts to alter the ethnic (or sex) ratio in a department once it is established (239). Whites are also reported to adopt reactive stances to management strategies designed

to overcome manpower shortages or resolve production difficulties by appointing or recruiting on merit (228).

Apart from trade union resistance, the authors argue that there is a causal belief "system" that will account for the stability of management practices that ignore evidence; or will foster practices that prevent evidence from being gathered. They devote a major section of the report to postulating the existence of a set of business norms and practices that restrain radical management (241). In turn, these norms are reinforced by a hypothetical managerial belief system (269-278). This "system", according to Mothobi and Cheater, survives as a set of stereotypical beliefs about Africans and their lack of skills, capacities and values compared with Europeans. The authors claim that no foundation exists for the belief system and that its function is to create the climate for a self-fulfilling prophecy. By this they mean that conditions for African behaviour will be created by the belief system itself.

Support for the plausibility of Mothobi and Cheater's hypothesis is not easy to gather. True, belief systems operate about the Italians, Van der Merwes and Newfoundlanders of the world, not to mention the Scots and their economic brothers the Batonga. These belief systems may variously act as a defence mechanism towards members of an out-group if the in-group is prejudiced towards them. To impute cause to the belief system, however, is somewhat tendentious. Profit motives seem a much surer cause for African use in low-level positions regardless of educational level; and will surely be a further cause for their occupational mobility in time to come, if the record of primary industry in Africa south of the Sahara is any criterion.

Finally, the work of Mothobi and Cheater illustrates clearly, that within the small number of firms sampled, there were wide differences in managerial practices, towards whites as well as blacks. Such evidence, provided by the writers themselves, seems incompatible with their assertion that beliefs are strong causal agents in self-fulfilling prophecies (273).

To sum up, the Mothobi and Cheater chapters are suggestive, revealing and compelling. They have produced a number of facts from detailed case studies. Generalization to the whole of Rhodesian industry would, at this stage, be wrong, since answers to several key questions are unavailable. However, the case-study practices and implied attitudes of white management and labour towards Africans are not so far removed from the findings of the Rogers and Frantz national survey of white attitudes to Africans in 1962 as to suggest that a dramatic change of heart towards fuller African participation in industrial benefits has resulted in ten years or so. A case for widespread discriminative practices in industry on this evidence is not proven, but the case for a preliminary hearing has been made. Finally, the reader has to

struggle with the impression given by the writers, on several occasions, particularly pages 207-210, that their conclusions and recommendations preempt the data itself. A pity, this, since advocacy seems to occur before science has had a chance to work.

### **Avoidable Errors and Admirable Advocacy.**

One can, perhaps, smile emphatically at the excesses of younger research students. Often their best conclusions have nothing whatsoever to do with the data. Sometimes they foresee results and findings because they passionately believe them to be so; and lo and behold, sometimes they are so! To intuit, for many young men and women sharpening their research skills, is to know for certain. But the conclusions of older workers, with years of research experience behind them, can seldom be indulged. They carry great weight and authority. Hence, when the senior author and editor transmits conclusions from other people's data, he has to be certain, even if the conclusions are not his own, that the conclusions are consistent with that data. What can we say about Part Four of the book, that strives to pull the whole together, draw conclusions and make recommendations?

I have hinted previously that I disagree with Professor Murphree's conclusions. Let me say immediately that I consider his advocacy to be humane and just. But his advocacy can be seen as something that is not logically derived from these research findings. He cannot use the report's conclusions to bolster his advocacy, simply because his, and his colleagues' inferences from data are, in my view, often incorrect.

Murphree begins by outlining the sociological equivalent of the nature-nurture controversy. He is adamant that only denial of opportunity has made African workers what they seem to be today. The key quote of the whole book is (293).

"Are the primary reasons for African underemployment to be found 'in cultural deprivation' factors leading to a lack of proper motivation and adequate cultural conditioning for effective participation in the entire spectrum of the occupational structure, or are they to be found in the labour market itself, in the recruitment and employment patterns which this market exhibits? The findings of this study are unequivocal, and clearly support the second view."

