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The Secondary School System in the Netherlands: Some Social Consequences of Streaming. Final Report.

Princeton Univ., N.J.

Spons Agency-Office of Education (DHEW), Washington, D.C. Bureau of Research.

Bureau No-BR-7-8136

Pub Date Jan 69

Contract-OEC-1-7-078136-2655

Note-36p.

EDRS Price MF-\$0.25 HC Not Available from EDRS.

Descriptors-*Ability Grouping, Competitive Selection, Educational Opportunities, Educational Research, Equal Education, Literature Reviews, *Occupational Aspiration, Occupational Choice, *Secondary Schools, *Social Class, Social Differences, Social Influences, *Social Mobility, Socioeconomic Background

Identifiers-*The Netherlands

As the major instrument for the discovery and training of talent, the school in contemporary technological society plays an increasingly deterministic role in the selection of individuals for particular occupations and, hence, particular positions in the social hierarchy. The Netherlands was chosen as a research site because the consequences of educational selection were anticipated as being particularly pronounced where streaming is a well established practice. To demonstrate the importance of analyzing schools as mechanisms of social selection, questionnaires were administered to all the fourth-year boy students (1,239) attending a selected sample of 44 secondary schools and representing all socioeconomic levels. Results of the study indicated that streaming tends to maintain the present system of social stratification in two ways. First, it functions as a "cooling-out" mechanism by bringing aspirations in line with expectations, and, second, it reduces objective distribution of talent by creating a social distance between certain classes and certain types of schools. Streaming was also found to contribute to the maintenance of patterns of deference to the opinions of an educated elite. [Not available in hard copy due to marginal legibility of original document]. (Author/JK)

ED029365

BR 7-8136
PA -24
OE-BR

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Contract No. OEC 1-7-078136-2655

Joseph L. Lennards

January 1969

The research reported herein was performed pursuant to a contract with the Office of Education, U. S. Department of Health, Education and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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Princeton, New Jersey.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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EA 002 145

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Introduction.

In the past, education was a corollary rather than a determinant of social class position. The mobility function of the school was largely secondary to its role as a stabilizer of social class positions across the generations. This situation has changed considerably, particularly in the technologically advanced societies. In these societies, economic stability and economic growth depend on the availability of well-trained manpower and on the most efficient allocation of that manpower. These changes in manpower requirement have increased considerably the role of the school in the identification, training and allocation of talent (16, 1). The consequences of this closer relationship between level of education and chances for occupational success have not yet been fully investigated.

One central problem raised by the new role of the educational system as the main avenue of occupational and social success is that the school must try to reconcile two somewhat contradictory principles. On the one hand, it must extend and equalize educational opportunities both as a democratic right and as an economic necessity, but, on the other hand, as long as the educational system is called upon to produce the differentiated skills required in a technological society, the school must also in some form sort out the more able from the less able students. In fulfilling these two tasks the school is supposed to create and to raise the aspirations of its students and, at the same time, to block the educational opportunities of the less talented pupils and thus to make it more difficult for them to obtain high status and well-paid jobs. Because educational selection has these important consequences, it becomes important to investigate what the effects of educational selection are on the motivations of the students involved, on the functioning of the school as a formal organization and on the wider society.

Heretofore, the attention of sociologists has focused primarily on one aspect of this hightening bond between the school and the stratification system, namely, on the extent to which social class background affects access to educational opportunities and level of educational performance. Most research has been

devoted to an analysis of the school as an opportunity structure and we possess, at the moment, a considerable body of knowledge about the extra- and intra-school factors affecting educational opportunities.

Much less is known about the working of the school as a selection mechanism. And, still, the modification of the relationship of education to social stratification raises crucial problems for educational policy. How to sustain the motivation and suppress the resentment of those who are selected out? How does the school legitimize its position as the main arbiter of social stratification and social mobility? How to avoid accentuating social class differences rather than bridging them when different levels of educational achievement are inevitably going to reflect the prestige differences in the outside occupational hierarchy to which they are geared?

From a theoretical perspective the effects of social stratification by destination(25) appear to be as important as the consequences of social stratification by class of origin, but a review of the literature indicates that the first problem has been relatively ignored as an area of research. Except for a few suggestive articles by Clark(4) and Turner(24) and the interesting studies by Stinchcombe (23) and Cicourel and Kitsuse (3), we have little knowledge about the mechanics and the effects of educational selection. The neglect of this dimension is particularly striking in the literature on occupational choice and on the effects of ability grouping, two topics, which seem to be particularly relevant in this context.

The problem of occupational choice has been studied from two perspectives: a psychological and a sociological one. In the psychological approach occupational choice is seen not as a single decision, but as the outcome of a long process of deliberation. Occupational decisions are not made at a particular point in time. Their formulation goes through several steps and the psychologist attempts to find out how this series of decisions occurs. Perhaps the classic study in this area is the one done by Ginzberg and his associates (7). His theory of the process of occupational choice suggests three main stages: the fantasy choice, the tentative choice and the realistic choice. The emphasis in this approach is on the adolescent as an individual and the choice of a career is viewed as a developmental phase

in his growth to adulthood. The final career-choice is the act of a mature individual who bases his decision on a rational assessment of his own abilities and skills. When applied to concrete reality, this model seems to be not quite adequate. What is ignored in this psychological approach is the impact of external factors and the extent to which these variables foster or hamper the individualization of occupational choice. Ginzberg's theory is based primarily on interviews with adolescents from upper-income families. The alternatives open to such adolescents will give them a greater scope for individual choice and, in addition, the prevalent norms of their socialmilieu will probably prescribe that children should be allowed and encouraged to develop their own occupational interests. By neglecting to specify the social conditions under which the theory applies the psychological approach to the problem of occupational choice proved to be not very pertinent for our purposes.

