

educational attainment of individuals were: conditions at work, unemployment, health, family size, one-parent families, housing, and environment.

There is a school of thought which attempts to explain school failure by referring to the upbringing of the child. Riesman (1962) develops this notion. It would be beyond the scope of this study to examine in any detail the plethora of literature dealing with different child rearing practices and different environmental experiences during childhood. The manifestations of these differential practices at home could be summarized as falling into three broad areas: cognition/learning, language, and parental attitudes.

A few examples will serve to show that generally these different approaches to child-rearing and education are often associated with the position the participants have in the economic structure of the society. Hers and Shipman (1965) and Bee (1969) found class differences in how working- and middle-class mothers approached goal-direction in their children. Apart from devoting more attention to goal-directed action, middle-class mothers (in contrast to lower-class mothers) also allowed their children to set their own pace and make more unaided decisions. Middle-class mothers also imposed less structure on the activities of their

children and praised success, rather than criticizing failure. Cook-Gumperz (1973) and Newson and Newson (1976) found class differences in the way mothers exercised social control over their offspring. Working-class mothers used more imperatives, while middle-class mothers used information about the consequences of an action.

Piling and Pringle (1978) review a number of studies of differences in language production between working-class and middle-class children. They conclude that although differences in the mastery and reproduction of language are evident, both classes examined usually exhibited about the same level of understanding.

Bernstein (1961) first introduced the notion that the "lower" classes have a "restrictive" language system which shapes both their cognitive thought and emotional development. Support for the position taken by Piling and Pringle (1978) comes from research conducted by Doll and Hawkins (1971). Doll and Hawkins reconstructed the Stanford-Binet I.Q. test using two means of communication, formal English and a "Negro" dialect. A brief quote from the reconstructed test indicates the extent of the difference between the two means of communication. "Present card (a) and say 'See all dese crosses?' See how mos' of 'em de same?

Here go one (pointing) what ain't de same like de uvvers"
(Doll and Hawkins, 1971:79).

Although children involved in the study scored close to normal on the test and higher than usual for young "Negro" children, the authors conclude that type of language did not significantly influence the test score. Certainly, however, the conclusion that vast differences in terms of language re-production are present cannot be escaped. The authors are careful to acknowledge this, stating that during the study the children did not at any stage struggle to comprehend either the Negro or the White dialect, but that children did struggle to produce the dialect with which they were unfamiliar. This is the useful conclusion from the study. The formal English dialect is of course the dialect which will be used to evaluate the children during their school, university, and working lives.

Parental attitudes are the third general area of home-based disadvantage. Bennet (1966) has identified a number of factors which, according to him, influence students to "drop out" or under-achieve. He identifies one of the factors most influencing academic performance as being divorce. "For many the burdens of conflict and disinterest in the household will be too great if they don't see any purpose or

have some success in what they are being asked to study" (Bennet, 1966:21). Bennet (1956) sees divorce as being what he terms "breakdowns or at least changes in communication and relationships within many of our families" (Bennet, 1966:20). The death of a parent would be another example of this form of breakdown of "usual" structure.

Bennet (1966) also cites family mobility (change of school environment) as another highly stressful event. Although the effects that the psychological state or relationship of parents have on the academic performance of their children is beyond the scope of this study, Watts (1970) introduces a novel element which seems to have some use in distinguishing between under- and over-achievers. She concludes her study with the thought that "some children are disadvantaged at school because of inadequacies stemming from the personality characteristics of their parents" (Watts, 1970:106).

Watts (1970) further identifies what she believes are universal personality traits relating to emphasis on achievement, approach to problem-solving, etc. These traits according to her occur across class, race and cultural boundaries. This second aspect of her conclusion is of less relevance to the present study. The first does, however, have some bearing in terms of a supportive versus a negative

environment for study having a direct effect on the level and quality of achievement.

Related to the emotional environment of the student's home are the feelings and perceptions of the student. "The attitude of children to their schoolwork is deeply affected by the degree of encouragement their parents give them" (Watts, 1970:89). At first glance the student's particular feelings about what was being studied, for which reason, and for how long such study is meaningful, would not appear to be a direct result of disadvantage. The attitude of the parents is, however, largely a result of where they are economically.

Parents are themselves a product of their background. Parker and Kleiner (1971) address the problem with their notion of a "self-perpetuating culture of poverty" (Parker and Kleiner, 1971:31). Fundamentally, the position states that children are socialized with the very values which led to the early termination of their parents education.

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education and occupation of a household head are strongly related to the extent of education of children within the family, propose that part of this relationship exists as a result of factors underlying the educational aspirations which parents have for their children's education. They test their hypothesis by examining educational aspirations among parents.

David et al. (1971) found that these aspirations were generally unrealistically high with "two thirds of parents of boys and more than half the parents of girls expecting their children to obtain some education beyond high school" (David et al., 1971:58). They further find that "the education of the spending head is far more important than any other variable in predicting educational aspirations" (David et al., 1971:63). Conversely, the authors find that the non-attainment of aspirations for the education of household children increases in proportion to decreasing education of the household head. We arrive at the chicken or egg problem again. Are aspirations the motivation in realizing full academic potential, or does the economic position of the individual dictate how long and how well he or she will perform academically?

