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EDUCATIONAL ASPIRATIONS OF FOURTH-FORM PUPILS IN KENYA

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In this paper we shall be concerned mainly with analysing some of the factors which help to determine the educational aspirations of fourth-form secondary school pupils in Kenya. We shall also discuss the effects which these aspirations have on the processes of selection for opportunities in further education, training, and employment after the pupils leave form four, and describe briefly some practical steps which are being taken to improve selection.

The data on which the paper is based come from a questionnaire which was administered to fourth-form pupils in a sample of Kenya secondary schools in October 1969. The study is part of a larger project, termed the Tracer Project, in which an attempt is being made to follow up samples of pupils who completed fourth-form education between 1965 and 1969, and to trace their careers in further education, training, and employment. The 1965-1968 cohorts are being studied retrospectively; that is, we started collecting information only after the pupils had completed form four. Peter Kinyanjui is reporting some results from this part of the project at this Conference. But with the 1969 cohort it was possible to obtain data by questionnaire before the pupils left school. Topics covered in the schedule included educational and occupational aspirations and expectations, and background factors such as father's education and occupation.

The 1969 sample consisted of 21 randomly selected secondary schools from all over Kenya, stratified by province. Seventeen of the schools were for boys only, two were co-educational, and two for girls only. We also obtained questionnaire data from three schools which were outside the random sample. This was done in order to cover as fully as we could the complete range of types of secondary school found in Kenya. Two of these supplementary schools were national-catchment low-cost schools, one for boys and the other for girls. Both these schools have long-established reputations for academic excellence, and have contributed altogether disproportionally to Kenya's educated elite. The third school in the supplementary sample is an agricultural school for boys. Because in this paper we shall be concerned with examining relationships among factors rather than with estimating population parameters, we shall analyse the data from the two samples together, without distinguishing between them.

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[1] I wish to acknowledge the help I have received from my colleagues P. Kinyanjui, E. Rado, and J. Anderson. An earlier and much shorter version of this paper was read at the University of East Africa Social Science Conference, Dar es Salaam, in December 1970.

Completed questionnaires were obtained from 1253 pupils in the 24 schools in our random and supplementary samples. Nine hundred and ninety-three of these pupils were boys, and 260 were girls. We are now attempting to follow up these pupils, to find out what has happened to them in the year since they completed form four. This information, however, is not yet complete, so this paper is based mainly on the questionnaire data, together with school certificate results obtained from Ministry of Education records.

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In two questions near the beginning of the schedule pupils were asked about their aspirations and expectations for further education and training. In the first of these questions, pupils were asked how far they wanted to continue their education, and in the second how far they thought they would be able to continue. We anticipated that the questions might produce very different answers: pupils might want to continue their education as far as possible, but at the same time be quite realistic in their assessment of how far they were likely to be able to continue. In both questions five alternative answers were provided:[1] as far as school certificate (O Level) only, and then enter employment;[2] as far as as O level, and then enter a job training course;[3] as far as A level, and then enter employment;[4] as far as A level and then enter a job training course;[5] as far as University. The distribution of answers to the two questions is given in Table 1.

Table 1. Further Education Wanted by Further Education Perceived Obtainable

Pupil's perception of further educ. obtainable	Further education wanted						TOTAL
	O Lev→ Job	O Lev→ Train.	A Lev→ Job	A Lev→ Train.	Univ.	NR	
O Lev.→ Job	30	13	0	2	2	0	47
O Lev.→ Train.	14	517	1	5	13	2	552
A Lev.→ Job	0	1	12	5	6	0	24
A Lev.→ Train.	0	1	2	42	17	0	62
University	0	13	4	2	265	0	285
NR	3	10	0	0	6	5	24
TOTAL	47	555	19	56	309	7	993

It can be seen at once that the results are very different from those we anticipated. As many as 871 pupils, or 87.7% of the sample, answered the two questions in exactly the same way. Only 46 pupils (4.6%) said they would like to continue their education to a higher level than they thought would be possible. But these unexpected patterns certainly did not result from any failure on the part of the pupils to modify their

educational experience. Rather, their experience seems to have affected both their expectations and their aspirations. Only two-fifths of the pupils (39.3%) said that they expected to continue their formal education past O level, and the proportion who wanted to continue was only marginally higher (39.7%).

Table 2 compares the school certificate performance of pupils in the various educational aspiration categories. With every breakdown of the data which we carried out, the results for educational aspiration and educational expectation were virtually identical, so tables for the latter variable will not be included in this paper. It is apparent that educational aspiration is strongly correlated with school certificate performance: pupils who want to continue their education to higher school certificate or university tend to have much better marks than those who want to leave school after O Level.[1] The results of Tables 1 and 2 taken in conjunction indicate clearly that most students have quite realistic perceptions of their educational prospects. Only a minority want to continue past school certificate, and these tend, for the most part, to be the abler students.

Table 2. Further Education Wanted by Overall School Certificate Performance (Mean Grade Aggregate).

Further Education Wanted	N	Mean Gr. Agg.	S.C. Division Div. 1	EACE + FAIL
None; wants to leave after O lev	603	38.74	7.2%	43.7%
Wants to continue to A lev (HSC)	75	32.90	13.3%	24.0%
Wants to continue to University	309	29.93	35.5%	19.7%
NR	6	-	-	-
TOTAL	993	35.55	15.61%	34.85%

Table 3 (on the next page) shows the relationships between educational aspirations on the one hand, and subjects taken for school certificate and performance in those subjects, on the other. Pupils wanting to continue their education to higher levels tend to be taking the more specialised science subjects (Physics, Chemistry, Physical Science, Biology), which are the subjects being given priority in current higher secondary school development plans, because of Kenya's projected manpower needs. Literature in English also tends to be popular with those seeking further education. By contrast, the school certificate courses of pupils not seeking further academic education tend to be made up from among the non-specialised science subjects (General science, Health Science, Geography) and some non-science subjects (Bible Knowledge, Swahili).

Performance in most individual School Certificate subjects is related to the level of educational aspiration in much the same way

[1] The school certificate marking system works in the opposite direction to most marking systems: a low grade aggregate indicates good performance, and a high aggregate poor performance. The range of possible aggregates is from 6 (6 grade 1 passes) to 54 (6 failures).

as is the aggregate mark. Pupils who want to go to university generally score about one-half to two-thirds of a standard deviation higher than those who want to leave after form four. But there are two conspicuous exceptions: Health Science and Swahili. In each of these subjects the mean grade of pupils wanting to continue their education past form four is only slightly higher than the mean grade of pupils not wanting to continue. Despite this, the relationship of overall school certificate performance to level of aspiration among both the Health Science and the Swahili candidates is

Table 3: Further Education wanted, by School Certificate Subjects Taken and Mean Grade

School Certificate Subject	% Taking Subject			Mean Grade (those taking subject only)		
	Further Educ. Wanted			Further Educ. Wanted		
	None	Alev.	Univ.	None.	ALev	Univ.
Mathematics	92.3	92.0	95.2	7.05	6.22	5.77
Physics	22.5	28.0	29.7	6.38	5.38	4.92
Chemistry	24.1	30.7	32.6	6.09	5.61	4.91
Physical Science	30.0	25.3	35.5	6.36	5.37	4.97
General Science	27.0	28.0	19.7	6.39	5.57	5.43
Biology	72.2	72.0	75.5	6.66	5.56	5.00
Health Science	33.8	28.0	24.8	5.97	5.38	5.91
Geography	96.0	96.0	89.0	6.43	5.40	5.00
English Lang.	100.0	100.0	100.0	6.78	5.96	5.39
English Lit.	39.1	53.3	58.1	6.94	6.10	5.28
History	78.4	86.7	78.1	7.54	6.98	6.43
Bible Knowledge	58.6	60.0	51.9	6.70	4.42	5.00
Swahili	47.5	48.0	42.9	7.68	7.75	7.41

much the same as it is in the sample as a whole: high-aspiration pupils have much higher mean grade aggregates than low-aspiration pupils. The most plausible interpretation of these results is that pupils who are seeking further academic education and who are taking either or both of these subjects regard them as being less important than their other school certificate subjects, and work less hard at them. For a pupil wanting to maximise his chances of getting a higher school certificate place, this may well be a rational strategy. In the first place, his overall result will not necessarily be affected adversely, and may even be improved. Most pupils take seven or eight subjects for school certificate, but the overall result (grade aggregate) is calculated from the best six only. Thus, if time is short, it may be wiser to concentrate on doing well in six subjects than to spread one's efforts over seven or eight. In the second place, headmasters of sixth-form schools show a marked tendency to prefer pupils

who have performed well in certain key subjects - notably English, Mathematics, and the more specialised sciences. Poor performance in Health Science or Swahili would certainly not debar a candidate from a higher school certificate place if he had obtained high marks in Mathematics and Physics, but if his performance profile were reversed his chances would be much slimmer.[1]

We can thus see that reality factors are of major importance in determining the aspirations which fourth-form pupils have for further education. Pupils understand clearly that fifth-form selection is severe: only a minority want or expect to contine their academic education past form four at all. Furthermore, pupils understand that that their chances of further education hinge upon their academic achievement: high-aspiration pupils perform much better in school certificate than low-aspiration pupils. And finally, pupils seem to understand that certain school certificate subjects are weighted more heavily in making fifth-form selections than other subjects: high-aspiration pupils tend to include more high-priority subjects in their school certificate courses, and to perform relatively better in them than in low-priority subjects.

But we must not labour the point. While our conclusion is certainly supported by the overall trends within the sample, the responses show a wide scatter, so that for a substantial minority of pupils the fit between educational aspirations and school certificate achievement is poor. It can be seen from Table 2, for instance, that nearly 20% of the pupils who said they wanted to continue their education to university either failed the examination completely, or obtained an EACE pass only. A further 20% passed in Division III (grade aggregate approx. 35-44). Some of these pupils may have underperformed in the examination, but most of them probably never had any real chance of being selected for fifth-form education (a grade aggregate of better than 30 is usually necessary before a pupil is considered). To explain the aspirations of these pupils we must look for factors other than their academic status. Two major sets of factors have been identified. The first consists of the closely associated factors of school quality and school type, and the second of factors deriving from the educational and occupational background of the pupil's family. We shall consider the effects of the school quality and school type factors first.

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[1] It is interesting to note that the aspiration-performance relationship for Bible Knowledge does not follow the same pattern as that for Health Science and Swahili: high-aspiration pupils perform very well in Bible knowledge. Perhaps the fact that many sixth-form schools retain close links with Christian missions may be relevant.

School quality is notoriously difficult to measure. Generally we are reduced to using some crude assessment based on the average performance of the pupils in a terminal examination. But this is open to two main objections. In the first place, there may be subtle aspects of intellectual and personal development which are not reflected in examination marks but which are nevertheless critical for effective performance when the pupils leave school and start work. In a large-sample survey such as this, where there has been little opportunity for intensive observation, there is nothing we can do to meet this objection. The second objection is that the quality of the output from a secondary school is determined not only by the quality of the instruction the pupils have received, but also by the quality of the intake. This is particularly important in Kenya, where over recent years a rather unique three-tier system of secondary education has evolved, with major differences between the tiers in the quality of the pupils they recruit. The top tier consists of the national-catchment schools, now called extra-provincial schools. These schools are highly selective, and recruit a disproportionate share of the most able primary school leavers. The middle tier is made up of the government-maintained local-catchment schools, which are less selective; while the bottom tier consists of unaided Harambee schools, which are essentially non-selective. Clearly, if we use average school certificate performance as a rough measure of school quality, we must control for the effects of recruitment differences among the three types of secondary school. But as well as recruitment differences, the schools vary among themselves in a number of other ways, some directly concerned with educational quality and some not. These differences will be of crucial importance in the interpretation of data to be presented both in this and in later papers, so before continuing to give more results, we shall discuss the differences between the three types of school in some detail.