In the sociological approach the social determinants of occupational choice form the centre of analysis. Especially in the last decade, a considerable amount of literature has been published on this subject-matter. Most of the articles are written in the form of a debate over what the relationship is between and the relative importance of "contextual" variables (operating on the level of the community, the school, the classroom) and "individual" variables (sex, IQ) (21, 13, 14).. The discussion on this problem has been very lively and heated at times (26, 15, 2, 20), but, unfortunately, this has been almost exclusively a methodological debate and it has made only a small contribution to our theoretical understanding of the relationship between social context and occupational choice. Since the participants in this discussion are mainly interested in demonstrating the relative importance of one type of context versus another, they tend to pay not enough attention to carefully identifying the theoretical components of these contexts. As for the "contextual" variable, for instance, we find that the respective researchers not only concentrate on different aspects (neighborhood, rural-urban, S.E.S. of best friend), but that they also, in many cases, use different measurements for the same aspects (social class composition of the high school, high school census tract). What makes these studies less than satisfactory for our purposes is the fact, that it is not always clear what the dependent variable, occupational choice, stands for. In the definition and measurement of the dependent

variable, the distinction between occupational aspirations and occupational expectations is often obscured. And where the author is aware of the importance of distinguishing these two aspects, as in the study by Stephenson, for instance (22), plans and aspirations are only related to class of origin and not to class of destination. The possibility that this is a spurious relationship and that educational achievement is the crucial variable is overlooked, even though the data show that lower class children are overrepresented in the commercial and vocational stream and underrepresented in the academic stream.

The second area of literature that we searched for clues about the effects of educational selection was the research on the advantages and disadvantages of homogeneous ability grouping in education. The very extensive literature on this topic has been competently summarized by Goodlad (9), Ekstrom (6) and, more recently, Passow (19). The authors agree that the research findings on the effects of streaming are inconsistent and inconclusive and Passow has indicated the methodological reasons for this. What struck us most in reviewing this literature is the existence of a certain lack of correspondence between the political context of the debate and the type of effects that have been selected for investigation. A noteworthy feature of the debate about the advantages and disadvantages of streaming is its value-laden character. What is being discussed is not so much the desirability of a particular administrative framework as well as the desirability of a particular society and, more specifically, the desirability of a particular distribution of opportunities and privileges. Since the school society is perceived as being a replica of the surrounding society, those who want to reduce existing social cleavages are in favor of reducing or even eliminating educational divisions among students. There seems to exist, implicitly at least, an awareness of the fact, that in our technological society educational selection implies selection for a particular position in the social stratification system and that, even when there would be equality of access to educational opportunities, the school may still serve as the training ground for the social stratification system of the future by stratifying and dividing its students according to their ability and, hence, their destination (25). This insight into the societal consequences of streaming seems to motivate much of the concern about ability grouping procedures. And yet, most of

the research in this area only deals with the effects of homogeneous ability grouping on academic achievement. Only in more recent years have some of the non-academic consequences been investigated (for a representative study: see 8). Even in these studies, however, the main focus is on the psychological consequences of streaming for the individuals involved (lower self-image, lack of motivation). The societal consequences of this procedure, its possible function as a mechanism of anticipatory socialization for future inequalities, tends to be ignored.

One of the reasons for the neglect of this social aspect, is methodological. Passow lists the inadequate duration of most studies as an important source of weakness (19). The full ramifications of streaming can only be studied in a situation where this procedure has been generally institutionalized for a number of years. This is the case in many European countries where traditionally, in contrast with the American practice, students are "selected-out" rather than "cooled-out"(4) immediately after leaving primary school.

Among the West-European countries, the Netherlands had maintained its traditional system of early selection and streaming in a basically unchanged manner at the time we undertook this study. (Since September 1968 the situation has changed somewhat). Unlike in Sweden and Great Britain there were no comprehensive schools at the secondary level. Selection for the several streams was made at the age of eleven and there were no "cycles of observation" as in France (11-13 years) or in Italy. This selection was rather definitive; as distinct from Germany, where there are two educational routes to the University, in the Netherlands the possibility of being admitted to the University without a Grammar-school education was very limited. The selection according to ability implied, in fact, a segregation of the student population into three distinct groups, each of which was being educated for a different level of the occupational hierarchy by teachers from a different educational background and according to a different curriculum. In the Vocational Schools the future manual workers were educated. The Secondary-Modern School led to white collar jobs and the Grammar School was the only one which gave access to the University and thus to higher status positions.

This tri-partite system of secondary education dated from the 19th century and it reflected the rigidly stratified and relatively closed society from which it originated. The Law on Secondary Education, introduced in 1863, distinguished three major classes, each of them having their own appropriate level of education.

1. For the "learned class" ("de geleerde stand") there was the Latin-Grammar school (Gymnasium) which prepared students for University education.
2. The Modern-Grammar School was intended for the "well-to-do bourgeoisie" ("de gegoede burgerij"). The purpose of this school was to give a general education to those members of the bourgeoisie "who have more freedom to develop their thinking and knowledge than the average artisan or small farmer" (12, p.157). Since in the curriculum of this school the "cultivating power of studying the classics" was missing, the Modern-Grammar School would not lead to University education.
3. For the rest of the population, the "ordinary people" ("het gewone volk"), primary school education would suffice.

The present-day educational structure emerged in the process of adapting this tri-partite system to the requirements of a democratic, industrial society. The Latin-Grammar school lost its monopoly and Modern-Grammar school students also gained the right to University education, although, at first, only in certain fields (Sciences and Engineering(!)).