We shall now examine the situation at school. As with the home environment, there is a plethora of literature dealing with the relationships between the nature of the school environment and academic success or failure within disadvantaged groups. The research may be categorized as falling into the following areas: educational finance or expenditure, pupil-teacher ratios, nature of the curriculum, and teacher quality and expectations.

Education expenditure and finance is a controversial area. It is difficult to draw comparisons across groups internationally due to the vast disparities in expenditure and the need to control for many variables (e.g., area, nature of school, presence or absence of special programs etc.). To attempt to relate expenditure to disadvantage and then through to academic success or failure is an awesome task. Sadly, it is somewhat easier to do in the South African context because of the extent of the inequalities, and we shall spend some time on expenditure when we discuss education in South Africa. Le Grand (1982) has attempted to relate expenditure to class in Britain. Mortimore and Blackstone (1982) very effectively summarize his intricate study. A lengthy quotation demonstrates both the complexity of the situation internationally, and the biased allocation of resources.

His data come from the 1973 General Household Survey (GHS) and DES statistics. The GHS data concern the number of people in six socio-economic groups (SEGs) attending different sectors of public education. Le Grand first compared the percentage distribution of expenditure with the percentage distribution of the 'client' population and then the expenditure per person in the client population for each SEG. On the basis of his calculations he estimated that children in the top two groups, professionals, employers and managers, who comprised 20 per cent of the population aged 0-49, received 24 per cent of education expenditure, whereas those families in the bottom two groups, semi and unskilled manual workers, who comprised 22 per cent of the population, received 20 per cent of expenditure. When education expenditure per person was considered, the top two groups received nearly 40 per cent more per person than the bottom two groups. When the figures were standardized for age and sex the picture hardly altered. Le Grand's analysis has been carried out using two variables: (i) the proportion of the population falling into socio-economic groups one to six and (ii) the average cost for each sector of the education system. For children of statutory school age, the proportion of total spending for each socio-economic group must equal the size of that group. There is no opportunity in the calculations for deviation to be introduced as the proportion spent equals the proportion of the population multiplied by the average per unit cost. Above and below the statutory school age, where there is differential take-up of provision between socio-economic groups (unlike the statutory age where all pupils of the relevant age are involved) there are likely to be disparities, as indeed Le Grand found. The figures, as Le Grand acknowledges, do not distinguish between grammar, modern and comprehensive schools. The costs in each type of school are averaged out. But because a higher proportion of middle-class than working-class children went to grammar schools in 1973, and because the grammar schools were more expensive to maintain (excluding the cost of the sixth form), middle-class children probably received a larger share than the figures suggest.

Le Grand relates his findings to calculations based on the Central Statistical Office's (CSO) estimates of the distribution of taxes and benefits by income group. He calculates the average 'original' income for households in each income group; that is, income before payment of taxes or receipt of any transfer from the State, and the education expenditure per household by the State. The distribution favours the higher income groups with the absolute amount increasing as the income increases. The CSO data is taken from the Family Expenditure Survey (FES) which presents results on a per household rather than a per person basis. There are large differences between the top and bottom groups, which Le Grand attributes to the fact that many of the households in the low income groups are composed of elderly people who are unlikely to benefit from education expenditure. However, this group will include one-parent families, large families and families with only one breadwinner, who will be using the education services.
(Mortimore and Blackstone, 1982:58-59)

The situation with regard to pupil-teacher ratios is as complicated, and will not be examined here. Once again, as in the case of expenditure, the South African situation is much more crudely obvious, and we will spend some time discussing such ratios when we deal with South Africa.

The nature of the curriculum is an obvious (but not trivial) factor to be taken into account. The fundamental and irresolvable problem faced by educationists can be found detailed in the work of Taylor (1964). Do we teach everyone exactly the same curriculum or do we, in various ways, "stream" individuals and teach different groups different things at different speeds? No matter what the choice is, the educationist is going to be criticized. Streaming in

any form will be criticized as being discriminatory toward the disadvantaged. At the other extreme, any system where everyone is taught the same curriculum will have a group of students who lack the ability, and who simply will not be able to cope. The problem of "disadvantage" arises when it can be shown that the streaming method chosen is discriminating against those of adequate ability, within the disadvantaged group. There is little doubt that in terms of class positions, the lower classes are overly represented in non-academic streams, regardless of the method of streaming chosen (see, for example, Lunn (1970) and Ford (1970)).

The quality of teaching received has obvious implications for school performance. The notion that the actual expectations which teachers have about their pupils become "self-fulfilling" prophecies, and are translated into academic performance, was suggested by Goodacre (1967).

Race, class and education are an almost indistinguishable web of inter-relationships. Mortimore and Blackstone (1982) conclude that "it is difficult to separate the issues of social class and social disadvantage ... there is very little evidence about the relative strength of the contribution made by the individual variables for which social class is intended to stand. Research methodology has

not been sophisticated enough to isolate crucial variables" (Mortimore and Blackstone, 1982:52). It must be remembered that some people within the disadvantaged group perform better than expected. These are the people which researchers should be attempting to characterize in terms of biographical variables.