The national-catchment schools, as their name implies, recruit their pupils from all over the country. They select their intake before other secondary schools, at a meeting held in Nairobi. They tend to attract teachers of high calibre, because they are established and well-known. Their standards of physical equipment are high. National-catchment schools are of two kinds; low-cost and high-cost, which are in many ways quite different from each other. There are only four low-cost national schools, three for boys and one for girls. They were all built by Christian missions, three of them before the Emergency, specifically to provide secondary education for Africans. Selection for entry is extremely competitive, and is based mainly on performance in the selection-examination (CPE). There is a quota for each area of the country. Fees are no higher than in other Government-maintained secondary schools. High-cost national schools were originally

built to cater for Europeans. They are now multi-racial. Two are for boys, and five for girls. Because higher fees are charged, competition for entry is not as intense as it is for low-cost national schools, although a generous bursary scheme operated by the Kenya Government makes it possible for many pupils from low-income families to enrol.

Our random sample included one high-cost national school (for boys), but no low-cost national school. We therefore included two low-cost schools, one for boys and the other for girls, in the supplementary sample. These two schools are perhaps the best known schools in Kenya. Over the years they have achieved consistently excellent results in school certicicate and other external examinations, although they have often been equalled, and sometimes surpassed, by other national schools.

Seventy-seven and thirty-five boys completed the questionnaire in the low-cost and high-cost national schools respectively. Together, these pupils made up 11.2% of the total boys' sample.

Local-catchment schools, by contrast, usually draw most of their intake from a fairly small area, and very often a majority of the pupils are of one tribe. These schools are maintained or aided by the Government, and all charge relatively low fees. Selection for entry is severe, but not as severe as for national low-cost schools. In most districts places are available in local-catchment schools for about 10-15% of the pupils sitting the secondary school selection examination. Local schools are of more recent orgin than national schools: the great majority have been established since the end of the Emergency, and about half since Independence.

Teachers in local-catchment schools are for the most part well qualified. In a typical school nearly half the teachers are likely to hold a university degree, and as many as three-quarters will hold a teaching qualification of some kind. There will be at least one laboratory equipped with gas and running water, and the library may contain several thousand books.

A high proportion of local-catchment schools are sited in rural areas. They often tend to form rather self-sufficient enclaves, isolated not only from the towns and cities, but also from the local rural community. The teachers typically live in houses on the school compound, and most of the pupils are boarders; even, in some schools, when their homes are within walking distance. Most of the facilities needed for day-to-day life in the school are to be found on the compound.

Government-maintained local-catchment schools provide education for the bulk of Kenya's secondary school pupils, particularly at the fourth-form level. In our sample, 79.9% of the boys are enrolled in schools of this type.

The final type of secondary school is the unaided Harambee school. These schools have been built by local self-help initiative, in response to the shortage of places in Government-maintained schools. The first were opened in 1964. They offer a two-year or four-year education, leading to the Kenya Junior Secondary Examination, or the East African Certificate of Education (School Certificate). They teach the same courses as maintained schools, except that because of shortages of equipment and specialist teachers they tend to concentrate on subjects which can be taught from a textbook, such as Health Science, Bible Knowledge, History and Geography. The intake is non-selective. Any pupil with a bare pass in the selection examination can be assured of a place in most Harambee schools, providing he can find the fees. These, on average, are about 50-75% higher than in maintained secondary schools.

Compared with Government Schools, most Harambee schools are poorly staffed. A good school may have a trained S1 or P1 teacher as its headmaster, and perhaps one other trained Kenyan teacher. If the school is fortunate, it may also have one or two overseas volunteer teachers. The other teachers, however, are likely to be untrained, and to have at best a second-division or third-division school certificate pass as their only qualification. Harambee schools are also nearly always badly equipped. Some of the better schools now have small libraries and rudimentary laboratories, usually without running water or gas, but just as often the only equipment consists of a few sets of classroom textbooks, a box of exercise books, and some sticks of chalk.

Because they were built by self-help, most Harambee schools tend to be less isolated from the local community than maintained schools. But the role which local leaders play in running the school once the buildings have been erected varies a great deal. In some schools the committee continues to function effectively, and takes responsibility for such things as maintaining and extending the buildings, buying equipment, and even for collecting school fees and recruiting teachers. More generally, however, these functions are carried out mainly by the headmaster, and the committee meets infrequently. Nevertheless local interest in the school is usually maintained, if only because many of the people who contributed to its building are also the parents of pupils.

For the first few years the development of Harambee schools was extremely rapid. By 1968 their first-form intake exceeded that of maintained and assisted schools.[1] At the fourth-form level, however, Harambee school enrollments make up a much smaller proportion of total enrollments, both because many Harambee schools have not yet reached form four, and because dropout is heavy, In our sample, only 9.1% of the boys are enrolled at Harambee schools.

We did not attempt to obtain systematic data on the quality of the intake into the three types of secondary school, because pupil reports are unreliable and school records incomplete. There is no doubt, however, that the differences are substantial, both in terms of average marks in the selection examination, and also, perhaps equally important for their future progress, in terms of the pupils' perceptions of their own educational potential. These differences can perhaps best be illustrated by considering what is likely to happen in average year to the candidates for secondary school selection in a primary school of good quality in a better-developed part of Kenya.

For the last two or three years of their elementary education, the efforts of the pupils will have been increasingly directed towards the secondary school selection examination. The activity-oriented approach of the lower standards will have given way to a much more circumscribed drive to learn and re-learn the large body of factual information included in the examination syllabus. The interest and relevance of a particular piece of information will come to be seen as being determined entirely by whether or not it is likely to be asked in the examination. During the last year extra study periods will probably be arranged; before or after school, in the term holidays, or even at night. A good deal of attention will be given to the specialised technique of answering multiple-choice questions. The class will be told of the careers of former pupils who passed the examination well. Their attainments will be attributed to hard work, with the moral that similar success can be achieved by almost anyone prepared to do the same. In the task-oriented atmosphere of the upper primary school there is little sympathy for the view that a pupil's intellectual shortcomings may be due to factors over which he has no control.

If the school is double-streamed, there will be about 60-75 selection examination candidates. In a good year, one of these candidates may be accepted for a national low-cost school, and perhaps another one for a national high-cost school, if his father can afford

[1] There are indications, however, that the period of rapid development may now be nearly over. In 1969 there was a sharp deceleration in the growth of the first-form Harambee school intake, although the number of new schools being opened continued to grow as rapidly as ever.

the fees. The entrant to the low-cost school is likely to be a pupil of exceptional performance. His success will be widely discussed in his home area, and will bring credit to his teachers and prestige to his school. He will be seen as having crossed a major obstacle - perhaps the major obstacle - on the path to becoming an educated and prosperous man. He will become a role-model for the pupils sitting the selection examination in the following year.

A small group of pupils - numbering perhaps between three and ten, depending on the quality of the school - will be accepted by local-catchment maintained secondary schools. Most of these pupils will be well above average in educational attainment. The size of the group is important in determining the local reputation of the primary school, but successful selection does not bring nearly as much attention to the individual pupil as does selection for a national low-cost school, or even for a high-cost school. Even a poor-quality primary school can expect in most years to get a few pupils into local maintained schools, so the pupil passes on to secondary school as one of a group, rather than as a specially singled-out individual. Some particularly ambitious pupils, indeed, may regard selection for a local school as partial failure, especially if a classmate with whom they may have competed on equal terms during the year is going on to a national school.

A third group of pupils will enter unaided Harambee schools. In the more prosperous parts of the country, where self-help secondary school building has been pursued with most vigour, this group is likely to be bigger than that entering local maintained schools. But it will be much less homogeneous in quality. Some pupils, victims of the inefficiencies of secondary school selection, will be just as capable as most of those entering maintained schools. Others, by contrast, will barely have mastered the basic skills of reading, composition, and simple calculation. Most Harambee schools have to meet all their recurrent expenses, and sometimes their capital expenses as well, from school fees alone, and so are forced into accepting virtually any applicant who can afford to pay.

But despite their diversity in educational attainment and potential, Harambee school entrants share one important characteristic: they all regard themselves, and are so regarded by others, as academic failures. In judging performance in the selection examination there is only one criterion that counts: success in gaining a place at a Government - maintained secondary school. A pupil's examination mark

may be in the top quartile, but if he does not gain a place, he has failed. Harambee school education is seen very much as a second-best or third-best choice, accepted only because the alternatives are even less attractive.

It is clear from our discussion that the various characteristics which differentiate the three types of secondary school will tend to reinforce each other in their effects on educational performance. The pupils who enter national-low-cost schools are extremely able, and they have each experienced before they arrive a major educational success. Many have an already-established local reputation to maintain. In secondary school they are taught for four years by well-qualified teachers working with first-rate equipment. By contrast, Harambee school recruits are mostly of lower educational potential, and each has experienced a failure in his first encounter with the educational selection system. They enroll for Harambee school education as the best of a bleak set of alternatives. They are then taught by underqualified teachers working with meagre equipment.

It is hardly surprising that huge differences in educational attainment result. If the 21 schools in our sample are arranged in descending order of mean school certificate grade aggregate, the two national catchment schools are at the top, with the low-cost national school nearly six grade-aggregate points (more than half a standard deviation) better than any other school. The 14 local-catchment maintained schools follow, and the five Harambee schools are grouped together at the bottom.[1] The differences in mean grade aggregate among the three types of school are striking:

	N	Mean Grade Aggregate
National Catchment Schools	112	25.90
Local Catchment Schools	791	35.94
Harambee Schools	90	45.27

There is a ten-point difference (0.89 of a standard deviation) between the average school certificate grade aggregate obtained by pupils in national-catchment and local-catchment maintained schools and a further nine point difference (0.83 of a standard deviation) between local schools and Harambee schools. As many as four-fifths of the pupils in national schools achieved division 1 or 2 passes, as compared with less than half of those in local national schools, and only 10% of those in Harambee schools.

[1] The boundaries between the three types of school are not, however, sharply defined. The best local maintained school in the sample averaged only 0.16 of a point lower than the poorer national school, while the best Harambee school was only 0.41 of a point behind the poorest maintained school. In the total population of Kenya secondary schools there is a certain amount of overlap between the types.

The differences between national-catchment, local-catchment, and Harambee schools are thus largely differences in educational quality. The three types of school differ in the calibre of their recruits, the quality of the instruction they provide, and in their success in school certificate.

But this is not the full picture. The schools are separated not only by their contemporary educational performance, but also by their past achievements. The national catchment schools, particularly the low-cost national schools have a long tradition of academic excellence. Until less than 20 years ago, the only means to educational advancement open to an African primary school pupil was through entry to one of these schools. Because the economic and social rewards to the successful completion of secondary education were so great, and because the available places were so few, competition for entry was intense, and the prestige of those who succeeded was high. Gaining admission to secondary school was a more difficult hurdle to overcome than passing the school certificate examination at the end of the course. Thus the mere fact that he had been accepted for secondary education was enough to set a primary school leaver apart from his fellows, and to mark him as a potential member of Kenya's educated elite. With the transfer of control from the colonial administration to the independent Kenyan government in the early 1960's, a high proportion of the graduates of these schools moved quickly into positions of political and administrative authority within the country. Many of these men still maintain close links with their old schools, often serving on the Board of Governors, but even if they do not, they are remembered in their school as old pupils who have succeeded. Thus they tend to become a reference group for the present-day pupils, helping to shape their aspirations and expectations, and at the same time buttressing the prestige of the school.