The function of the 19th century Modern-Grammar School was taken over by the Secondary-Modern School and the Vocational School was created in answer to the growing need for a well-skilled industrial labor force. These schools formed a hierarchy of prestige with the Latin-Grammar School, offering a classical education, at the top, followed by the Modern-Grammar School, the Secondary-Modern School and the Vocational School. The 19th century idea that each social class needed its own appropriate type of education, still prevailed, although the schools no longer intended to divide the student population according to class of origin, but only according to class of destination.

Within the setting of this well-established system of streaming we explored the following questions:

1. Whether and to what extent do the pupils of the three different types of schools perceive that they have differential access to "the good things in life"? In particular, we wanted to discover what their as-

- pirations and what their expectations are with regard to the attainment of material wealth, political influence and occupational prestige.
2. If these expectations and aspirations can be explained in terms of class of destination, whether and to what extent is the function of the school as the main arbiter of social stratification accepted by the pupils of the three different types of school?
 - a) as a fact. Education as the main and only determinant of social mobility? What other factors are stressed as being important for getting ahead in life? Are different things stressed by the pupils of the three types of school and within type of school by pupils from different social class background?
 - b) as a legitimate fact. Do the pupils of the three different types of school accept the legitimacy of differences in income, prestige and political influence, based on educational achievement?
 3. Whether and to what extent do differences exist in academic motivation and attitudes towards the school between the pupils of the three different types of school and within type of school by pupils of different social class background? How are these differences related to the perception of unequal access to "the good things of life"?

As the nature of the above questions indicates, this is an exploratory study. Given the neglect of class of destination as a variable in previous research, what we want to do is, first of all, to identify some of the effects of educational selection. As a sociologist we are mainly interested in exploring the societal consequences of streaming: its contribution towards maintaining and legitimizing inequality in a society.

Method.

In this section we will briefly describe the characteristics of our sample and the procedures employed in securing the data.

The sample for this study consists of 1239 boys from the fourth grade of 44 secondary schools in the Netherlands. This is a purposive rather than a probability sample. Since this is an exploratory study, our primary purpose was not to estimate the distribution of certain population characteristics, but to identify and to analyze some of the theoretically relevant relationships existing within the population. To achieve this latter objective it was important, first of all, to ensure that in each type of school students from all social classes would be sufficiently represented. By including in our sample a disproportionate number of students from the Vocational school and the Grammar school we were able to compensate for the underrepresentation of upper class students and lower class students in, respectively, the Vocational school and the Grammar school. In addition to social class, we also wanted to control for the effects, if any, of religious background and type of residence (rural-urban). This was accomplished by combining two sources of information. The Dutch Central Bureau of Statistics has published a typology of all Dutch communities according to their degree of urbanization (based on 1960 census data (18)) and the Dutch Ministry of Education provided us with a current list of the location and ideological affiliation (Catholic, Protestant, Neutral) of all secondary schools in the Netherlands. The schools, that we selected on the basis of these data, are distributed as follows:

	Rural			Urban			
	Prot.	Cath.	Neutral	Prot.	Cath.	Neutral	
Grammar School	2	2	2	2	3	1	12
Sec. Mod. School	2	1	1	2	2	2	10
Vocational School	2	1	1	7	6	5	22
	6	4	4	11	11	8	44

The decision to study boy students in their fourth year of secondary school is motivated by the fact that, in this stage of their educational career, students are forced to think about their future with some degree of realism. For those attending Vocational and Secondary Modern Schools this is their leaving year and, consequently, they are very directly confronted with the problem of what to do next. The Grammar School lasts two years longer, but the students in this school must, at the end of their fourth year, choose between the scientific and the liberal arts branch and this choice will narrow future occupational opportunities. This thinking about the future takes place at a time, when the students have been exposed to their school environment for a sufficient number of years to show its effects, if any.

There is one drawback to the study of fourth graders. National statistics show, that about one quarter of the students drop out before they reach the fourth grade (17). Since these drop-outs come predominantly from lower class background, this tends to bias our results in foreseeable directions. We feel, that this bias is acceptable and that the advantages of using fourth graders outweigh the disadvantages of omitting drop-outs. It would have been possible to reduce the drop-out bias considerably by studying second graders instead of fourth graders. But our pre-test taught us that most second graders were unable to make responsible statements about their aspirations and expectations of the future. Furthermore, it is fair to assume that the drop-out rate will be highest among those students, who feel that their school experience does not give them a sense of control over their future (5). In other words, the bias involved in studying fourth graders is one that works against us. By taking fourth year students we concentrate on a group that is self-selective in favor of their school experience. From a methodological point of view, this seems to be an acceptable procedure, for it will tend to make it more difficult to demonstrate the importance of class of destination as an independent variable. In evaluating the results of our study it is important to keep this in mind.

The data for this study were collected mainly by questionnaire. The questionnaire was administered to the sample during the first three months of 1967. It was pre-tested on a smaller sample of 137 students during the months of November and December, 1966.

The administration of the questionnaire was conducted all by ourselves. In seven schools the classes were assembled into a large room, where they took the questionnaire together. In these cases teachers were present in the room to secure order. In the remaining schools the questionnaires were administered to forty-three classrooms separately and we were alone in the room with the students. Before the questionnaires were distributed we introduced ourselves and tried to create an appropriate atmosphere. We explained to the students in particular, that this was a questionnaire and not a test, that cooperation was voluntary and that their anonymity would be fully protected. Wherever possible, we also went through the school records of the students in our sample. This enabled us to check the reliability of part of our questionnaire. Matching the answers from these two sources on the following data: occupation father, education father, school-career, age, religion, we found a high degree of consensus (86%, 90%, 93%, 95%, 94%, respectively). In addition, the school records contained also some information that could not be obtained by questionnaire, since not all students are aware of it or remember it, namely, grade on entrance examination, present school grades and, in some cases, results of I.Q. tests.