2.D. The South African Case - A Theoretical Perspective

In our discussion of education in South Africa we shall first propose a brief macro-theory of education in South African society. The background to the current study will then be set using evidence of inequalities in education in South Africa, in the next section.

South African education exhibits an explicit, legally entrenched, racial bias. In the words of Christie and Collins (1984) "Unlike schooling in bourgeois democratic states, where children may be differently prepared for respective class positions within a single schooling system, South Africa operated different schooling systems to reproduce social relations" (Christie and Collins, 1984:166). However, the situation in South Africa goes beyond the simple Black/White dichotomy (certainly though, as we shall see, this simple approach has vast explanatory power as well as masses of "evidence").

Bowles (1980) further reminds us that the result of schooling is not only the reproduction of social relations, but also, obviously, the creation and development of labour power. "State policies, and the structure of the state itself, are severely limited by the prevailing structure and

its class relations. The economic structure itself is influenced by the state, ordinarily in ways which increase the power and income of the politically powerful groups" (Bowles, 1980:206). Although the state can be viewed as the "cause" and "perpetrator" of gross inequalities in the educational structure of South Africa, it is unlikely that the state has been operating as independently as many writers would like to presume. Kallaway (1984) clarifies the situation in the South African context with a brief examination of educational policy. He identifies three periods of educational policy crisis in South Africa, and links each period of crisis to an economic change in the structure of South African society. The first such change was from mercantile to industrial capital during the period 1880 - 1920, the second was the expansion of secondary industry and urbanisation during the 1940s and 1950s and the third is the current crisis we have been experiencing since about 1960, the rise of monopoly capital.

In re-defining educational policy the "dominant" group presents its own interest as the "national" interest. "What is crucial here is the extent to which a particular class or a particular sector of industry (e.g., 'national capital' vs 'imperial capital') can present its needs as being identical to and compatible with the national interest ... In the

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current crisis in South Africa the "national interest" is increasingly defined in economic terms" (Kallaway, 1984:13). For Kallaway (1984) the 1981 De Lange commission (which we examine later) is a good example of the above phenomena. "[the commission] goes a considerable way towards meeting both the universal condemnation of racist Bantu Education policies, and the specific criticisms of the educational system from the business sector on account of its shortcomings in producing adequate supplies of appropriately trained 'manpower' for industry" (Kallaway 1984:14).

Two factors destroy the neatness of this model. The provision of schooling has an unintended side effect in that "over time educational institutions took on a dynamic of their own. Members of the working class were able to use them to increase their political strength and promote policies that sought a more equitable distribution of the educational 'goods' of the society" (Kallaway, 1984:11). Secondly, the view of the state as an extension of capital is naive. The actions of the state might generally reflect the needs of the dominant forces within the society. However, the state also has its own dynamic - an interest in its own survival through the maintenance, and increase, of its power. Thus, there is from the state a resistance to change.

The underlying mechanism for explaining South African educational policy may be summarized as a compromise, or stability of tensions, between three groups: the state, with an interest in stability and power, capital or industry, with changing manpower needs, and militant students (and some educators) attempting to "equalize" the educational structure. We would accordingly assert that although looking at disadvantage in purely racial terms may be adequate and justifiable, to not also examine wider class differences (biographical factors discussed previously) would be bad research, quite apart from being morally selective.

2.E. South African Evidence

We turn now to the evidence, and a little history, of inequality in education in South Africa. We will examine specifically Black/White differences in educational resource allocations and outcomes. The question of whether conceptualizing disadvantage in education in South Africa, in purely racial terms is adequate will be left to the body of the study where some social biographical characteristics of class differences (summarized earlier) will be examined relative to academic success.

Although disadvantage in education in South Africa may be traced back to 1658 when schooling for slaves was designed "to train them for the purposes for which they had been bought" (Molteno, 1984:45), we will take 1948 as our starting point. In 1948 the present Nationalist government came into power. As a result of the Nationalist policy of "apartheid", statutes passed in the fifties and early sixties legally entrenched the pre-existing notion of separate educational authorities. The justification for this entrenchment of inequality, was as Penny (1979) points out, the idea of racial inequality which was god-ordained and which translated into the concept of "exclusive spheres of life" (Penny, 1979:138) for different race groups.

The Bantu Education Act of 1953 legally established complete Nationalist control over Black education in South Africa. A central theme in the act was "that Bantu students should receive instruction in both official languages from the beginning so that they can already in the lower primary school develop an ability to speak and understand them" (Atkinson, 1978:227).

In October 1958 the Department of Native Affairs was divided into two autonomous entities, the Department of Bantu Administration and Development, and the Department of Bantu

Education. Bantu education was now separate, and more administratively rational. A most important result of the above was, according to Atkinson (1978), the fact that higher education fell under the latter Department and that "the Extension of the University Education Act passed during 1959 gave it complete control of three university institutions specifically intended to serve Bantu communities" (Atkinson, 1978:231).

Separate systems imply separate budgets. An examination of relative expenditures on schooling indicates a dramatic bias in favour of White pupils.