Nowadays there is little to choose between the low-cost national schools and the best local-catchment schools in terms of examination performance; indeed, if the rather lower calibre of the intake into local schools were taken into account it could probably be shown that a number of local schools provide education which is in no way inferior. But in their possession of impressive lists of old boys, the national low-cost schools have a decisive advantage, and one which is not likely to be eroded quickly. Most local schools, it will be remembered, are of comparatively recent establishment: the oldest of them were opened during or just after the Emergency. It takes as much as ten years from the time when a newly established school accepts its first intake into the lowest form to the time that the first old pupils graduate with a university degree. Thus a high proportion of the ablest products of the local schools

have either not yet completed their formal education, or, if they are in employment, still occupy comparatively junior posts. Most of those who do have jobs arrived on the job market a little too late. The highly favourable opportunities for rapid promotion into senior positions which existed for a short time after Independence had already disappeared; pre-empted, very largely, by graduates of the national low-cost schools, who had had the advantage of a few years' seniority. The high prestige of the national low-cost schools was originally established because they provided at the time the only means of access to scarce and highly valued opportunities; but the maintainance of their prestige through to the present day depends more on their demonstrated success in preparing pupils to fill positions of authority and influence in Kenya than it does on their contemporary educational achievements.

What effects do these differences between the three main types of secondary school have on educational aspirations? Table 4 sets out the relevant data.

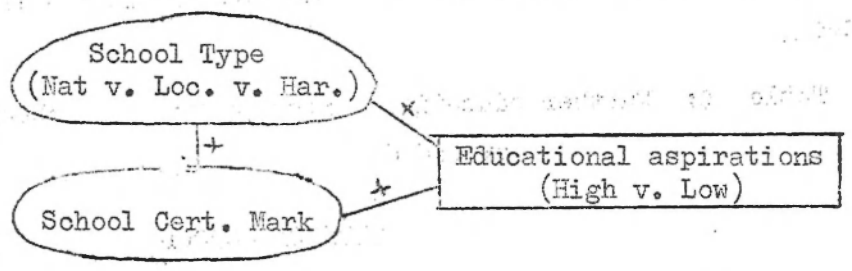
Table 4: Further education wanted by type of school attended

Further Education Wanted	TYPE OF SCHOOL			TOTAL
	National	Local	Harambee	
O Level only	33 (29.7%)	500 (63.2%)	69 (76.2%)	602
A Level	12 (10.8%)	58 (7.3%)	5 (5.6%)	75
University	66 (59.5%)	228 (28.8%)	15 (16.7%)	309
N.S.	1	5	1	7
TOTAL	112	791	90	993

Clearly the type of school a pupil has been attending is strongly associated with how far he wants to continue his education. Most pupils at national schools have high aspirations: more than two thirds want to continue their education through to A level (Higher School Certificate) at least, and about three fifths hope to go to University. By contrast more than three-quarters of the pupils in Harambee schools are not aiming at anything more than a pass in the E.A.C.E. (School Certificate) examination at the end of their fourth year (although, like low-aspiration pupils from other types of school, most of them would prefer to enter a job-training course after leaving school rather than seek employment immediately). The aspirations of pupils in local catchment maintained schools are intermediate in character, but they are much closer to those of Harambee school pupils than they are to those of pupils in national catchment schools.

But what of the effects of differences in educational achievement on these relationships? We have already seen in Table 2 that there is a strong association between success in school certificate and aspirations for further education: pupils with better marks tend to have higher aspirations. Furthermore, there are large differences between the three types of secondary school in their average school certificate performance (p 11). We thus have a situation in which two independent variables (school type and examination performance) are both strongly correlated with a dependent variable (educational aspirations) and at the same time strongly correlated with each other. The relationship of each independent variable with educational aspiration will thus to some extent be contaminated by the effects of the other.

Fig. 1. Associations among school type, school certificate mark, and educational spiration



Note: In this and later figures, independent variables are indicated by by ovals, and dependent variables by rectangles.

It may well be objected to the formulation just given that school certificate performance cannot be treated as an independent variable, and as a possible determinant of educational aspiration, because our measure of aspiration was obtained several months before the students knew their school certificate marks. (The questionnaires were completed in October, and pupils did not know their school certificate marks till the following March). What we are doing is to use the school certificate mark as a surrogate for a measure of the pupil's general academic status during his fourth year of secondary education. This status can be regarded as being made up of two components: (i) the pupil's status relative to other pupils in the same school and class, and (ii) the status of the school relative to other secondary schools in the country. If we ignore the effects of measurements errors and also the effects of performance changes over time, we can perhaps accept the school certificate mark as a satisfactory substitute.

What is more important is the extent to which fourth-form pupils have knowledge of their academic status, before it is defined for them by their school certificate results. Under some circumstances the information available to the pupil is likely to be misleading, so that his perceived

status may be very different from his real status. This is likely to have serious consequences if, as is the case in Kenya, he must take crucial decisions as to his future career before the examination results are known. We shall discuss this point in greater detail later in this paper, when it will become relevant as a possible explanation for some of the relationships we shall be examining.

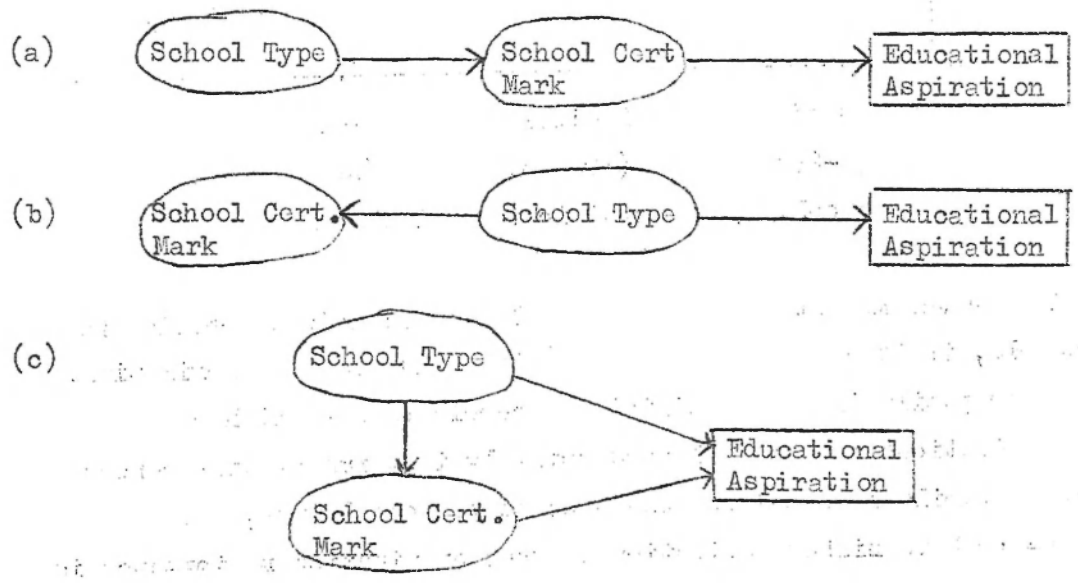
There are three alternative causal patterns which might be compatible with the relationships summarised in Fig.1:

(a) The variations in educational aspiration may be due entirely to differences in educational achievement. The type of school in which a pupil is educated may have no effects on his educational aspirations, except inasfar as it influences his achievement (see Fig. 2a) In this case one would expect aspirational differences among the school types to disappear when school certificate achievement is controlled.

(b) Alternatively, the differences in aspiration may result entirely from differences between the school types. It may be the type of school a pupil attends which determines his educational aspirations through its effects on his self-perceptions: educational achievement may appear to be important only because it is also affected by school type see Fig. 2b). If this hypothesis holds, one would expect the correlation between school certificate mark and educational aspiration to disappear when school type is controlled.

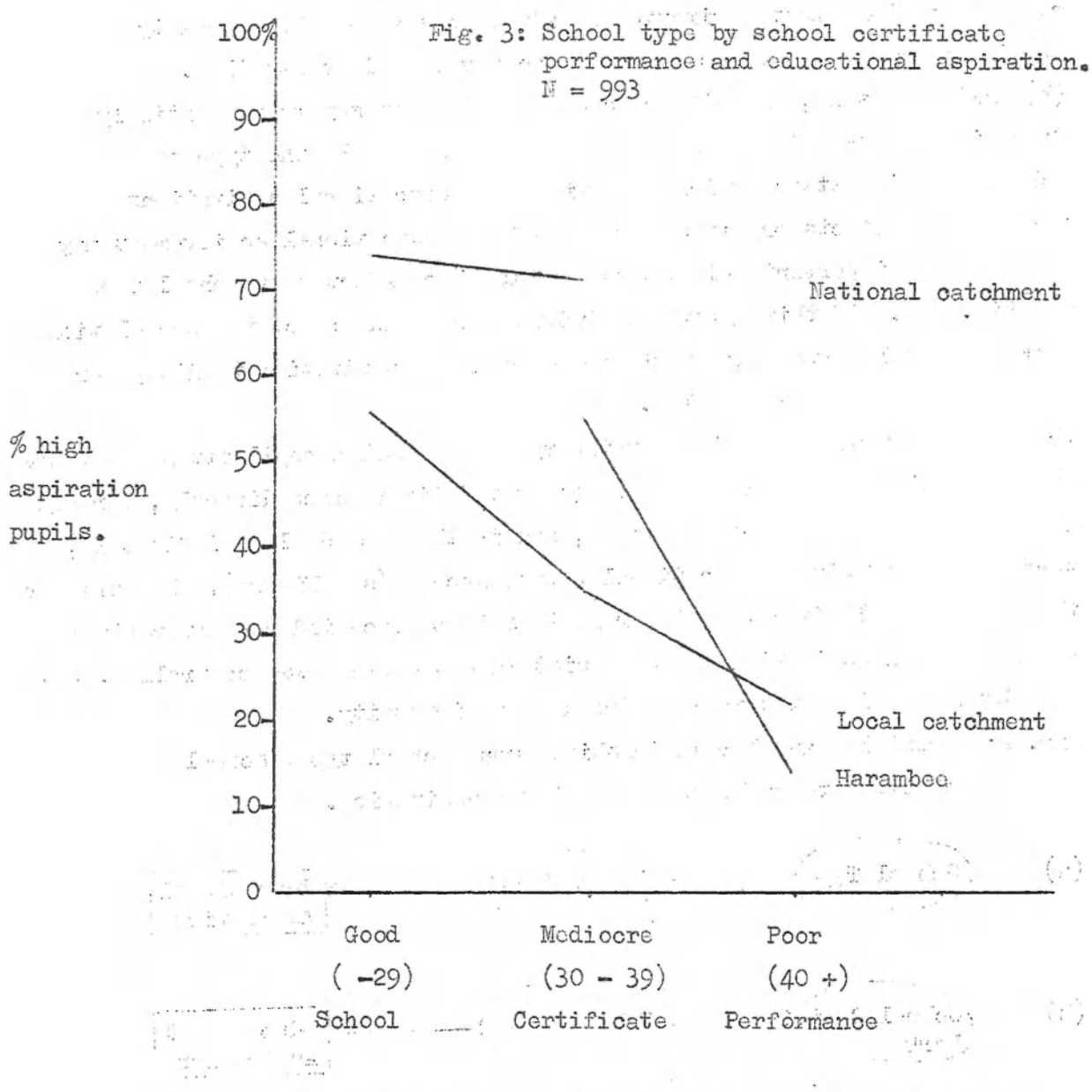
(c) A third possibility is that the type of school a pupil attends affects his aspirations in two separate ways: in the first place directly, through its effects on his self-perceptions, and in the second place indirectly, through its effects on educational performance (see Fig 2c). If this were the case we would find that the relationship of each independent variable to educational aspiration would persist when the other was controlled, but that both relationships would be reduced in intensity.