In the analysis of our data we used standard statistical techniques. It is important to stress that, since we have no statistically random sample, measures of statistical significance could not be meaningfully applied to our data. Our main interest lies not in estimating population values, but in investigating types and degrees of relationship between our major variables. For that purpose, computing percentage distributions and indices of correlation seemed to be the most appropriate statistical technique.

Results.

A. Background Variables:

1. There are no significant age differences among the students of the three types of school. The median age for the students in all schools is 16.
2. Students from rural and urban areas are equally represented in the Vocational School. In the other two types of school we find an overrepresentation of urban students (59% versus 41% in the Grammar School and 69% versus 31% in the Secondary Modern School).
3. The religious distribution of the students is as follows:

Table 1. Religion of students by type of school.

	Grammar		Secondary Modern	Vocational
	Latin	Modern		
Catholics	61%	49%	45%	46%
Protestants	27%	39%	40%	40%
Other relig.	1%	1%	-	1%
No religion	11%	11%	15%	13%
	267	321	265	380

Catholic students are overrepresented and Protestant students are underrepresented in the Latin Grammar School.

4. There is a strong correlation between social class, as measured by the occupation of the father and type of school attended.

Table 2. Social class of students by type of school.

	Grammar		Secondary Modern	Vocational
	Latin	Modern		
Upper class	38%	22%	14%	5%
Middle class	53%	66%	67%	48%
Lower class	9%	12%	19%	47%
	265	322	264	379

B. Choice of School and School Career:

1. 86% of the Grammar School students, 78% of the Secondary Modern School students and 82% of the Vocational School students came directly to their present type of school after leaving primary school.
2. For the majority of these students this seems to have been a self-evident choice. 69% of the Grammar School students, 58% of the Secondary Modern School students and 60% of the Vocational School students report that their parents did not consider sending them to another type of secondary school.
3. The self evident nature of this decision cannot be explained solely in terms of school performance. For the average or the above average student from lower class background the Secondary Modern School is the most natural choice. Very bright students enter the Grammar School, but they do this after more hesitation than their upper- or middle class counterparts. They more often report that their parents were considering alternatives (Secondary-Modern School) and that they entered the Grammar School because of the advice of their teachers. For the upper- and, to a lesser extent, the middle class the Secondary Modern School is the minimum alternative. Poor students are sent to the Vocational School, but not after having considered the Secondary Modern School as an alternative, while this is about three times less often done by the parents of poor and below average students from the lower class.
4. The decision to attend a particular type of secondary school is a final one. There is little transfer of students between the three schools.

Table 3. School career of students by type of school.

	Grammar	Secondary Modern	Vocational
Directly	86%	78%	82%
Via Grammar	X	20%	3%
Via Sec.Mod.	14%	X	15%
Via Vocational	-	1%	X
	589	265	378

The table also indicates that, where transfer can take place in both directions, more students move downwards than upwards.

C. Expectations and Aspirations:

1. The students have an accurate picture of the Dutch occupational prestige hierarchy. When presented with a selected list of 30 occupations, they group these occupations in the same order of prestige as the respondents did in a previous representative national sample (11).
2. Within this common frame of reference the students were asked to answer the following question: "What number would most people give to the occupation that you expect to have in the future?"(1-10). The differences in prestige expectations are closely related to present type of school.

Table 4. Level of expected prestige by type of school (in percentages).

	Grammar		Sec.Mod.	Vocational
	Latin	Modern		
Low (1,2,3) (4,5,6) (7,8)	1	1	2	9
	9	17	35	44
	69	66	54	42
High (9,10)	21	15	9	6
	257	318	263	373
Mean:	7.8	7.4	6.8	6.1
Gamma = -0.48				

This relationship between class of destination and expectations of occupational prestige is a genuine one. Controlling for class of origin does not alter the strength of the relationship significantly (gamma = -0.41)

The existence of differential expectations about future prestige was also explored in a more indirect way. The students were again presented with the list of 30 occupations, mentioned in point 1 above. This time they were asked to indicate for each of these 30 occupations whether they would be able to achieve these positions, if they really wanted to (1 = easily obtainable, 5 = very difficult to obtain). Instead of presenting each of these 30 tables separately, we have summarized the results in one

table indicating the mean difficulty of obtaining 30 occupations, grouped according to the mean prestige, accorded to them by the students. The control for social class did not affect the strength of the relationship between obtainability and type of school for any of the 30 occupations.

Table 5. Mean difficulty of obtaining occupations with different levels of prestige by type of school.

		Grammar		Sec.Mod.	Vocational
		Latin	Modern		
Low	(1,2,3)	1.8	1.8	1.9	2.2
	(4,5,6)	2.7	2.7	2.7	2.9
	(7,8)	3.1	3.2	3.3	3.4
High	(9,10)	3.2	3.6	4.1	4.3

3. Expectations about access to positions of power were tested by asking the students to indicate the extent to which they considered 6 public offices to be within their reach (1= easily obtainable, 5= very difficult to obtain). These are offices for which everybody is eligible and for which no qualifications are formally required. Instead of presenting all the different tables we will again summarize the results in one table indicating the mean difficulty of becoming an officer in a local and a national sport, cultural and political organization.