According to Auerbach (1977), the gap in expenditure between Black and White education actually widened from 1953 to 1971, and only since then began to improve. In 1953 the per capita expenditure in Black education was 14% the amount spent on Whites. In 1976 the figure was 6.4%. Expenditure on Black education by the government rose sharply in the 1970s, from 27 million rand in 1972-73 to 29 million rand in 1980-81 (Marcum, 1982:22). However, in 1980-81 the discrepancy was still large - R113 per pupil per year for Blacks versus R1071 per pupil per year for Whites (Marcum, 1982:25). So, in 1980-81 the amount spent on Blacks was only 10.6% the per capita amount spent on Whites. In spite

of a large increase in expenditure on Black education between 1972-73 and 1980-81 (267 million rand) Black students were still worse off relative to the Whites than they had been in 1953, the year of the Bantu Education Act. Separation of educational systems has clearly meant dramatic inequality in terms of the allotment of funds.

The fairly clinical summary of the separateness of education, and the disproportionate budgets for the schooling of Blacks and Whites, points to three areas which need further examination: the quality of different schooling processes, the outcome of different schooling processes, and the reaction of Black scholars to the inequalities they perceive.

Examining teacher-pupil ratios and the qualifications which teachers have will serve to demonstrate that the quality of teaching within the Black system of education cannot be the same as the quality of teaching received by White students. With some figures extracted from the Survey of Race Relations (South African Institute of Race Relations, 1972, 1977, 1982, 1983, 1984, and 1986) we can arrive at the following table.

Table 2.1 Selected Teacher-Pupil Ratios for Blacks and Whites

YEAR	WHITE	BLACK
1971	1:20	1:58
1976	1:20	1:52
1981	1:18	1:48
1982	1:18	1:39
1983	1:18	1:43
1984	1:19	1:41

The table above is fairly indicative of potential differences in the quality of teaching which may occur as a result of the time teachers are able to spend pupils. The situation becomes worse if one looks at figures for under-qualified teachers. The Survey of Race Relations provides figures for 1982: Whites 3.4% and Blacks 85.0%, under the assumption that an adequately qualified teacher has at least matric and a diploma (South African Institute of Race Relations, 1983:466). In 1979 only 2.3% of Black teachers had university degrees as opposed to 32.0% for Whites. At the other extreme 82.2% of Black teachers did not have matric as opposed to 0.0% for Whites (Christie, 1986:116). As Christie notes, there are other shortcomings in the quality of Black education as a result of inadequate expenditure, e.g., shortages of class rooms, libraries, and laboratory facilities.

Black scholars are characterized by having less money spent on their education than Whites. Blacks are also taught by proportionately fewer teachers, most of whom are under-qualified when compared to those teaching Whites.

What is the final outcome of the differences in expenditure and quality between Black and White education? The outcome which is of specific interest to us, in the context of the study, is the number of pupils who obtain a matriculation exemption, i.e., those pupils who are at least able to apply for admission to a university (a matric exemption does not guarantee acceptance into a university).

There are a number of ways of presenting comparative statistics on Black and White matric results. The method we have chosen is the same as that used by Auerbach (1977). Essentially the method examines the survival of a cohort of students. The number who obtain matriculation exemptions can be compared to the number of the cohort who began schooling in the first grade and, using the beginning figure as a base of 100, a figure out of 100 eligible for university can be obtained.

All figures pertaining to Black students will reflect the State of South Africa as it was in 1963, Auerbach's base year, i.e., all now independent "homelands" are included in the figures. Auerbach provides us with figures for Blacks in the 1963-1974 cohort. Using 1963 as a base, 100 Black pupils entered grade 1. A mere 1,96 of them arrived in matric in 1974 and 32,4% of these obtained a matriculation exemption (Auerbach, 1977:32). Expressing 32,4% as a proportion of 1,96, only 0,64 of every hundred pupils in grade 1 in 1963 obtained a matric exemption in 1974.

A problem exists in calculating the figure for Whites of the comparable cohort. The matric exemption rate for 1974 is not available. According to the South African Institute of Race Relations "no information on exam results has been published for a number of years" (South African Institute of Race Relations, 1976:234). One can, however, do the first part of the calculation and look at the survival rate of the White cohort. In 1974, 58,4 of every 100 Whites who were in grade 1, were in matric (figures extracted from South African Institute of Race Relations, 1976, the survival rate for the White matriculants in 1974 was thus 29,8 times that of Blacks in the comparable cohort.

We would like to present data for the cohort which was asked to respond to the questionnaire associated with the current study. Since the study was conducted in 1982, information is required for the 1970-1981 cohort. The enrolment figure for Whites in grade 1 in 1970 was unavailable but was estimated as follows. In 1968 the White enrolment in grade 1 was 10,16% of the total enrolment in White schools. In 1970 the total enrolment in White schools was 862302, so we have used the same percentage and have assumed the 1970 enrolment in grade 1 to be 87610. (figures extracted from South African Institute of Race Relations, 1971). We can thus compare our 1970-1981 Black/White cohorts. All figures except survival percentage, ratio of people eligible to attend university, and multiplicative comparisons between them are extracted from the South African Institute of Race Relations, (1971, 1972, and 1983).