Fig. 2: Possible causal relationships among school type, school certificate mark, and educational aspiration.



The results of controlling the relationships between the two independent variables, school type and educational achievement, are shown in Fig. 3. The graph plots the proportion of high aspiration pupils (higher school certificate or university) against school certificate performance for each of the three types of school. The curves for the national schools and Harambee schools are incomplete because in each case one of the sub-samples was too small (only seven pupils from national schools scored grade aggregates of 40 or poorer, and only 6 pupils from Harambee schools scored grade aggregates of 29 or better).

Fig. 3: School type by school certificate performance and educational aspiration. N = 993



If for the moment we compare only local maintained schools and Harambee schools, it is clear that model (a) is an adequate approximation. The tendency for pupils in local maintained schools to have higher educational aspirations can be explained entirely in terms of differences in achievement: pupils in local schools tend to perform better, and therefore tend to have higher aspirations. When examination performance is

controlled, the aspiration differences disappear altogether, or are even slightly reversed. In setting their aspiration levels, these pupils are responding to the examination mark they expect to get, not to the type of school they are in.

When we come to compare national schools with other schools, however, model (c) is a much better fit than model (a). To some extent the huge aspirational differences between national schools and other schools are due to differences in achievement: the pupils, quite realistically, expect to do better in school certificate, and hence have higher aspirations. But even when examination performance is controlled, substantial differences in aspiration remain. Among pupils with "mediocre" school certificate marks (grade aggregate 30-39), for instance, more than 70% of those in national schools have high educational aspirations, as compared with only 54% of those in Harambee schools, and as few as 35% of those in local schools. With any given school certificate mark a boy in a national school hopes, and expects, to be able to continue his education further than a boy with similar marks in a local catchment or Harambee school.

But there is a further complexity, which was not anticipated in any of the models set out in Figure 2. The models all assumed that in predicting educational aspirations our two independent variables would have only contaminating effects on each other: the association of either independent variable with aspiration might be partially or wholly a result of the effects of the other. It is clear, however, that this was too simple a view. As well as their contaminating effects, the two independent variables also interact with each other. In other words, under different conditions of one independent variable, the relationship of the other to educational aspiration changes. These interactions are indicated by the fact that the curves in Figure 3 are not parallel to each other. Thus the effect which educational achievement has on educational aspirations depends on the type of school in which the pupils has been enrolled. In Harambee schools, educational aspirations are highly sensitive to differences in achievement: more than half the boys with aggregates between 30 and 39 want to continue their formal education past form four, as compared with only 15% of those with aggregates of 40 or poorer. In local-catchment maintained schools the relationship is somewhat weaker, but still substantial. But in the national-catchment schools, by contrast, aspirations seem to be virtually insulated from the effects of educational performance; not only do these pupils have much higher aspirations than pupils of comparable attainment in other types of school, but their aspirations are not modified downwards in response to indifferent performance.

Let us summarise these results. It seems that even after contamination effects are controlled, educational aspirations are influenced both by the type of school the pupil has attended, and by his academic achievement. As far as type of school is concerned, the major difference is between national catchment schools and other schools: pupils in national schools have much higher aspirations than pupils in local catchment or Harambee schools. When we consider the effects of academic achievement, the major difference is again between national schools and other schools, but the difference is of another kind. In local maintained and Harambee schools, academic achievement correlates highly with educational aspirations, but in national schools there is virtually no correlation at all. In short, if we are told that a pupil is in a local-catchment or Harambee school we need to know also his examination marks before we can say much that is useful about his probable aspirations; but if we are told that he is in a national school the additional information about performance adds very little to the accuracy of our prediction.

So our major problem in interpretation is to determine why the aspirational patterns in national schools are so different from those in other schools: firstly, why are aspirations so much higher; and secondly, why are they so unresponsive to changes in educational achievement?

It will be remembered from our account of the various types of secondary school that national catchment schools differ from other schools in two major ways. In the first place they tend to offer education of higher quality. They are usually better staffed and equipped, and they tend to supplement the formal work of the classroom with a much wider range of activities such as debating, drama, school visits and the like. Perhaps the quality of the intellectual and cultural environment which these schools offer their pupils has a direct effect on the value which the pupils place on further education, quite separately from the indirect quality effects mediated through educational performance which we have already discussed. In other words, pupils in national schools may want to continue their formal education not only because their performance qualifies them for it, but also because they find the educational experience enjoyable.

An alternative hypothesis is that the high level of aspiration of pupils in national schools (over and above what might be expected from their superior performance) is due to the reputation which national schools enjoy for being able to facilitate the rapid mobility of their products, rather than to anything in the content or quality of the education they provide. It may be that students in national schools share with other educated members of the community in general a perception of the kind of educational and career pattern which is appropriate for people who have received this type of education, derived largely from their knowledge of the

career patterns of former national school pupils. In short, the aspirational effects of national schools may spring not from any characteristics of their internal organisation, but rather from their perceived ability to confer status gains on the pupils they admit - or, to use Meyer's term, from their "Charter".[1]

Fortunately we have data which will enable us to examine the relative merits of these two hypotheses. As we have already seen, national schools are by no means the only schools in Kenya which offer a high quality secondary education. In a number local catchment maintained schools energetic and imaginative teachers have created an intellectual and cultural climate which comes close to matching that of the best national schools. But, there is nothing that teachers in these schools can do to influence the career patterns of former students, except perhaps in the very long term. Nor can they make their recruitment systems as selective as they are in the national schools.

Table 5: Quality categories for local catchment maintained schools

Quality category	N (schools)	N (pupils)	Mean EACE grade aggregate
High	4	257	31.30
Medium	5	313	36.36
Low	5	221	40.73
T O T A L	14	791	35.94

The 14 local-catchment schools in our sample were divided into three quality categories on the basis of their mean school certificate grade aggregates (see Table 5). It would obviously have been preferable to have used broader criteria of quality, but systematic and objective data are not available. Informal observation, suggests, however, that the two measures would be highly correlated. Schools which get the best examination results are those which provide the fullest and most varied programme of activities for their pupils.[2] Certainly the four local catchment schools in our sample with the best mean grade aggregates would all be classified as being of high quality on observational criteria.

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[1] John W. Meyer: The Charter: Conditions of Diffuse Socialisation in Schools. Stanford University, 1968.

[2] Later in this paper data will be presented which indicate that schools which achieve better examination results tend to have more efficient careers guidance programmes.

If the aspirational differences between national schools and other schools which remain when performance differences are controlled are due mainly to the direct effects of quality factors, then we should find that the four high-quality local schools in our sample show aspirational characteristics which are closer to those in national schools than they are to those in low-quality local schools and Harambee schools. But if, on the other hand, the aspirational differences are due mainly to differences in the way in which national and local schools are chartered, then there should be a substantial gap between the aspiration level of pupils in national schools and high-quality local schools. Furthermore, pupils in high quality local schools should not show significantly higher aspirational levels than pupils in low quality local schools when school certificate performance is held constant.

Table 6: Educational aspirations by school quality
(Local-catchment maintained schools only)

Further education wanted	Quality - Level of school			TOTAL
	High	Medium	Low	
O Level only	174 (67.7%)	204 (66.0%)	122 (55.5%)	500
A Level	19 (7.4%)	17 (5.5%)	22 (10.0%)	58
University	64 (24.9%)	88 (28.1%)	76 (34.5%)	228
N S	0	4	1	5
T O T A L	257	313	221	791

Table 6 sets out the relevant data. It is immediately apparent that these results are unusual, and not entirely compatible with what was anticipated under either hypothesis. Even before the effects of performance differences are controlled, pupils in high-quality local catchment schools have lower aspirations than pupils in medium-quality or low-quality schools. Only one-quarter of the pupils in high-quality schools want to continue their education to university , as compared with one-third of those in low-quality schools. Correspondingly, as many as two-thirds of the pupils in high-quality schools want to complete their education at the end of form four, as compared with only 55% of those in low-quality schools.

Hence the aspirational levels of pupils in high-quality local-catchment schools, far from tending to match those of national school pupils, are actually strongly contrasted with them. Just how striking the contrast is can be seen by comparing the data of Tables 4 and 6. For example, about three fifths of the pupils in national schools want to continue their education to university, whereas, as we have just seen, about two-thirds of those in high-quality local schools want to leave after form four.

It is thus clear that we must seek for the explanation of the high educational aspirations of pupils in national schools not in factors which these schools have in common with high quality local schools, but rather in the factors which distinguish them. That is to say, it is most unlikely that the high value which national school pupils place on further education results in any direct way from the quality of the intellectual and cultural environment they have experienced at school. But it may well be due to the unique way in which national schools in Kenya are chartered.

Later in this account we shall need to return to this point. National schools certainly do differ from other schools in the extent to which they are chartered to enhance status, but sofar we have not produced any evidence to link the chartering differences directly to the aspirational differences. There might well be other relevant factors which should be considered. But before we pursue this further we must return to the data of Table 6. There are some puzzling trends here which we have not yet explained.

It will be recalled that under the second hypothesis which we put forward to account for the high-level aspirations of national school pupils (the "chartering" hypothesis) we anticipated that national school pupils would show substantially higher aspiration levels than high-quality local school pupils; but that these latter pupils in turn would show higher levels than medium-quality and low-quality local school pupils, because of the effects of school quality on school certificate performance. The expected gap between national schools and high-quality local schools was fact found, providing strong circumstantial evidence in support of the chartering hypothesis. But among the three local school quality levels the relationships to aspiration were the reverse of those we anticipated; low-quality school pupils had higher aspirations than high-quality school pupils. This trend suggests strongly that there must be an as yet unidentified third independent variable, associated in some way with school quality, which is exercising a powerful effect on the aspirational levels of the pupils in our sample.

Figure 4: Associations among school quality, school certificate mark, and educational aspirations (local catchment maintained schools only)

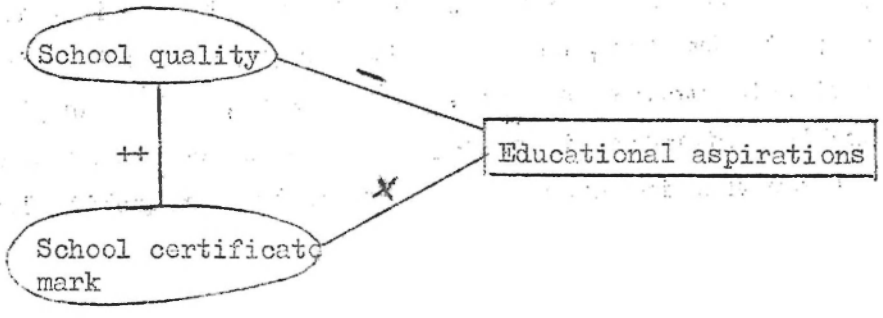

Figure 4 summarises the relationships we are dealing with. School quality is, of course, highly correlated with educational performance as measured by the school certificate mark: and, as we saw in Figure 3, local-catchment pupils who perform well have markedly higher aspirations that those who perform poorly. Despite this, school quality and educational aspirations are negatively related. We thus have the task of trying to explain how it comes about that two independent variables (school quality and educational performance) can have a strong positive correlation to each other, yet have opposite effects on a dependent variable.