Table 6. Mean difficulty of becoming an officer in each of the following organizations by type of school.

		Sport		Cultural		Political	
		Local	Nat.	Local	Nat.	Local	Nat. (=Senate)
Grammar	Latin	2.8	3.3	2.9	2.9	3.2	3.9
	Modern	2.5	3.1	3.0	3.4	3.3	4.0
Sec. Modern		2.6	3.2	3.4	3.6	3.7	4.4
Vocational		2.9	3.3	3.5	3.8	3.9	4.5
Gamma =		0.07	0.06	0.24	0.27	0.29	0.34
Controlling for social class							
Gamma =		0.05	0.07	0.22	0.23	0.24	0.32

4. Expectations about income were obtained by asking the students how difficult they thought it would be

for them to obtain a well-paid job in the future
(1 = most difficult, 5 = least difficult).

Table 7. Difficulty of obtaining a well-paid job by type of school (in percentages).

	Grammar		Sec.Mod.	Vocational
	Latin	Modern		
Most (1,2)	34	42	47	53
(3)	37	32	30	26
Least (4,5)	30	27	23	21
	263	319	261	380
Mean:	2.9	2.8	2.6	2.5
Gamma = -0.23				
Controlling for social class:				
Gamma = -0.16				

5. Levels of prestige aspirations were obtained in the same indirect way described in point 2 above. This time the students were asked about the same 30 occupations: "How much would you like to have such an occupation in the course of your life?" (1= most preferred, 5= least preferred). Here are the results summarized again in one table.

Table 8. Mean aspiration for 30 occupations with different levels of prestige by type of school.

	Grammar		Sec.Mod.	Vocational
	Latin	Modern		
Low (1,2,3)	4.8	4.7	4.6	4.3
(4,5,6)	4.0	3.9	3.6	3.4
(7,8)	4.0	3.8	3.7	3.4
High (9,10)	3.3	3.4	3.5	3.8

When controlling for social class for each of the 30 occupations, the relationship between class of destination and level of aspiration is reduced in most cases, but it does not disappear. Social class enters as an intervening variable: upper class students have higher level of aspirations than lower class students in all three types of school. When comparing the intensity with which these aspirations are held, however, the influence of class of origin is sharply reduced and class of destination appears

to be the crucial determinant. The intensity, with which the same level of aspirations is held by students from the same class background, varies depending on whether or not the present type of school enables the students to fulfill these aspirations. This is illustrated by the following comparison between upper- and lower class students.

Table 9. Mean aspiration for 30 occupations with different levels of prestige by type of school and by social class (upper- and lower)

		<u>Upper Class</u>		Sec.Mod.	Vocational
		Grammar	Modern		
		Latin			
Low	(1,2,3)	4.8	4.7	4.7	4.5
	(4,5,6)	4.2	4.1	3.9	3.7
	(7,8)	4.1	4.0	3.6	3.6
High	(9,10)	3.1	3.3	3.4	3.6

		<u>Lower Class</u>		Sec.Mod.	Vocational
		Grammar	Modern		
		Latin			
Low	(1,2,3)	4.7	4.7	4.6	4.2
	(4,5,6)	3.8	3.8	3.5	3.3
	(7,8)	3.8	3.7	3.7	3.3
High	(9,10)	3.2	3.5	3.6	4.0

6. Aspirations for positions of power were measured by presenting the students with a list of the same six public offices listed above (see point 3). This time the question was: "How much would you like to occupy such an office in the course of your life?" (1= most preferred, 5= least preferred).

Table 10. Mean aspiration for being an officer in each of the following organizations by type of school.

		Sport		Cultural		Political	
		Local	Nat.	Local	Nat.	Local	Nat.
Grammar	Latin	3.3	3.6	3.8	3.9	3.6	3.2
	Modern	3.3	3.6	4.1	4.2	3.7	3.5
Sec. Modern		3.0	3.4	4.1	4.3	3.8	3.8
Vocational		3.0	3.4	4.2	4.4	4.0	4.1
Gamma =		-0.08	-0.05	0.19	0.23	0.26	0.29

Controlled for social class:

Gamma = -0.07 -0.06 0.11 0.12 0.17 0.19

When comparing the intensity with which aspirations are held, the impact of social class is again sharply reduced.

7. Aspirations for income were obtained by asking students how important it was to obtain a well-paid job in the future (1= very important, 5= least important).

Table 11. Aspirations for obtaining a well-paid job by type of school (in percentages).

	Grammar		Sec.Mod.	Vocational
	Latin	Modern		
Most (1,2)	60	75	78	84
(3)	24	13	14	10
Least (4,5)	16	12	8	6
	<u>265</u>	<u>322</u>	<u>261</u>	<u>380</u>
Mean:	2.4	2.0	1.9	1.7
Gamma = -0.34				
Controlled for social class:				
Gamma = -0.30				

8. The above presented relationship between class of destination and aspirations cannot be explained in terms of the self-selectivity of the three types of school. To control for this factor we compared the prestige expectations of students from aspiring and non-aspiring families attending the same type of school and sharing the same class background. Students from aspiring families were defined, in the case of the Grammar School, as students whose parents sent them to the Grammar School directly without considering alternatives; in the case of the Vocational School, the definition was: students who came to the Vocational School after having attended first another type of school and students who came directly, but only after having considered alternatives. Students from non-aspiring families were defined, in case of the Grammar School, as students who were sent to the Grammar School on the advice of teachers and/or after having considered another type of school; in the case of the Vocational School, the definition was: students who never failed a grade in primary school and who

came to the Vocational School directly without having considered alternatives.