We shall deal with the Black cohort first. In 1970, 645285 Black pupils entered grade 1, and 56920 of them survived to matric (8.8%). Of these, 12,5% obtained a matric exemption in 1981. Thus, 1,1 of every one hundred Blacks who entered school in 1970 were eligible to attend university in 1982. For the comparable White cohort the situation is dramatically different. Of 87610 who entered grade 1 in 1970, 55667 survived to matric (63,5%), and 49,1% of those

who survived obtained a matric exemption in 1981. Thus, 31,3 of every one hundred Whites who entered school in 1970 were eligible to attend university in 1982. If these figures are compared to those calculated by Auerbach (1977) it can be seen that the ratio of Black survival to White survival has improved. Only 7,2 times as many Whites reach matric as Blacks (compared to 29,8 times as many in 1974). However, the relationship between Black matric exemptions and White matric exemptions is dismal with 28,27 times as many Whites obtaining matric exemptions as Blacks. Interestingly, the overall pass rate for Whites in 1981 was an unbelievable 99,1%.

The above may be summarized in a table as follows:

Table 2.2 Black Versus White Survival Ratios and Matric Exemption Ratios: 1970 - 1981

	1970 GRADE 1	1981 MATRIC	ELIGIBLE FOR UNIVERSITY
Black	100	8.8	1.1
White	100	63.5	31.1

A characteristic of Black education since 1976 has been a large increase in the number of candidates, combined with a steady decrease in both the pass rate, and the matriculation exemption rate. The following table may be produced from

information in the 1983 Survey of Race Relations (South African Institute of Race Relations, 1984:439).

Table 2.3 Black Pass Rates and Matric Exemption Rates by Year

YEAR	NO. OF CANDIDATES	% PASSING MATRIC	% OBTAINING MATRIC EXEMPTIONS
1976	9593	83.4	35.5
1977	8225	71.7	27.9
1978	9804	76.2	38.8
1979	14574	73.5	28.4
1980	29973	53.2	15.7
1981	48571	53.5	12.5
1982	60108	50.8	10.5
1983	72168	48.3	9.8

In comparison, the matriculation exemption figure for Whites was 49.1% in 1981 (12.5% for Blacks) and 46.6% in 1983 (9.8% for Blacks). What we have is a situation where, although the total number of Blacks who are passing matric has increased dramatically (from 7666 in 1976 to 34876 in 1983), the proportion of candidates who have passed is decreasing (from 83.4% in 1976 to 48.3% in 1983). In addition, the proportion of candidates obtaining matric exemptions is decreasing even faster (from 35.5% in 1976 to 9.8% in 1983)

Up to now we have concentrated solely on inequalities experienced by Black scholars, in comparison to White scholars. We will in this study continue to emphasize Black education, but we should not lose sight of our theoretical mechanism for explaining education in South Africa developed at the beginning of this chapter, i.e., we should not in general ignore "class" and concentrate solely on race. As File (1986) points out, "While a lack of empirical information on the class background of students has hindered local research in this area it is apparent that there is a high degree of stratification within each of the education systems which seems to relate to class differences. For example, in Cape Town in 1982 Rustenburg achieved a 95% matric exemption success rate, Queens Park High 0% (both White schools) ... 16% of the Department of Education and Training Schools achieved an 80% senior certificate success rate in 1983" (File, 1986:28). Thus, although Blacks, in general, are worse off than Whites, if individual schools are examined matric candidates at some Black schools are doing better than candidates at some White schools.

We have examined some of the manifest symptoms of inequality in Black education. Let us discuss how the scholars have reacted to the situation. This is probably best summed up by the Survey of Race Relations (1976): the general feeling

was that they "were simply not interested in continuing their education under the present system" (South African Institute of Race Relations, 1977:324). The general feeling of discontent among Black scholars was externalized in the "disturbances" of 1976 and 1980, the boycotts of 1982 and 1984, and the continuing boycotts and "disturbances" of 1985, 1986 and 1987. The scale of the boycott action has been unprecedented in the history of South Africa, e.g., by September 1984 the estimated figure of Blacks boycotting Department of Education and Training schools was 130 000 (Rand Daily Mail, 19 September 1984).

As Hunter (1983) points out, the boycotts and disturbances of 1980 were initially concerned with "local" issues. Increasingly, however, "The lists of complaints continued to include such items as the physical conditions of schools, injudicious corporal punishment, compulsory school uniforms, the shortage of qualified teachers, the inadequate supply of text books and inter-racial disparities in teachers' salaries. ... reference was made to the inferior quality of Black education in general, the content of syllabuses, unequal resource-allocation among racial sectors of the system, and the policy of racially separate institutions and systems" (Hunter, 1983:16).

It was against this backdrop that the Prime Minister announced in June 1980 that the Human Sciences Research Council had been given the task of completing a large scale investigation into education across all races in South Africa. We are not going to examine in detail the findings of the De Lange Committee. But the recommendations made may be summarized as that: "equal opportunities for education, irrespective of race, should be the purposeful endeavor of the state, education should fall under one ministry of education" (Hunter, 1983:22) and "education shall give positive recognition to the freedom of choice of the individual" (Hunter, 1983:25).