The only tenable interpretation is that the quality of education a pupil receives at a local-catchment maintained school affects his aspirations in two quite separate ways. In the first place, a pupil who receives a high-quality education is likely to perform better in his examinations. This in turn improves the opportunities for further education open to him, so the pupil, quite realistically, adjusts his aspirations upwards. But as well as these specific effects mediated by educational performance, there must be also other effects derived in some way from the general quality of the intellectual and cultural climate provided by the school. When we were considering the differences between national schools and other schools, we suggested (under the discarded first hypothesis) that these general effects might tend to augment the performance effects; pupils who had experienced a richer and more varied program of activities might come to value further education more highly, even if their classroom performance was indifferent. But the facts force us into the opposite interpretation. In some way the general effects of receiving a high quality education must be to depress aspirations for further education rather than to raise them. Furthermore, these general effects must be powerful; they are strong enough to more than counterbalance the effects mediated by performance, so that the overall relationship between school quality and educational aspiration is negative rather than positive.

Just how strong these general effects are can be seen in Figure 5, which plots the educational aspirations of local-catchment maintained school pupils according to school quality and examination performance. With the performance effects controlled, the aspirational differences between pupils in schools of the three quality levels are enormous. Among pupils of "good" school certificate performance (grade aggregates of 29 or better), nearly 90% of those in low-quality schools want to continue their formal education past form four, which is a higher proportion than is found even in the national-catchment schools. By contrast, less than 50% of the pupils of comparable performance in high-quality local schools have high aspirations, which is lower than in schools of any other type or quality level.

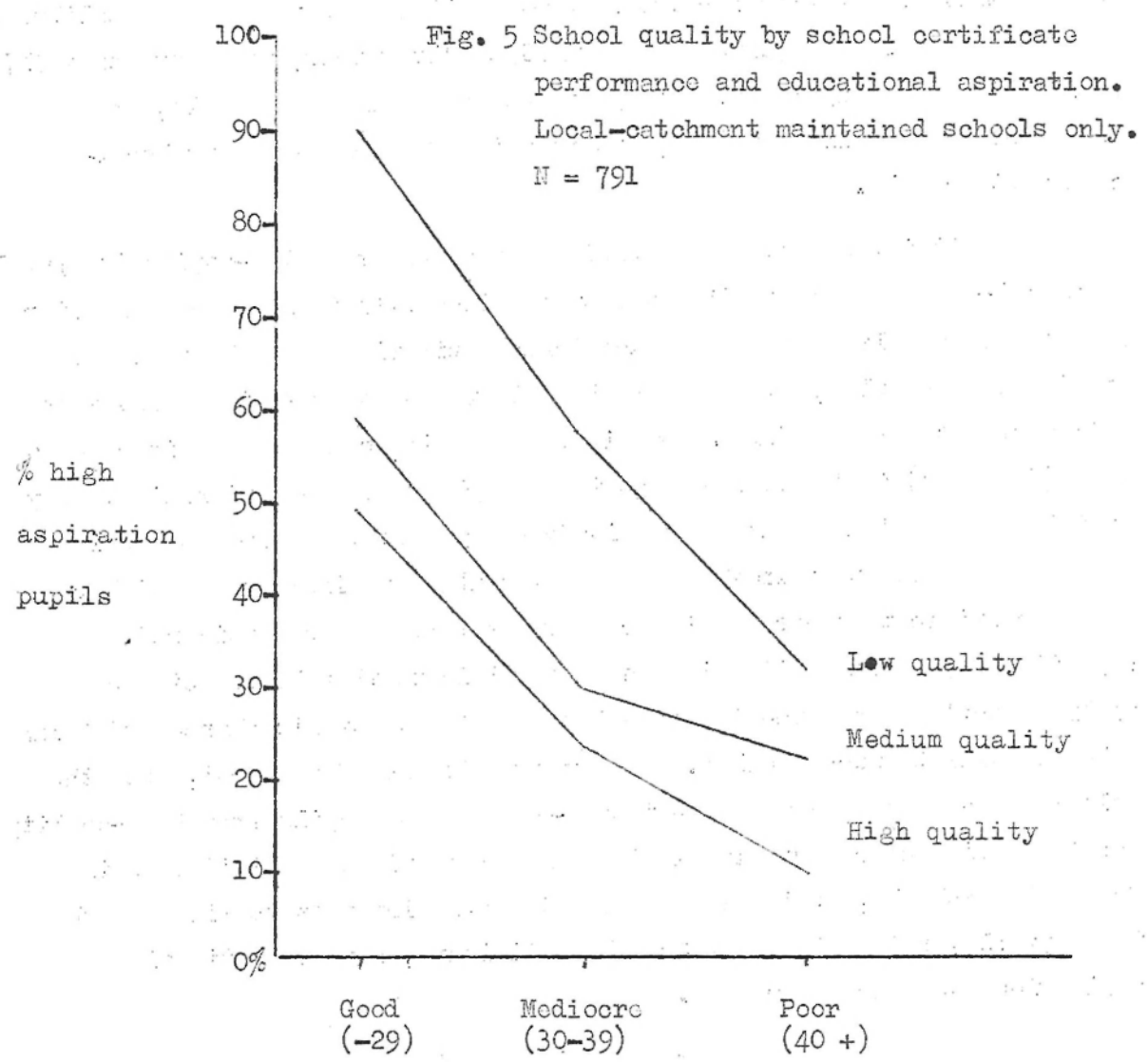

Fig. 5 School quality by school certificate performance and educational aspiration. Local-catchment maintained schools only. N = 791

As we move down the performance scale, aspirations drop steeply in schools of all three quality levels, but the differences between them are maintained. Among pupils with "poor" school certificate results, for instance, only 9% of those in high quality schools have high aspirations, as compared with nearly 30% of those in low-quality schools.

In 1970 the cut-off point for acceptance into form five was approximately 30 points, provided only that the pupil's course included a combination of subjects that could be offered for higher school certificate (A Level). Thus nearly all the pupils in our "good" performance category could have had a form-five place if they had wanted it. In the low-quality local schools, nearly all these "high opportunity" pupils had matching high aspirations; but in the high-quality schools, more than half wanted to leave after form four, and thus not take advantage of the opportunities for further education open to them.

Because high-achievement pupils from high-quality secondary schools make up such a large proportion of the high-achievement pupils in our total

sample, their low aspiration levels could well reduce the average calibre of the fifth-form intake quite substantially. Altogether, there are only 317 pupils with grade aggregates of 29 or better in our full sample, and of these, as many as 119, or 37½%, are from the four high-quality local-catchment schools.

It is, of course, probable that a number of low-aspiration pupils from high-quality schools did in fact continue with their education after form four. The links between educational aspiration and behaviour are likely to be complex, and we shall be able to investigate them only when follow-up data are complete. But if those pupils completed their careers form ("Form A") in the same way as they completed our questionnaire, they must have been at a considerable disadvantage. At the formal selection meeting for entry to form five only pupils who have indicated a higher school certificate course as their first preference are considered. A pupil who performs better in school certificate than he expected can apply directly to a form-five school for a place, but his chances of being selected will be much smaller. But even if it should turn out, when the follow up data are analysed, that high-achievement pupils from high-quality local schools enter form five in the same proportions as similar pupils from other schools, it is still of considerable interest to find out why these pupils, before they sit school certificate, have educational aspirations that are so modest.

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The first possible explanation which we must explore is that the aspirational differences spring from differences in the estimates which pupils make of their achievement status. If it could be shown that high quality schools tend to underestimate their likely school certificate marks, while pupils in low-quality schools tend to overestimate them, then the differences in aspiration might simply reflect the differing perceptions which the pupils have of the opportunities for further education that are likely to be open to them.

In Kenya, as elsewhere, secondary school pupils assess their academic standing mainly from their knowledge of (i) their performance relative to that of other pupils in the same class and school, and (ii) the status of their school relative to other secondary schools in the country. There is no doubt that most Kenya pupils have very clear information as to their standing among their classmates. Their work is constantly being assessed in exercises and tests, and an order of overall merit is usually established after each internal examination. Similarly most pupils have at least a rough idea as to the status of their school. School certificate pass lists for every school in Kenya are printed in the newspapers every

year. Passes in the various merit categories (Division I, II, etc.) are listed separately, so by simply comparing column inches a pupil can estimate how successful his school has been, relative to other schools. But the trouble is, of course, that this information is always one year out of date; it refers to the previous form-four class. If the quality of the instruction the school is giving has not changed very much this will not matter a great deal. But sometimes the quality of a secondary school can change radically from one year to the next, usually as the result of st staff changes. When this happens, last year's pass lists are a misleading guide, and pupils who rely on them are likely to hold distorted perceptions of their probable achievements.

If pupils based their estimates of their achievement status entirely on their rank order within their classes, then there is no doubt that pupils in low-quality schools would over-estimate their real status, while pupils in high-quality schools would correspondingly under-estimate. A pupil from a low-quality school in our sample who ranked at the bottom of the top quarter of his class (that is, at the 75th percentile) would typically have a grade aggregate of about 34-36 points, whereas a pupil of similar class position in a high-quality school would have an aggregate of between 22 and 24 points. But in real life, of course, these effects would be largely counteracted by the pupil's knowledge of the general academic quality of his school. Our pupil from the low-quality school might be encouraged to rate his chances of success in school certificate highly when he compared himself with other pupils in his year, but he would probably revise his expectations downwards when he remembered that only 20% of the pupils who were in the same class in the year before him managed to get a Division II pass or better.

Let us nevertheless postulate for the moment, quite against the evidence, that pupils do in fact estimate their academic potential and set their aspirations for further education solely from their position in class, and not at all from what they know of the quality of their school. If this were the case, we should expect the differences associated with school quality to be at their maximum for any given level of performance, boys in high-quality schools should assess their academic potential more modestly, and set lower aspirations, than boys in low-quality schools.

We can test this hypothesis by controlling for classroom ranking. If the hypothesis holds, then the aspirational differences associated with school quality should disappear altogether, because the factor which we are suggesting is responsible for them is being partialled out.

Figure 6 gives the relevant data. The three graphs show the educational aspirations of pupils in local catchment maintained schools

according to school quality and the achievement ranking of each pupil among his classmates. The rankings are grouped into quartiles, based on the school certificate grade aggregate.