Table 12. Median level of prestige expected by students from aspiring and non-aspiring families by type of school (Grammar and Vocational) and by social class.

	Grammar		Vocational	
	Aspiring	Non-aspiring	Aspiring	Non-aspiring
Lower Class	8	8	5	6
Middle Class	7	8	6	6
Upper Class	8	-	6	-

Latin- and Modern Grammar School are combined in this table in order to have sufficient cases.

Controlling for self-selectivity with regard to prestige aspirations leads to the same results as discussed under point 5 above: students from aspiring families have slightly higher levels of aspirations, but the intensity with which these aspirations are held varies according to class of destination.

D. Attitudes toward Social Stratification, Social Mobility and the School.

1. Whether the students explicitly recognized the importance of education for social mobility was measured by asking them: "What are, according to you, the three most important things which a man needs in everyday life, when he wants to get ahead in the world?" The students were to choose these from a list of ten items, which included both achievement and ascriptive criteria and controllable (good character, good manners) and uncontrollable (luck) factors. The ascriptive criteria (wealth, influential relatives) and the uncontrollable factors ended up on the bottom of the list in all three types of school and were rejected as being insignificant by more than 90%. The following four factors were mentioned as the most important ones:

Table 13. Important factors for social mobility by type of school (in percentages).

	Grammar		Sec.Mod.	Vocational
	Latin	Modern		
A good education	50	58	68	75
Good brains	52	48	50	46
Hard work	75	70	67	53
Good character	46	43	44	47

There were no significant differences by social class within each type of school.

2. In order to investigate the extent to which students accepted the legitimacy of social inequalities based on education they were asked to express their views (1: strongly agree, 5: strongly disagree) on the following three statements:

- a) "It is the best thing for most people to follow the opinion of the better-educated people in important matters".

Table 14. Rightness of following the opinion of better-educated people by type of school (in percentages).

	Grammar		Sec.Mod.	Vocational
	Latin	Modern		
Agree (1,2)	50	50	54	51
	29	31	26	31
Disagree (4,5)	21	18	20	19
	266	322	266	378

Gamma: -0.01

- b) "It is not right that people with less education earn more than better-educated people".

Table 15. Rightness of being paid according to level of education by type of school (in percentages).

	Grammar		Sec.Mod.	Vocational
	Latin	Modern		
Agree (1,2)	38	40	42	41
	25	21	17	25
Disagree (4,5)	38	40	40	34
	267	321	265	379

Gamma: -0.04

- c) "One should not blame intelligent people for being sometimes a little conceited".

Table 16. Right to be conceited for intelligent people by type of school (in percentages).

	Grammar		Sec. Mod. Vocational	
	Latin	Modern		
Agree (1,2)	14	17	19	31
	12	14	16	22
Disagree (4,5)	74	70	66	47
	267	322	265	379

Gamma: -0.30

Upper class students in all three types of school disagreed with this statement more often than their lower class colleagues.

3. The prevalence of a mobility ideology was measured by the following question: "One must not continue forever trying to improve one's position in society".

Table 17. Non-acceptance of a mobility ideology by type of school (in percentages).

	Grammar		Sec. Mod. Vocational	
	Latin	Modern		
Agree (1,2)	28	25	20	31
	14	16	12	17
Disagree (4,5)	58	60	67	52
	266	321	266	379

Gamma: -0.05

4. Attitudes toward the school were obtained by developing an index based on the answers to the following three attitude statements (1: strongly agree, 5: strongly disagree)
- I like school.
 - The school is a necessary evil.
 - The only reason why boys like me go to school after age 15 is because they are forced to.
- A total score for each individual was computed by dividing the answers to each statement in three groups: 1= low score (less than 25% of all the answers),

2= median score (25-75% of all the answers) and
 3= high score (the remaining 25%). The highest possible score, expressing the most unfavourable attitude towards the school was 9 and the lowest possible score, expressing the most favourable attitude towards the school was 3. Combining these three statements seemed justified since they appeared to be highly correlated (the lowest product moment correlation coefficient between b) and c) was still 0.45).

Table 18. Attitudes towards the school by type of school (in percentages).

	Grammar		Sec.Mod.	Vocational
	Latin	Modern		
Favourable (3,4)	38	32	36	40
(5,6,7)	42	51	37	45
Unfavourable(8,9)	<u>20</u>	<u>17</u>	<u>27</u>	<u>15</u>
	261	314	261	370

Gamma: 0.02

Since the attitudes towards the school cannot be explained in terms of absolute deprivation (lowest level of expectations in the Vocational School and the highest level of expectations in the Grammar School), we analyzed them from the perspective of relative deprivation, that is, relative with respect to class of origin.

Table 19. Percentages of students expressing a favourable attitude towards the school by type of school and by social class.

	Upper	Middle	Lower
Grammar Latin	25	42	83
Grammar Modern	23	39	58
Sec. Modern	27	33	53
Vocational	14	30	45

A second source of relative deprivation is academic standing within one's classroom. To control for the effects of this factor we divided the students into two groups according to whether or not they had above or below median academic standing within their classroom. We then calculated what percentage of students in table 18 were drawn from each of these groups. In other words, table 18 provided the percentage base for the following

table:

Table 20. Percentage of students expressing a favourable attitude towards the school by type of school, social class and academic standing.

	Upper		Middle		Lower	
	<50	>50	<50	>50	<50	>50
Grammar	81	19	63	37	52	48
Sec. Mod.	69	31	62	38	57	43
Vocational	72	28	58	42	42	58

The Latin-Grammar and Modern-Grammar School are combined in order to have sufficient cases per category.