The report was widely criticized. The main criticism was that the committee's recommendations were technicist, i.e., a response to industrial demands, divorced from social context (Chisholm, 1984). In any case the government did not accept the central recommendation of the committee. As Hunter states "In October 1981 the government published an interim memorandum accepting all eleven principles on which the De Lange Committee had agreed, but making it clear that it would see these as implementable only in relation to a policy having different Education Departments for the different population groups, with each population group

having its own schools, and the principle of mother-tongue medium being applied" (Hunter, 1983:25).

Needless to say, the boycotts and disturbances at Black schools continued.

Having provided some evidence of inequality in schools, we shall now look at the situation at universities in South Africa. Two areas will be examined: inequality in higher education, and Black matriculation scores in the context of "White" education (which is specifically our focus).

We have already seen how the 1959 act led to the creation of separate universities for Blacks and Whites. Blacks could only study at White universities if a permit for them to do so was obtained. A permit was usually only granted for post-graduate study. Although to begin with, this placed them in a small minority with attendant problems that we shall touch on, their circumstances were much less adverse than at the Black universities. By way of contrast it is worth briefly noting the attitudes of students at a Black university.

Penny and Millar (1983) analyzed transcripts of interviews with 30 members of staff and 1346 first year students at the University of Fort Hare during 1977-1979. The authors

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We have already seen how the 1959 act led to the creation of separate universities for Blacks and Whites. Blacks could only study at White universities if a permit for them to do so was obtained. A permit was usually only granted for post-graduate study. Although to begin with, this placed them in a small minority with attendant problems that we shall touch on, their circumstances were much less adverse than at the Black universities. By way of contrast it is worth briefly noting the attitudes of students at a Black university.

Penny and Millar (1983) analyzed transcripts of interviews with 30 members of staff and 1346 first year students at the University of Fort Hare during 1977-1979. The authors

detected a "deep-seated ambivalence in students' attitudes to the university they attend" (Penny and Millar, 1983:328). Although the University was perceived as a means of obtaining upward social mobility, it was also seen as an instrument of the state in the promotion of its ideology of separateness, and in the reproduction of the social relations associated with the current system.

Penny and Millar (1983) conclude that "the experience of coercion and political powerlessness that is Black experience of life in South Africa includes the experience of forced attendance at a segregated state-controlled institution. Furthermore, contrasting cultural and linguistic backgrounds make it difficult for staff and students to find in their curriculum the shared meanings and traditions of thought that make learning and teaching a mutually stimulating process" (Penny and Miller, 1983: 345).

We note that at the moment there are some 20 Black universities in South Africa, which served approximately 33414 students in 1983 (Shochet, 1987:41).

What of the role of "White" universities? At the time of the 1959 Act the University of Cape Town and the University of the Witwatersrand were admitting both Black and White

students and therefore referred to themselves as "open" universities. Between the period 1957 and 1983 White English-medium universities, particularly the Universities of the Witwatersrand and Cape Town, continually opposed this infringement on academic freedom. "In 1974 [they] not only re-affirmed their commitment to open universities but pointed out the infringement on academic freedom by the broader political context of South African society and concomitant repressive legislation" (Shochet, 1987:39). However, the universities concerned took little action apart from protest. They were never confronted with the problems associated with the admission of Black students. For example, the number of Black students at the university of the Witwatersrand in 1973 was a quarter of one percent of the total student population, as opposed to one and a half percent in 1959 (Orkin, 1964:3).

In 1983 the Universities Amendment Act repealed key features of the Extension of University Education Act. Universities were apparently free to admit whomever they liked. Unfortunately, the situation was not that simple, as Forsyth (1984) points out "... the Universities Amendment Act (1983) envisages only a change in which the 'racial' mix at the 'open' universities would be controlled. The act contains a provision that allows the Minister of National Education to

impose racial and other quotas on the admission of students and to withdraw subsidy from the universities if they fail to comply with the laid down quota' (Forsyth, 1984:14).

The open universities protested vehemently. They would not do the governments "dirty work". The Minister of Education, in the light of the protest, compromised and decided that the quotas which the Act allowed for would not be laid down. The Act itself was not repealed. The implication is obvious, i.e., if the Minister is unhappy with the number of Black students admitted, quotas could yet be imposed on Black admissions. In addition to the possibility of quotas being enforced if too many Blacks are admitted to "White" universities the state is exerting a more subtle form of pressure on university admissions.

The subsidy formula used to calculate the quantity of money the state grants each university was changed in 1983. Previously, the state subsidy to universities was based on the number of students in the university. The subsidy formula "...will now be based on a complicated calculation of the productivity of the university. In essence this means that the subsidy will depend on the amount of research carried out, the number of learned publications by staff

members and the pass rate of the university in question" (Forsyth, 1984:14).

The net result of the change in subsidy formula will be that it will be even more difficult for Black students to get into White universities. Matric performance (as we have seen, and will see) remains the best predictor of whether a student will pass or fail at university. To obtain a larger subsidy the pass rate must improve - so to improve the pass rate, one must surely raise the admissions criteria. But whom will this most severely affect? The answer is potential students at the low end of the matric rating range. Blacks are disproportionately represented at the low end of the scale, so they would be mostly excluded.