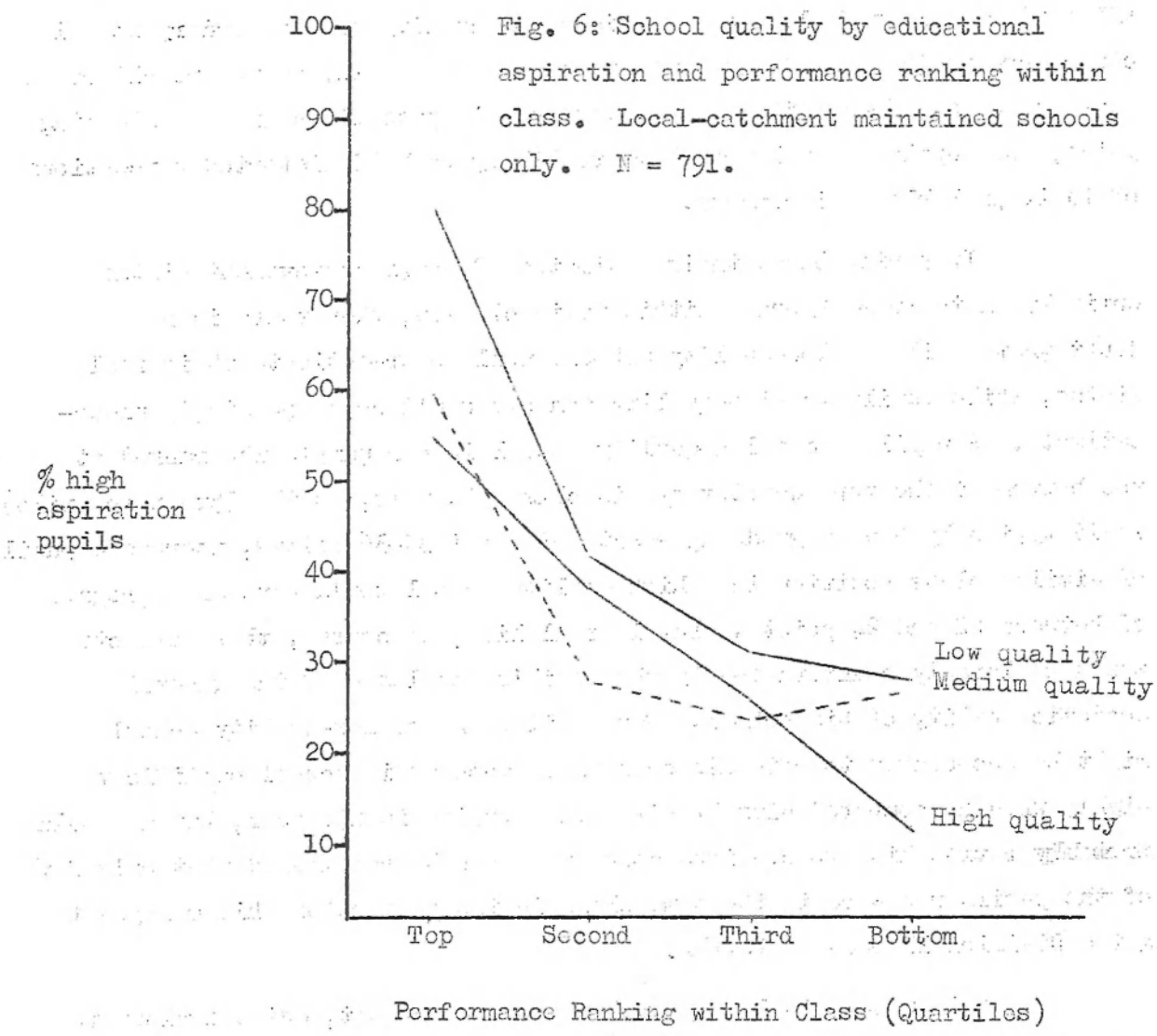

Fig. 6: School quality by educational aspiration and performance ranking within class. Local-catchment maintained schools only. N = 791.

It can be seen that, even with classroom ranking held constant, there is still a definite tendency for boys in low-quality schools to have higher aspirations than those in high-quality schools. Among pupils who are within the top quarter of their classes, for instance, more than 80% of those in low-quality schools have high aspirations, as against only 56% of those in high-quality schools.

Thus the ranking effects can be, at best, only a partial explanation for the aspirational differences between schools of different quality levels. Pupils who occupy any given classroom rank tend to have higher aspirations if they are in a low-quality school. And we still have not made any allowance for the effects of the pupils' knowledge of the general quality of his school. If we assume, as is most realistic, that

pupils are influenced in setting their aspirations both by their personal standing within their class and by school quality, then we would expect to find, when class ranking was controlled, that pupils from high quality schools had higher aspirations than those from low quality schools, because they would know that, for any given classroom position, they would be likely to get a better school certificate mark.

But it is possible that secondary school quality in Kenya is so labile that information derived from the examination success of the previous year's class is of limited validity, or even of no validity at all. If several of the high-quality schools in the sample had recently improved sharply in quality, or if some of the low-quality schools had deteriorated, then the aspirational differences might be partially due to lag effects. To check on this possibility, we assessed the previous year's quality levels for the 14 local catchment schools in our sample by calculating 1968 mean grade aggregates. Rather unexpectedly, there was a very high level of consistency between the 1968 and 1969 quality rankings. The rank order (tau) correlation was .80, and not a single school changed its quality category (e.g. from "medium" to "high" or from "medium" to "low"). Thus if pupils in 1969 based their assessment of their schools' probable success in school certificate on the 1968 results, they were using data that were essentially valid. And the effect should have been to raise the aspirations of pupil in high-quality schools, and to depress those of pupils in low-quality schools. The trends shown in Table 6 and Figure 5 are as enigmatic as ever, and we must seek for an alternative explanation. Let us consider in a little more detail some of the characersitics which differentiate high-quality from low-quality schools.

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In visiting secondary schools in different parts of Kenya one is repeatedly struck by the extent to which morale and professional committment vary from school to school. These differences often seem to stem from the quality of the headmaster, and it is certainly the case that a change in headmaster is often followed very quickly by a marked change in examination results.[1]

But the morale and committment of the teachers affects extra-curricular activities even more than it does examination results. In schools where morale is low, teachers usually do the classroom teaching that is expected of them, and little more. Individual teachers may organise

[1] Secondary school quality changes more from year to year in the total population of Kenya secondary schools than it does in our sample. At one non-sample school, for instance, the proportion of pupils gaining Division I or II passes rose from 12% to 41% between 1967 and 1969, while in another the proportion dropped from 77% to 45% over the same period. Thus two schools which started off being at opposite ends of the quality scale moved over a two year period, to being practically identical in examination performance. In each case the achievement changes were associated with a change in headmaster.

activities directly related to the subjects they teach, such as Biology or Geography clubs, because these activities can help their pupils to perform better in school certificate, and it is on the examination results they achieve that their effectiveness as teachers will be judged, and their chances for promotion will depend. Activities which are peripheral to the formal curriculum are more vulnerable. If debating clubs societies, drama clubs, and the like exist at all, they are likely to meet only sporadically. But perhaps most vulnerable of all is the careers guidance service. It is only in schools where teachers have a real concern for the futures of their pupils, which transcends their interest in getting them over the next examination hurdle, that an effective guidance programme is likely to be found.

We did not have an opportunity to make a direct assessment of the quality of the careers guidance programmes in the schools in our sample, but we can make an indirect estimate from the answers given to one of the items in our questionnaire. In this question, pupils were asked to say what sources they had used to get information about the job they wanted to do after they had finished their formal education. The exact wording of the question was as follows:

> Have you talked to anybody, or read any books or pamphlets, to get information about this job?
>
> ☐ Yes ☐ No
>
> If yes: Please explain briefly what you did.

From reading through the answers to this question it became clear which schools had effective guidance programmes and which did not. Four schools obviously had very comprehensive programmes. The pupils referred to general talks from their careers masters, to talks from outside speakers about specific job opportunities, to reading the Kenya Careers guide and various pamphlets, and to having individual interviews with their careers masters:

> "Our careers master talked to me about it explaining in detail what qualifications and skill are needed and also the pay."
>
> "Talked to careers master. Read careers guide. Listened to careers talk by registrar of the training school. Applied for the job in Form A."

A further three schools had fairly effective programmes. Typically the careers master gave general talks, and made careers literature available, but either talks from outside speakers or individual interviews were lacking.

The remaining fourteen schools, or two-thirds of the sample, had either ineffective guidance programmes or no programme at all. In some of these schools pupils had access to prospectuses mailed to the school by various training institutions, but in others not even this material was available. In one school the careers programme consisted of a talk by the headmaster, described by one pupil in the following way:

> "The headmaster gave us a talk about the goodness of teaching. Then he told us who was fit to be a teacher, and I was chosen."

Thus, judging from the sources of information used by pupils in making their career choices, only one-third of the schools in our sample had a functioning careers guidance programme. This proportion is probably fairly close to the figure for Kenya secondary schools as a whole. Each year the Kenya Secondary School Headmasters Association organises a two-day Careers Conference in Nairobi, at which a great deal of information about career opportunities for secondary school leavers is made available. Only about one-fifth of the secondary schools in Kenya send their careers master or another representative.

As we anticipated, there is a strong relationship between school type and quality, and the effectiveness of the careers guidance programme (see Table 7).

Table 7 : School type and quality, by Careers Guidance Effectiveness

School type and quality	Careers Guidance: Very effective/ fairly effective	Careers Guidance: Ineffective/ Non-existent
National catchment	2	0
Local catchment:		
High quality	3	1
Medium quality	1	4
Low quality	1	4
Harambee	0	5
T O T A L	7	14

As many as five of the six national-catchment and high-quality local-catchment schools have effective guidance programmes, compared with only two of the ten medium and low-quality local schools, and none of the five Harambee schools.

Although these relationships are clear-cut, they must be treated with caution because they are based on essentially subjective assessments of the replies given to the question about careers information. To provide a more objective check, we classified the replies of each individual pupil according to whether or not he indicated that he had been

influenced in his career choice by the careers guidance service. A reply was counted as positive if the pupil said that (i) he had listened to a careers talk either by a staff member or by an outside speaker brought to the school, or (ii) he had had an individual interview with the careers master. Pupils who said that they had read careers pamphlets or prospectuses from training institutions were not included, because this material is often sent simply because the school is on a mailing list.[1] The proportions of positive replies in schools of different types and quality are set out in Table 8

Table 8: Proportions of Pupils Influenced by Careers Guidance Service in Making Careers Choices

School Type and quality	% Influenced
National catchment	27.7%
Local catchment:	
High quality	21.0%
Medium quality	10.0%
Low quality	7.7%
Harambee	4.4%

The absolute level of the percentages in this table does not, of course, mean a great deal. The question we asked was an open-ended one, and whether or not a pupil chose to mention the school guidance service depended very largely on how salient it had been among the many factors influencing his careers decision. It was noticeable, for example, that pupils with educated fathers or other close kin were more likely to mention these relatives as sources of information and advice, even when it was obvious, from the replies of other pupils, that the school they a attended offered a first-rate guidance service.

Despite these limitations, the results can perhaps be accepted as giving a rough but relatively objective measure of the effectiveness of school guidance programs in influencing pupils' career choices. The trends closely parallel those of Table 7. Pupils in national-catchment and high-quality local-catchment schools mention receiving careers guidance more than twice as often as pupils in medium- and low-quality local schools, and about five times as often as pupils in Harambee schools. There can be

[1] The proportions are much higher but the relationships virtually unaltered if these pupils who had had access to careers literature are included.

little doubt that the quality of the classroom instruction which a school provides is closely correlated with the effectiveness of its extracurricula activities, or at least its careers guidance service. The data, of course, do little more than give quantitative backing to a conclusion that was already clear from informal observation.

But what relevance do these facts about careers guidance have in explaining the aspirational differences between high-quality and low-quality local-catchment schools, with which we have been concerned? Table 9 sets out data which establish a link.

Table 9: Educational Aspirations of Pupils in Local-Catchment Schools, by School Quality and Careers Guidance Influence.