The social class distribution of academic standing per school is as follows:

Table 21. Percentage of students above and below median academic standing by social class and type of school.

	Latin-Grammar			Modern-Grammar		
	Upper	Middle	Lower	Upper	Middle	Lower
<50	42	53	68	36	48	62
>50	<u>58</u>	<u>47</u>	<u>32</u>	<u>64</u>	<u>52</u>	<u>38</u>
	101	140	24	70	213	38

	Secondary-Modern			Vocational		
	Upper	Middle	Lower	Upper	Middle	Lower
<50	63	51	53	29	41	47
>50	<u>37</u>	<u>49</u>	<u>47</u>	<u>71</u>	<u>59</u>	<u>53</u>
	37	177	50	19	182	178

Discussion.

As the data on the social class composition of the school and on parents' preferences for secondary education indicate the Grammar school, the Secondary Modern school and the Vocational school recruit their students predominantly from particular segments of the social stratification hierarchy. In each of the three social classes we find a preference for a specific type of secondary education which is viewed as being the normal choice for a child from that social milieu. Since within each social class talents are differentially distributed, this class based preference cannot always be followed. As our data show, however, the existence of differences in talent does not eliminate the class based nature of school choice. This becomes especially clear when comparing the school choice of upper and lower class students. For the non-talented upper class boy the Secondary Modern School is considered to be the minimum alternative, while the same school is normally viewed as a maximum alternative by the parents of talented lower class students. It requires the extra efforts of teachers, counsellors and the like to bring about a more adequate allocation of talent. The differentiation of the system of secondary education into three types of school which differ in prestige because they educate for different levels of the occupational hierarchy, tends to accentuate the existing social cleavages between social classes and, consequently, tends to create a social distance between certain classes and certain types of school.

Although class of origin influences school choice, once a particular type of school is chosen and once students have been exposed to it for a number of years, class of destination becomes a more important factor in shaping their expectations and aspirations. This conclusion clearly emerges from the data presented in Tables 4 - 7 above. The students who attend the same type of school share a common set of expectations about their chances of obtaining "the good things in life", regardless of their social class background. The uniformity of expectations by school is highest for prestige, followed by power and income. The lower correlation of type of school and expectations about income may well be a product of the way in which we have measured this item. Unlike our questions about prestige and power, the question about income lacks an absolute reference point. Our pretest taught us that using a specific amount of income as a reference point

yielded unreliable results and since the Netherlands has not yet fully entered the era of mass-consumption, it also proved to be impossible to develop some kind of scale of desired living. The second best possible procedure followed by us will probably tend to underestimate the strength of the relationship between type of school and expectations about income.

The general impression left from the study of aspirations is that in all three types of school students tend to have a very realistic outlook on the future. They tend either to reject ambitions which are incongruent with their expectations or, to scale down or upgrade their importance. The data presented in Table 8 illustrate part of this process. Students want, first of all, to achieve a level of prestige which is commensurate with their present type of schooling. The higher the school is on the hierarchy of class of destination, the greater the range of positions which are considered to be undesirable. The second process, that of adjusting class-of-origin-based aspirations to the deprivations and opportunities provided by class of destination is shown in Table 9. What is adjusted in many cases is not so much the level of ambition as well as the intensity with which aspirations are held. In other words, in order to explain the high ambition of upper class children and the low ambition of lower class children we should look to class of destination rather than to class of origin as the crucial factor. The origin of a certain level of ambition may be related to social class background and social background may influence school choice, but this ambition tends only to be maintained in those situations where it is congruent with class of destination. Theoretically, at least, there exists the possibility, that the found relationship between type of school and outlook on the future is spurious and that it is a product of the self-selectivity of the three types of school. Our data seem to discredit this possibility, however. As we have indicated above, there is no exact correspondence between the aspiration level of the family and the type of school attended by our respondents. To further test the relative impact of class of origin and class of destination separately we compared the expectations and aspirations of students from non-aspiring families with those of students from aspiring families within each type of school, holding social class constant. If class of origin is the most important factor, one would expect that the boys from unaspiring families have lower expectations and aspirations. The data with commentary are presented on page 18

and they indicate that this is not the case.

The students in our study seem to be fully aware of the fact, that their present type of schooling gives them differential access to the good things in life and that education is a crucial determinant of social stratification. To the respondents in all three types of school social advancement takes place within a clearly defined context. Social mobility is a predictable event. It is a possibility only for those who are rightly qualified for the race. In order to qualify you must, first of all, have a good education. This opinion is most strongly shared by the students from the Vocational and the Secondary Modern School (see Table 13). They agree that without a good education you are out of the race and that factors like hard work or even good brains are of relative minor importance. The fact, that Grammar school students tend to share the opposite opinion, especially with regard to the relative importance of hard work versus a good education, might be interpreted as evidence for a more optimistic view about their mobility chances. Since they can take it for granted that they are in the race on the basis of their education, they stress the factors which make one man a better runner than the other.

The awareness that the future position in the stratification system largely depends on the present level of school, exists in a situation where the "ideology of success" is widespread (see Table 17). Given the importance attached to "getting ahead", how do the students react to the limitations and opportunities resulting from educational selection?