The introduction of more stringent selection procedures by universities was stated as being an explicit intent of the new subsidy formula by Dr. Gerrit Viljoen, Minister of National Education: "I am certain that this subsidy formula will have the effect of making the universities more selective with the admission of students and contribute to a greater emphasis being placed on excellence in the work of our universities" (Cape Times, 6 October 1983, cited in Nusas News, October 1983).

The Universities of Cape Town and Witwatersrand have accepted the subsidy formula with, in Orkin's (1984) words, "nary a peep" (1984:13). Orkin (1984) and Forsyth (1984) both seem to agree on the reason for the uncomplaining acceptance of the subsidy formula. Both universities are more productive in terms of research and publication than other South African universities; thus, they stand to gain more money in proportion to other universities by accepting the formula. The subsidy is also technicist in that it rewards output (both graduates and research) at a time when industry in South Africa apparently needs both. Keenan (1980) puts it a little more strongly. "University councils which represent as they do the state and big business... cannot impose straitjackets on the activities of the universities' members. But they do not need to do so. They can rely on the class interests of the majority of the staff and students. In other words the universities are as they are not because of the twin pressures of state and big business, but because the majority of their members share the values and interests of the state and big business" (Keenan 1980:44). Ah, Bowles would say, institutions within the society reproduce, reflect, and reward the dominant culture.

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Let us sum up the situation as presented so far. We have demonstrated blatant inequalities between Black and White schooling systems. As far as universities are concerned the most important result of this inequality is the questionable quality of Black education allied to the low number of Black scholars who receive matric exemptions (although we also saw that inequalities also exist within race groups). There are separate universities for Blacks and Whites and until recently Blacks could only attend White universities after they had obtained a permit to do so. From 1983 this direct control over the admission of Black students to White universities has been relaxed somewhat. However, there is still a subtle control in the form of the subsidy calculation and the unimplemented (but unrepealed) quota legislation.

What now of the focus of this study, disadvantaged students at the University of the Witwatersrand? In the light of the discussion hitherto we can accept, as Shochet (1987) does, that most of these disadvantaged students are Black. However, bearing in mind the literature we reviewed, we would not accept disadvantage being defined in solely racial terms. As a result of the extent of inequality in schooling as well as the explicit nature of state domination over

Blacks, it would be fair to term them uniquely, or doubly, disadvantaged.

As we did for Blacks at "Black" universities let us look, briefly, at how Blacks feel when they attend "White" universities. Vilakazi and Tema (1986) state the problem experienced by Blacks at White universities in a nutshell. "The correct starting point should be the realization that the problem is not the Black student, but the whiteness of the university itself" (Vilakazi and Tema, 1986:38). The authors believe that a common problem experienced by Black students at White universities are remarks or behavior which may be interpreted as racist. The problem lies not in the ratio of Blacks to Whites in the student body, but with the ratio of Blacks to Whites in the power structure of the university. "The organised power of Whites has over the generations so openly conspired to deny or distort opportunities for development for Blacks that the whiteness of any institution or committee immediately warns the masses of Blacks that they cannot expect justice from that institution or committee" (Vilakazi and Tema, 1986:38).

This has implications for both pass rates (problems with motivation and attitude) and academic support (mainly administered by Whites). The authors have two

recommendation: the educators need to be re-educated, and (at least for Black applicants) matric marks should be replaced as the criterion for admission with an in-depth interview. We elaborate on the latter in the Conclusion.

This leads us into our next area of investigation. What happens to Black students who manage to gain admission to a "White" university? Let us examine Black pass rates at "White" universities, with specific reference to the University of the Witwatersrand.

One of the earliest studies of failure rates at the University of the Witwatersrand was a Senate investigation into first-year failure at Wits conducted during the period 1975-1979. The report (University of the Witwatersrand, 1979) consisted of cross-tabulations of pass rate by a number of variables considered important to the University. No specific emphasis was placed on race, since nearly all students at that time were White.

Classen and Orkin (1983) first addressed the question of Black pass rates, in the Faculty of Arts at Wits in 1982. The analysis was conducted to ascertain whether an increase in the minimum requirements for admission would in any way unfairly discriminate against Blacks. The analysis was in

response to a pending increase in admissions criteria. The authors conclude: "The pattern that emerges from the analysis seems to us to be clear. Black pre-matric scores do not differ significantly from White pre-matric scores. However, Blacks do less well in their matrics than in pre-matric; Whites don't. Yet when these Blacks get to University, they do as well as Whites overall, and better than Whites in comparable matric rating ranges: both in the proportion of Blacks who pass and in the number of subjects they pass. They achieve this despite the fact that about two-thirds of the Blacks as compared to a few percent of Whites enter with matric ratings below 24. We conclude that there is a downward bias in Blacks' reported aggregate matric symbols; so that to decide to exclude them on the strength of these symbols, in the same manner as for Whites, would be racially discriminatory" (Classen and Orkin, 1983:7).