Educational Aspirations	High Quality Schools			Med. & Low Quality Schools			All Local Catchment Schools		
	Influenced	Not Influenced	Total	Influenced	Not Influenced	Total	Influenced	Not Influenced	Total
High	12(22.2%)	71(34.5%)	83	12(25.0%)	191(39.7%)	203	24(23.5%)	262(38.3%)	286
Low	42(77.8%)	132(65.5)	174	36(75.0%)	290(60.3%)	326	78(76.5%)	422(61.7%)	500
TOTAL	54	203	257	48	481	529	102	684	786

There is a clear tendency for pupils who say they received advice or information from a careers guidance service to have lower educational aspirations than those who say they did not. Only a little over one-fifth of the former group want to continue their formal education past form four, as against nearly two-fifths of the latter group. The data are not, of course, as unambiguous as we would like; in particular, the argument would be stronger if we could identify pupils who did not mention careers guidance from the school in their open-ended answers, but who did, in fact, receive it. Nevertheless there is, at the least, strong circumstantial evidence to indicate that pupils who take account of information and advice given to them in a careers guidance service set lower aspirations than pupils who do not. And this seems the most likely explanation of the aspirational differences between high-quality and low-quality local-catchment schools.

The data again agree well with observational impressions. In listening to careers talks in Kenya, one is struck by how often speakers seem preoccup ied with stressing the difficulties of the unemployment situation, and with emphasising the need for fourth-form leavers to set "realistic" educational and career goals. But realism in setting aspirations has two components: firstly, adjusting to the facts of the labour market, and secondly, adjusting to the facts of one's own intellectual strengths and weaknesses. Kenya is certainly facing a serious and worsening unemployment problem; but at the same time she is still short of qualified people to fill many middle-level and most high-level occupations. The conventional wisdom has it that many young people with Division I or II school certificate passes are roaming the streets of Nairobi looking for jobs and the moral is drawn that school leavers should adjust their aspirations downwards rather than risk missing out on a job opportunity altogether. In fact, however, as Peter Kinyanjui's survey is showing, the labour market remains remarkably open for school certificate leavers with good passes in relevant subjects. About eight percent of the leavers in his most recent cohort (1968) were still unemployed in their second year after leaving school, but the great majority were pupils with very low school certificate grades. Not a single leaver with a Division I or II pass remained unemployed for as long as twelve months.

Reading through the questionnaires from our 1969 sample it is certainly not difficult to pick out pupils who hold inflated views as to the market value of their skills. One pupil, who obtained a Division III pass, wanted to be an economics professor because "I saw an advertisement for that job in the newspaper and thought I would like it." Another wanted to be a doctor, because "I was advised by my relatives who are big people with important jobs." A high proportion of these pupils are from low-quality local schools or Harambee schools, often in isolated

parts of the country. It is apparent that they know virtually nothing about the careers that are open to fourth-form leavers. In the circumstances, it is hardly surprising that their aspirations are sometimes nothing more than wish-fulfilling fantasies.

Given their lack of information, it is in fact remarkable how realistic the ambitions of most of these pupils are. By referring back to Figures 3 and 5 it can be seen that there is a stronger correlation between educational aspiration and school certificate performance among low-quality local-catchment school pupils and Harambee school pupils than there is among pupils in schools of any other type or quality tevel. The trends suggest that these pupils are setting their aspirations as rationally as they can, but that the information available to them is confined largely to the facts of their own academic standing and the quality level of their school. By contrast, pupils in higher-quality local schools are responding to a much wider range of relevant information. The have been told about the attractions of the various job opportunities open to fourth-form leavers, and they have been warned about the competitiveness of fifth-form selection and the job market. Hence their aspirations for further education are reduced, and the correlation between aspiration and performance somewhat weakened.

Enigmatically, it is the pupils who have been educated at low-quality local schools who have the more realistic ambitions, if we judge realism in terms of the fit between aspiration, performance, and opportunity. Clearly what is needed is a guidance service which provides not only the basic facts about the kinds of jobs that school leavers can apply for, but also accurate information from which the higher-achieving pupil can set his educational and career aspirations at a level appropriate to his talents. As we shall see in the next section, the over-modest ambitions of many high-achievers create some real problems in selecting leavers for opportunities after form four.

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We have not yet discussed in any detail the hypothesis that the high and inflexible aspirations of pupils in national catchment schools are due to chartering effects nor have we considered the influence of socio-economic factors. Both of these topics will, however, require extended discussion so it may be better to keep them for another paper. But perhaps it would be of interest to participants in this conference to conclude this discussion by giving a very brief account of some steps that have been taken to to implement some of the policy implications arising from the findings.

Early in 1971, after a preliminary draft of this paper had been written, D.S. Shepard and I undertook for the Ministry of Education to investigate the possibility of using computers to assist in the

selection of fourth-form leavers for the various educational and careers opportunities that are open to them. As a pilot project, it was decided to computerise data for 1970 leavers who wished to enter higher school certificate classes. This involved matching information from the Careers Form ("Form A"), which all secondary school pupils fill in towards the end of their fourth-form year, with school certificate results in ten key subjects, and then printing out selection lists for each recruiting school in order of overall performance. Each school received three lists, showing pupils who had chosen it as their first, second, and third preferences respectively.[1]

The pilot project was completed successfully, but it became obvious that if in subsequent years computerisation was to be extended to the full cohort of fourth form leavers, the Careers Form would first have to be modified radically. In part, this revision was needed simply to make the transfer of data to the computer easier and more efficient. But much more important, it was needed to achieve a more rational balance between educational and career opportunities on the one hand, and expressed preferences on the other.

In the old Careers Form, pupils were asked to express up to four overall preferences from among 15 general types of opportunity, ranging from a form-five course to secretarial training and direct employment in the private sector. Then, within each of his overall preferences, other pupil could choose among a member of specific opportunities. Table 10 shows the first preferences expressed on the Careers Form by the full cohort of form-four leavers in 1970. Where the figures are available, the table also shows the numbers in each preference group who obtained division I and II passes, and also, where appropriate, the number of training places to be filled in 1971.

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[1] D.S. Shepard has recently described the technical processes involved. See D.S. Shepard: Computer-Assisted Selection for Education after EACE. Paper prepared for Ministry of Education, July 1971.

A detailed account of some of the problems involved in using the old Careers Form can be found in Rado, E.R.; Morgan, James; and Shepard, Don: The Selection of Form Four leavers for Training, Education, and Employment IDS Discussion Paper No.94, June 1970.

Table 10: Educational and Careers Preferences as Expressed through Form A.

(All Kenya Fourth-Form Pupils; 1970 Cohort)

Course	Places Available 1971	APPLICANTS (1st Pref.) TOTAL	DIV I	DIV II
Form 5 (HSC)	3,300	5,830	1200	1700
Secondary Teacher Training				
(a) Kenyatta	200	1,478	80	345
(b) Science Teachers' College	144	221	37	68
(c) Polytechnic	100	131	-	-
Primary Teacher Training	670	4,346	29	250
Agricultural Training				
(a) Egerton	140	742	54	129
(b) Embu	100	218	1	12
(c) AHITI	120	117	0	7
Medical Training				
(a) Nursing	180	786	13	95
(b) Health Inspector	20	312	20	50
(c) Medi. Asst.	35	150	3	25
(d) Pharmacy	44	96	14	24
(e) Other	70	251	10	39
Mombasa Technical Courses	-	250	-	-
Secretarial Training	120	439	3	35
Accountancy Training	40	122	25	50
Direct Entry to Employment				
(a) Public Sector	-	424	-	-
(b) Private Sector	-	422	-	-
Form A not accounted for		1,563		
TOTAL EACE CANDIDATES, 1 9 7 0		17,898	1,540	3,220

The first thing that is striking about these figures is the small proportion who express their first preference for continued formal education. Just as in our 1969 sample, the educational aspirations of those 1970 leavers are low. Only 5,830 pupils, or 32.7% of all school certificate candidates,[1] applied to be considered for form five. In the general perception, competition for entry to form five is held to be extremely severe, and it is commonly accepted that a Division I pass, or at least a very good Division II, is needed to gain a place. This view is held by both secondary school pupils and their teachers, and it is even shared by Ministry officials. At the beginning of the 1971 selection meeting, headmasters of the recruiting schools were told that they should not accept any candidate with a school certificate aggregate of poorer than 26 points. In fact, however, fifth-form selection in 1971 was far from severe. If headmasters had been forced to fill their 3,300 form-five places only from among those who had applied through Form A it would have been necessary to accept every pupil with an aggregate of 34 points or better. That is, all Division I and II applicants would have been accepted, together with about 400 from Division III. What in fact happened was that pupils with aggregates down to about 30 points were accepted providing they were taking appropriate subjects, and that only about 2,200 places were filled at the selection meeting. Headmasters then attempted to recruit well-qualified pupils to fill the remaining 1,100 places, but this, of course, meant "poaching" many pupils who had already been offered places in training courses of various kinds. Then the higher-level training institutions, in their turn, tried to fill their vacant places by "poaching" from institutions offering less advanced course. The result was that many institutions did not achieve a stable enrolment until mid-June, or half-way through the teaching year. And even so, the higher school certificate schools never succeeded in filling more than about half the places which had remained vacant at the end of the selection meeting. A survey just completed by the Kenya Headmasters' Association indicates that by July schools had filled only 90% of their fifth-form places in Arts courses, and as few as 60% of their places in Science courses. The costs of these inefficiencies, in terms of wasted time, underemployed teachers and equipment, and unfilled places must be very high.

A second point to note from Table 10 is the lack of any rational relationship between the number of places available in each course and the number of applicants, and similarly between the intellectual demands of a course and the calibre of those who apply. Fourth-form leavers and the teachers who advise them obviously lack accurate information as to how competitive the various courses are, so that the

[1] Excluding private candidates.

ratio of applicants to places for any course seems to be determined as much by rumour and fashion as by any other factor. For some reason the Health Inspector's course at the Medical Training Centre is particularly popular. It attracted more than 15 applicants for every place, and if all of the applicants had in fact been available for recruitment it would have been possible to fill the class entirely with Division I school certificate holders. By contrast, the first-rate Kenya Science Teachers College Course, which trains leavers for jobs in an area where there is still a critical manpower shortage, received only 221 applications for 144 places. The College was able to fill its places with qualified entrants only by conducting its own recruitment campaign, aimed largely at pupils who had left form four in earlier years.

A conclusion that is clear from the results discussed earlier in this paper is that pupils, by and large, set realistic aspirations within the limits of the information available to them. If they seem to be making irrational educational and career choices, this is more likely to spring from ignorance of the facts rather than from any perverse tendency to fly in their face. This conclusion is the basic assumption underlying the new careers selection system which is just being set up. It is anticipated that, by providing fourth form leavers with essential facts in a careers information sheet which will accompany the careers application form, they will be able to make more realistic decisions. This should mean that selection will be much quicker and more efficient, and there should also be a better fit between the requirements of the different career opportunities and the talents and interests of the recruits. A copy of the new Careers Form, and some extracts from the Careers Information Sheet, are given as an appendix to this paper.

It so happened that a new edition of the Kenya Careers Guide was being prepared at the same time as the new careers form and careers information sheet.[1] In the new Careers Guide, which is of book length, the descriptions of the opportunities open to fourth-form leavers are grouped in exactly the same way as they are in the Careers Form and Careers Information Sheet. Cross-referencing has also been provided, so it should be possible for the fourth-form pupil to move easily from the Form to the Information Sheet to the Careers Guide, receiving as he goes increasingly detailed but consistent information about the opportunities which interest him. The Careers Guide should be published and in the schools by the time the pupils have to complete the Careers Form.

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[1] The new Guide has been written by Mrs Ruth Yost for the Kenyanisation of Personnel Bureau. I am most grateful to her for her help and practical cooperation. I should also like to thank Mr. A. Githinji and Mr. D. Mwangi of the Management Section of the Ministry of Education, wt without whose enthusiastic support and assistance the project could not have been carried out.