Stereotyped belief systems are socially objectionable because they take no account of individual differences. Sociological enquiry is sometimes objectionable as science for the same reason. To discuss the complex phenomenon of interactions that are the basis of abilities and skills in a group context, as if individual deficits and gains were unimportant is simply a denial of man's nature. One cannot, in an exercise of advocacy, accuse employers of perpetrating a belief system if at the same time one can be accused of using one of one's



own. And this belief system, for *all* the writers of the book seems to be that the nature-nurture controversy about African abilities and skills is resolved; and that this report demonstrates that the balance of evidence is on the nurture side. For this reviewer, the nature-nurture controversy is irrelevant. Moreover, application of the nature-nurture model cannot answer the question of what will happen if different ethnic groups attempt identical industrial tasks from the same base of formal schooling. Only two pieces of evidence are adduced from Rhodesian industry in the report. Certainly they give rise to a *hypothesis* that no differences may result, if management are to pursue personnel procedures that will dispense with ethnicity as a criteria for success. But the issue is an open, empirical question, not an ideological one; and an hypothesis is a basis for further scientific enquiry, not a reason for industrial or social policy.

Murphree asserts, nevertheless, that the data upholds the 'nurture' argument. As *reasons* for that contention he states two crucial findings from the data (295).

1. The school leavers' occupational aspirations are uniformly high, indicating a set of life-style goals comparable to those of white youth of the same age and implying appropriate motivation for occupational placement in areas of current professional and skill shortages (pp 113-116, 120-134).
2. The school leavers' academic achievement is comparable to that of their white counterparts, both in regard to quality and content, implying an intellectual development and occupational potential of equal comparability (pp 134-140).

Can Murphree argue that this data supports the nurture end of the polarity? More fundamental, is it necessary to invoke the argument at all? He says that Form 4 African achievements are comparable to their white counterparts. In what sense? He also says this *implies* an intellectual development *and* occupational potential of equal comparability. Can he make such a deduction, logically?

I would have liked, but cannot for reasons of brevity, to take up in detail Professor Murphree's other assertion that white and black 'O' level results are 'comparable'. My analysis of their data shows that it is impossible to predict the *order* of subject percentage passes in blacks knowing the white order, or vice versa. The correlation is what we would expect from two sets of random variables. Hence the results are not comparable in that sense. By calculations also show that whereas African results are gained from two per cent of the age group, European results are gained from almost seventy percent of the age group. They are not comparable, either, in that sense. Finally, the examinations were set and marked by different examination boards; and

notwithstanding the special pleading of Dr. Dorsey, they are not scientifically comparable on that account. The only sense in which they are comparable, is that almost as many Africans as Europeans will be coming out of the school system with 'O' level qualifications. But, once again, there are wide individual differences *irrespective of ethnic grouping* in what grades individuals have achieved and in what subjects these grades are achieved. And often, history tells us, such results are as much accidents of curriculum opportunity as results of individual interests or aptitude. But even if we choose not to debate the issue of comparability, would that fact imply equal potential for employment success? Scientifically, it would not.

The enquiry that will demonstrate occupational potential of equal comparability with whites has not been conducted, either in this report — Cheater and Mothobi's evidence is too thin to warrant such a flat generalisation — or in any other available to us. If one accepts that schooling is a base-line condition for entry, one has to be certain that criterion correlations are identical for each group, and that the range of individual differences is also comparable. One should not forget studies that show that 'the same' educational qualifications or scores do not predict the same outcomes unless the relationships between such measures and the criterion are identical. In short equal base line qualifications in different ethnic groups do not, by themselves, guarantee equal probability of criterion achievement.

Secondly, Professor Murphree deduces from the research that African aspirations for employment are high and that they have life-style goals that are "comparable to" those of white youths — points that brook no debate. He adds that this implies "appropriate motivation" for placement in a wide variety of skilled jobs. It is this conclusion that one quarrels with. It is a long scientific stride from aspirations and goals to a whole complex theory of achievement motivation for Mashona or Ndebele society. Moreover, it is part of the customary assertion by social scientists that African and other ethnic groups are different; and that it is iniquitous for any other group to impose its own psychological theories of personality and motivation on to alien cultures. And, interestingly enough, the report's own evidence about complete lack of correlation between environment and family variables and achievement, contrary to Euro-American studies, shows that a vital piece of evidence that would support Murphree's *assumption* of identical motivational theories is not there. In short, Murphree cannot move from similarity of life-style goals and approaches to an assumption that Africans are "appropriately motivated" for jobs hitherto confined to Europeans. Again, the lack of evidence on individual differences bedevils interpretation of this report.