The response to the article was fairly rapid and vocal. Some reporters, e.g., the Sowetan of October 21, 1983 and the Sunday Tribune of October 23, 1983, attempted to use the article to support claims that the Department of Education and Training (DET) was deliberately lowering the matric marks of candidates. The authors did not, in fact, claim this. The DET in turn responded to the analysis and

criticized it on a number of grounds ranging from statistical adequacy to the relevance of pre-matric marks. It is not relevant to engage the debate here, but we do wish to point out that the DET denied any "fixing" of marks, noting that the Joint Matriculation Board acted as a moderator in respects of Senior Certificate Examinations. However, "in August [1984] it was revealed that the Transvaal Education Department (TED) awarded more distinctions than had been recommended by examiners...e.g., 400 were recommended in Biology, 818 eventually awarded" (South African Institute of Race Relations, 1985:681). In other words, what Classen and Orkin's results may have actually been manifesting was the upward bias in the reported White marks.

The overall position taken by the authors may be summed up as being that Blacks do better at university than their matric marks would lead one to expect. Support for drawing distinctions of this kind comes from an inquiry conducted by the Human Sciences Research Council (HSRC). The HSRC investigated what the effect would be of increasing the minimum number of marks necessary to obtain a matric exemption from 950 to 1050. The HSRC states that "significant differences were found in a number of study fields between the success rate of students who, although

falling in the same school aggregate category, wrote their Standard 10 examination under different examining bodies" (HSRC, 1985:5). Moreover, "18% of the B.A. (languages) students and 27% of the B.A. (non-languages) students with a school aggregate of between 950 and 1050 achieved success at university" (HSRC, 1985:5). This study will attempt to achieve a characterization, in terms of biographic variables, of students who fall into these categories.

3. METHOD OF INVESTIGATION

3.A. Underlying Philosophy of Methodological Approach

According to Golden (1976), social research may be divided into four categories: exploratory research, with the general goal of generating hypotheses for further investigation; descriptive research; research to establish or validate relationships (an "outgrowth" of descriptive research); and causal research, which has some form of prediction as its outcome.

The goals of this research project are to examine some previously established relationships as well as to generate and explore a few new relationships based on current data, i.e., in Golden's terms the goals of this study are exploration and validation.

More specifically the aim of the research is to attempt to isolate, and if possible characterize (in terms of biographic/social variables) a group of people. All that may be assumed about the group of people is that they have comparatively low matric marks and that they passed B.A.I in 1982. At the time the analysis in coming chapters was performed there was much speculation as to what

characterized this group. However, within the South African context little research on biographical antecedents of academic performance at university had been performed. The reason for this was twofold. As pointed out by Shochet (1987) and Mortimore and Blackstone (1982) techniques currently available for the analysis of data within the hypothetico-deductive paradigm do not adequately allow for the complexity of biographical or social variables. Secondly, there was not, until recently, a perceived need for this form of research to be performed.

The sections in the literature review on the current crisis facing South African universities adequately takes care of the second point - there is a pressing need for research on how to distinguish academically adequate candidates from academically inadequate candidates.

We would like to address ourselves to the first problem, the problem of researching biographic/social variables. We would like to begin by asking what "scientific" methodology, with specific regard to sociology, does for the discipline.

Following the general pattern of the literature review, and indeed that of the conflict-orientated view of society as a process, we would contend that following a traditional

scientific approach for the "doing" of sociology has a purpose which is not immediately apparent. This purpose is the legitimization (within the scientific community) of the practice of sociology.

Let us summarize a traditional scientific approach to social research. Kneller (1978) believes that by "scientific method we mean the rational structure of those scientific investigations in which hypotheses are formed and tested" (Kneller, 1978:118). A social scientist identifies or notices a problem. He or she then proposes a hypothesis which "explains" the problem. Predictions may be deduced from the hypothesis. The scientist attempts to refute the hypothesis by testing the predictions. For Kneller (1978) the process is self-corrective since "by eliminating the incorrect hypotheses, the scientist narrows the search for the correct one" (Kneller, 1978:118). This is a simple view of how scientific sociology traditionally proceeds. The method legitimizes sociology as a science because it is a copy of the method which is purportedly used in the already accepted "hard" natural sciences.

The above method may be seen as a response to Hume's problem of induction (and the solution of the logical empiricists to that problem). Creating general laws from specific instances

(induction) gives rise to the problem that all laws may be refuted by the next occurrence of the event. For example, all pieces of copper have, up to now, expanded when heated. If the next piece of copper to be heated does not expand, what happens to the general law that copper expands when heated? Indeed, what happens to science? The logical empiricists tried to circumvent the problem by proposing some "probable certainty" with which an inductive theory may be trusted. This was not enough for Popper who is credited with the current "scientific" method of refutation of hypotheses outlined above.

For Popper the method of refutation of hypotheses copes with the problem of induction because although a theory cannot be proved it may be falsified, and until it is falsified the theory may be used as explanation. The goal of science is thus refutation of theory or refutation of conjectures stated as hypotheses, based on the theory. Two problems are evident. For Kneller (1978) Popper has not escaped the problem of induction. "We verify a test statement by repeating the observation it records. But to accept the first test on the strength of the second is to accept it inductively. Thus Popper relies on induction after all" (Kneller 1978:56). Secondly, if the goal of science is refutation of hypotheses what does the researcher do with

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