The facts given in the Information Sheet are of two main kinds. Firstly, for each major type of opportunity there is a brief description of the kind of work involved, together with any formal entry requirements. This is the kind of information which is already available to pupils lucky enough to be in schools with efficient guidance programmes. Secondly we have indicated, where the data are available, how much competition there is for entry to each opportunity. School leavers who are interested in careers in agriculture will see, for instance, that in 1971 the General Agriculture course at Egerton College attracted nine applicants for each place, whereas the Dairy Technology course at the same instituion attracted only two applicants for each place. These figures will, of course, have to be brought up to date each year. In the short term the information may produce sharp oscillations in the popularity of the various opportunities from year to year, but over a longer period it should result in a more rational balance between applicants and places.

A major concern has been to ensure that enough candidates of sufficient calibre apply for form five, so that it is possible to fill the available places at the selection meeting, and thus avoid the undesirable chain effects on recruitment for other courses which we have already described. This has been attempted in three ways. First, and probably least important, the application for admission to form five has been separated from the application for other types of opportunity. This means that pupils must, in effect, opt out of consideration for form five by not filling in one section of the form; rather than, as in the past, opting in by nominating form five as first preference. Second, pupils have been told the facts as to how competitive form-five selection was in 1971, in just the same way as they have been for other opportunities. As we have already seen, selection for form five is a good deal less severe than is commonly supposed. Third, pupils have been assured, both in the Careers Form and the Information Sheet, that if they apply for form five but are not accepted, their chances of being accepted for a career opportunity will not be affected. In the past it has been feared, with a good deal of justification, that unsuccessful HSC applicants might miss out altogether on other opportunities, because their names would not be on the selection lists. With computerisation it should be possible to avoid this completely. The HSC selection meeting will be held several days before the other selection meetings, and supplementary lists of unsuccessful HSC applicants will be prepared for each recruiting institution, sorted according to careers preference and school certificate performance.

It is inevitable that experience will reveal deficiencies in the new Careers Form. But with computerisation it will be easy to monitor the way the selection system is working each year, and to introduce modifications as they are needed.

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MINISTRY OF EDUCATION

CAREERS INFORMATION SHEET

PART I

INSTRUCTIONS FOR FILLING IN THE CAREERS FORM

The Careers Form has been designed to enable you to express your career preferences. Before you begin to fill it in, read through this information sheet carefully. You should also refer to the relevant sections of the Kenya Careers Guide (1971 Revision), which you can borrow from your Careers Master.

This year, much of the work of preparing selection lists from the Careers Form will be done by computer. To help us do this, every educational and career opportunity for which you can apply has been given a code number. These code numbers are all listed in Parts II and III of this information sheet. You will see, for instance, that Kenya Science Teachers College has the code number 102, and the career of Compositor has the code number 521. You MUST give the code numbers for the opportunities for which you wish to be considered, in the boxes provided on the form. Write the numbers clearly, one digit to each box.

The form is divided into five sections. You will fill in Sections A,B,C, and D yourself. Section E will be completed by your headmaster or form teacher.

In Section A you are asked for information about yourself. Write your name in BLOCK CAPITALS, one letter to each box. You MUST use the same name as in your E.A.C.E. entry form. Similarly record your E.A.C.E. number, one digit to each box. The first three boxes are for your examination centre number, and the second three boxes are for your personal number. If your personal number is below 100, add zeros before the digits so that all three boxes are filled. For instance, if your personal number is 69, you should enter 069; if it is 4, you should enter 004. (The bracketed numbers in small print near the boxes are to help us transfer the information to the computer, and you should ignore them).

It is MOST IMPORTANT that your E.A.C.E. number be correct. We shall use your E.A.C.E. number to match your career preferences with your E.A.C.E. results on the computer. If your number is incorrect, matching will not be possible and you may be omitted from the selection lists.

In Section B you are given the opportunity to apply for entry to a form five (higher school certificate) course. If you wish to be considered for form five, write the names and code numbers of up to three schools in the spaces provided. A list of schools, together with their code numbers and the courses or subjects they teach, is given in Part II of this information sheet. Make sure that the schools you choose teach the subjects you wish to take.

Indicate whether you would prefer an Arts or a Science course by putting a tick in the appropriate box, and list up to four subjects you would like to take, in order of preference. Note that your preferences are for the guidance of the selecting schools only; you may be offered a course in different subjects, particularly if you get better E.A.C.E. grades in them.

PART II

INFORMATION ABOUT HIGH SCHOOL CERTIFICATE COURSES

In 1970 about 5800 fourth-form leavers applied through the Careers Form for entry to Form Five. There were 3,300 places. Most pupils with a grade aggregate of 30 or better were accepted, provided their E.A.C.E. courses included three subjects which they could continue in an Arts or Science course in Form 5. (In many schools, Geography and Mathematics can be part of a course in either Arts or Science. E.A.C.E. Physical Science is accepted as a preparation for both Physics and Chemistry in Form 5).

There will be about 3,600 places available in 1972. If you wish to continue your education into form five, and if you think you have a good chance of getting a Division I or II EACE in suitable subjects, then you should apply by completing Section B. Your chances of being selected for a career opportunity will NOT be affected should your application fail.

Schools which will offer form-five courses in 1972 are listed below. You may apply for schools in any part of Kenya. The abbreviations used are explained at the bottom of the table. The School code numbers are given in the first column. They are the same as the EACE school index numbers, and all begin with the letter K.

For schools for which we have the information, we have listed the courses which will be available in 1972. You will see, for instance, that at school K259 (Muranga) you may take science courses MPC(Maths, Physics Chemistry), PCB(Physics Chemistry Biology) and CBG (Chemistry Biology Geography). At school K220 (Mary Leakey) you can choose any three subjects from among English, History, Geography, and Divinity (Religious Knowledge). This means you could take EHG (English History Geography), EHD (English History Divinity) EDG (English Divinity Geography) or HGD (History Geography Divinity). Note that we have listed Principal subjects only; Subsidiary subjects are not included.

For some schools we do not have information as to the courses which will be available in 1972. For these we have simply listed the subjects taught.

If you wish to continue your education to University, you should take particular care in choosing your form-five subjects. Before you decide, check the subject requirements for the University faculties you might wish to enter (see Section C of the 1971 Kenya careers guide). Note in particular that you are strongly advised to take Mathematics to HSC level if you wish to specialise in Economics at University.

Schools K103 (Shimo-la-Tewa) and K012(Nakuru) will offer both New and Traditional Mathematics courses in 1972. Schools K001 (Alliance Boys) K002(Lenana) and K005 (Nairobi Boys) will offer New Mathematics only. If you are taking New Mathematics for EACE, you should apply for Form Five schools where you can continue the same course.

In Section C you are asked to indicate your career preferences. If you apply for a form-five place in Section B, you will be considered for the opportunities you list in Section C only if your form-five application fails.

Detailed instructions for filling in Section C are given in the Careers Form. In brief, you should read through the seven types of career open to form-four leavers given in Part III of this information sheet (groups 1 to 7) and then choose ONE or TWO for which you would like to be considered. Then, for each of your two overall career preferences, you may choose up to THREE specific job opportunities from the appropriate list in Part III, and write their names and code numbers in the spaces provided.

Suppose, for example, that your first and second overall preferences are for careers in health (group 3) and technical work (group 4) respectively. You would then choose up to three of the opportunities listed in group 3 (code numbers 301-310) and three of those listed in group 4 (code numbers 401 - 431) and write their names and code numbers in the appropriate spaces.

Note that you do not have to make three choices for each overall preference. Suppose, for example, that you want most of all to become a computer operator, but that if you are not accepted you would rather become a teacher than accept any other opportunity listed in Group 4. You would then list the career of computer operator (code No. 431) as your only choice for your first overall preference, and up to three teacher training institutions chosen from Group 1 for your second overall preference.

All the careers for which you may apply are described in greater detail in the 1971 edition of the Careers Guide (Section B: Careers for Fourth Form Leavers). You should read these descriptions through carefully before making your choices.

In Section D describe in your own words your interests and activities.

When you have completed Sections A,B,C and D, check that you have entered all the code numbers correctly before returning the form to your form master or careers master.

PART III

INFORMATION ABOUT CAREERS (extract only)

Group 2: Careers in Agriculture, Forestry, and Wildlife Management

Fourth-form leavers wishing to take up careers in agriculture may apply for three-year diploma courses at Egerton College, or two-year certificate courses at Embu Institute of Agriculture or the Animal Health and Industry Training Institute (AHITI) at Kabete. The total Kenyan intake is about 400 each year, divided nearly evenly among the three institutions. Most trainees are recruited straight from school.

The minimum educational requirement for courses at Egerton is a Division II EACE with credits in English, Mathematics, and two science subjects (not including Health Science). Applicants for the Agricultural Engineering course will be given preference if they have good passes in Physics and technical subjects, and applicants for the Agriculture and Home Economics course will be given preference if they have passed Home Economics. For the courses at Embu and AHITI the requirement is a good EACE pass. A good grounding in science subjects, particularly Biology, is essential.

The Ministry of Agriculture also operates a Water Development Training Scheme. The intake at present is 78 per year, but considerable expansion is planned over the next five years. Trainees are based at Provincial Headquarters, and spend much of their time receiving on-the-job trainingin the field. Entry requirements are an EACE, preferably Division II with good passes in English, Mathematics and Physics.

Fourth-form leavers wishing to train as Assistant Game Wardens or Forest Rangers may apply for admission to the African Wildlife Management College, Mweka, Tanzania, and to the Forestry Training School, Londiani, respectively. Entry requirements are an EACE with credits in English, Mathematics and Biology. The Forestry Training School also requires a credit in Physical Science.

Further information on all these careers may be found in the Careers Guide, Section B Group 2 (1971 Edition) and also in prospectuses published by Egerton, Embu, and AHITI.

Schools which **will** offer Form 5 for the first time in 1972. are grouped together at the end of the list. In 1971 many new schools had difficulty filling their places. You will improve your chances of being accepted for Form 5 if you include one of these schools among your choices. Details of subjects these schools will offer are not yet available, but we have indicated whether they will teach Arts or Science courses.

Schools marked with an asterisk are high-cost schools. They charge fees ranging from 870/- to 3,240/- per annum. Bursaries may be available, but they will not amount to more than 30% of the total fees. You should choose these schools only if you can afford the fees.

(Table of schools courses, and code numbers omitted)

Code No.	Training Course	Name of Job	Approx. No of Places 1972 (Kenyans)	Applicants (1st Pref.) (1971)
201-207 Egerton Courses				
201	General Agriculture	Assist. Agric. Officer	20	180
202	Agricultural Education	Agricultural Secondary teacher	20	69
203	Agricultural Engineer	Agricultural Eng. technician	20	87
204	Animal Production	Livestock Officer	20	145
205	Dairy Technology	Asst. Dairy Officer	20	45
206	Agriculture & Home Economics (Girls)	Asst. Agricultural Officer (H.E.)	20	101
207	Range Management	Asst. Range Officer	20	115
211-212 Embu Courses				
211	General Agriculture	Agricultural Asst.	82	218
212	Agriculture with home economics (Girls)	Agricultural Asst. (Home Economics)	15	22
221-223 AHITI Courses				
221	Animal Health	Animal Health Assist.	80	117 (all courses)
222	Range Management	Range Asst.	40	
223	Leather Manufacture	Tannery Supervisor	10	
231, 241, and 251 Other Courses				
231	Water Development	1. Water Supply Foreman 2. Technical Officer 3. Water Bailiff 4. Draughtsman	78	-
241	Wildlife Management	Asst. Game Warden	-	-
251	Forestry	Forest Ranger	-	-