This argument, that Europeans and Africans in Form 4 may be seen to be homogeneous or matched in achievement or aspiration, can also be criticised in this fashion:

“When nutritional status, or educational level, or socio-economic status etc. are equated, as they are at the start of the investigation, these environmental facts are deemed to have been controlled, although the investigator may know nothing about how they varied during the preceding development period. This surely is decisive as virtually everything we are interested in under the heading of cognitive processes is the outcome of a long period of growth and maturation, from the prenatal stage onward. Adverse circumstances relating to health, nutrition, child rearing practices, mental stimulation, opportunities for interaction with the material and cultural environment, are all known to be relevant and the earlier their impact, the less reversible their effects appear to be.”

This quote is from Biesheuvel's critique of Arthur Jensen,<sup>7</sup> who argues, equally invalidly, for the nature pole of the controversy. In short, Murphree's keystone conclusions are regrettably, and remarkably, untenable from his data. The facts are capable of interpretation by rival plausible hypotheses and his conclusions do not pretend to take account of them.

In a senior scientist, this verdict is a difficult and painful one to record. What could Murphree have concluded instead? First, he could have pointed out how great a contribution to potential HLMP the African education system is producing. He could have rested his case there. And, he could have added, it will grow larger in time. He could have asked if it is wise to invest so much and to employ so little of it? He need not have risked scientifically unverifiable comparisons with Europeans or chosen the nature-nurture model for his data. Next he could have asked management to search their souls for truths about their own organizational systems compared with the secret seven who offered research facilities. And he could have said that beliefs about Africans are useless in the face of cumulative evidence of successful enterprises with Africans in key managerial roles. He could have asked, finally, if, in order to preserve a free-enterprise industrial system, one could suffer smaller profits by investing in the establishment of an African middle and upper class.

Murphree, indeed, makes the last point implicitly at the end of the book. It really is advocacy at its best. But it has nothing to do with science. He says that survival of the profit system will depend on whether management heeds carefully the message of the book, and accepts the responsibility for making changes (303).

<sup>7</sup>Biesheuvel, S. An examination of Jensen's theory concerning educability, heritability and population differences. *Psychologia Africana*, 1972, 14, 87-94, page 91. Biesheuvel, formerly Director of the National Institute for Personnel Research, and Personnel Director, S. African Breweries, is now head of the Graduate School of Business Administration, University of Witwatersrand.

“Management which refuses to accept this responsibility is, in effect, taking a stance which undermines the hope of its own survival for it leaves to the large bulk of Rhodesia’s population only a socialistic economic system as a viable alternative to a profit-compulsive market economy ruled by partial competition and sectional bias.”

Africa, and now Europe, abounds with examples of the rejection of the private enterprise system if its benefits remain in the hands of the few. Self-interest has been said to motivate much industrial reform. Enlightened self-interest is not far removed from Bishop Butler’s “cool self-love”. The alternative, Hobbes’s *Leviathan*, is too monstrous to contemplate.

Few, in admiring as I do, the energy, strong-mindedness, and fact-accumulation in the book may escape the feeling that it is doomed, in its present form, to the fate of a Solzhenytsin novel. Everyone will talk about it, but few will be able to stay awake long enough to read it at bed-time. Murphree repeatedly states that the book’s target audience is management in the public and private sectors. I should like to suggest, therefore, that the book be read in the following order; Chapter 16; Chapter 1; Chapter 15; Chapter 8 pages 156-166. In these chapters lie the heart of the matter. The detailed material of Cheater and Mothobi should be read next. Then, if the reader wishes, he can pursue the arguments of Dr. Dorsey as she unfolds her thesis.

Such an enterprise, though, is not recommended for the faint-hearted. I wish, in all sorrow, that Professor Murphree’s editorial prerogative had been exercised, even within the family circle, firmly and mercilessly. The result would have been a shorter, plainer, more potent book. Had he, too been able to see the flaws in the logic of his fellow-authors, he would not have committed so many unforced errors of interpretation. Rogers and Frantz produced, in comparison, a model of careful, scholarly interpretation. Hence, although this book is the most important local publication in race relations since the Rogers and Frantz book, it falls well below that standard in its content, analysis and conclusions. Nevertheless, it should be read. But not without qualification. And not uncritically.

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