We would like to discuss first how streaming affects the attitudes of students toward the school. The data are presented in Tables 18-20. Before discussing these results a few words should be said about the way we have measured this dimension. The scale items listed on page 20 may be open to question on the grounds that they represent an inadequate sample of the universe and probably do not cover the whole range. Since the primary purpose of the scale is to discriminate those who have a favourable attitude toward the school from those who do not, this criticism does not seem to be a particular serious one for this study. One of the main positive sanctions that the school has at its disposal is the promise that success at school will lead to success in the future. In view of this, we had anticipated that the greatest proportion of dissatisfied students were to be found in the Vocational school. Table 18 indicates that

the opposite is true. Students in the Vocational school are more often satisfied with school than students in the Grammar school. Control for social class seems partly to account for this finding (see Table 19). The attitude toward the school is motivated not so much by the absolute gratification promised, but by the relative gratification, that is, the extent to which class of destination will be, at least, on the same level as class of origin. A closer analysis of Table 19 revealed some rather curious exceptions, however. Upper and middle class students in the Grammar school and the Vocational school express, respectively, more dissatisfaction and more satisfaction than could be anticipated on the basis of social class only. In order to explain these findings a second control factor was introduced: academic standing. The data are presented in Table 20 and they suggest, that streaming tends to put special pressure on certain categories of students. This is best illustrated by the upper class student in the Grammar school. For him to have a favourable attitude toward school, it is not enough to attend the right type of school, he must also be an above average student. While, in the Grammar school, there is a greater lack of enthusiasm for school among upper- and middle class students than would be expected, in the Vocational school we find the opposite pattern. These seemingly contradictory findings can be explained by the same principle: streams tend to create their own frame of reference. Once you are allocated to a particular school, you compete for success only with the people in that school. In the Grammar school, this makes the academic competition more severe, since students have to compete with the best. The effects of this are felt, in particular, by the upper-class student and to a lesser extent also by the middle class student, whose aspiration is to secure a position at the top. In the Vocational school, the shift in reference group makes it possible for students from upper- and middle class background to feel satisfied with school, even though they are downward mobile, provided they can obtain good academic standing. The distribution in Tables 18 and 19 can therefore be explained in light of the data presented in Tables 20 and 21.

In addition to attitudes toward the school, we also explored the attitudes of students toward the stratification system and, in particular, towards the legitimacy of distributing privileges on the basis of education. The first dimension measured was that of authority: the exercise of legitimized power (Table 14). Only 20% of the students reject the principle of deference to the opinions of an educated elite. The majority of stu-

dents in all three types of school considers this to be a desirable state of affairs. The way in which this authority should be exercised, is subject to certain restrictions, however. What is generally resented is conceitedness (Table 16). This type of behavior is disapproved of by three-fourth of the students in the Grammar school. Table 16 suggests, that their predominant orientation is one of "noblesse oblige". Students in the Vocational school disapprove of conceited intellectuals to a significantly lesser extent. These inter-school differences can only partly be explained in terms of the different social class distribution of the schools. Given the fact, that we presented to the students a very strong worded statement, it must be considered remarkable, that only 47 percent of the students in the Vocational school disagreed with it. It reflects the extent to which in a system of streaming institutionalized recognition is given to intelligence as a mark of superiority. While a majority of the students were willing to accept the equation of education with social influence, there was less readiness to apply the same principle to the area of income distribution. Still, four out of ten students agreed that less educated people should not earn more than better educated people. The fact, that in all three types of school the same amount of agreement exists about the rightness of equating education with social influence and income makes it impossible to prove that streaming causes these opinions. They may well have originated elsewhere. What we can state is that, since the belief in the legitimacy of distributing social influence and income on the basis of educational achievement is accepted even by the less educated students, streaming contributes, at least, to the maintenance of these beliefs.

To conclude this section we would like to remind the reader that a more detailed analysis and interpretation of the above findings can be found in our forthcoming dissertation.

Conclusions and Implications.

The general conclusion of our study is that streaming has, indeed, important social consequences.

1. Streaming hampers rather than promotes the efficient allocation of talent. An educational system which segregates its secondary school students according to ability, accentuates the existing class differences in the society. It will be impossible to maintain "parity of esteem". When occupations are evaluated differently these prestige differences will also attach to the agencies which prepare for these occupations. As our data indicate this inequality in prestige between schools will tend to affect their recruitment. Since choice of school will, at the same time, be a choice as to where you want to end up in the social stratification system, there will exist a class based preference for certain types of school. The normal tendency of upper class parents to protect their children against downward mobility and of lower class people to aspire to the next higher rung on the stratification ladder will tend to restrict the chances of bringing about an effective and adequate distribution of talent. In our opinion, this consequence of streaming has been insufficiently stressed in the past. The loss of talent which occurs in streamed systems of education has been explained largely in terms of the difficulties involved in identifying talent accurately, especially at an early age. In order to rectify this situation, several European countries have now moved up the age at which selection for a particular type of secondary education has to be made. If our analysis is correct, this will provide only a partial solution to the problem. Selection at a later age will not necessarily contribute to a lessening of the social distance between certain type of schools and certain social classes. To reduce the loss of talent which results from this factor a much more fundamental change in the structure of the present system is required.

2. Streaming functions as a mechanism of anticipatory socialization for future inequalities. Our data clearly demonstrate that the limits suggested by the structure of the school system are recognized by the students and that they are accepted as defining the limits of personal ambition. From a psychological perspective, this is probably a healthy state of affairs, since it prevents the development of feelings of frustration. Streaming fulfills an important function from

a sociological point of view too. It drains off the potential resentment of those who are selected out and it facilitates their absorption into the existing stratification system. Finding some kind of "cooling-out" mechanism is of great importance in our industrial society where the school has become the main arbiter of social stratification and social mobility. In order to be acceptable, however, such mechanism must be able to bear the full weight of responsibility for social efficiency and social justice. For reasons outlined above, there is insufficient evidence to suggest that streaming can bear the weight of this responsibility.

3. Streaming increases academic pressure and, hence, status anxiety among aspiring students in the upper streams while, at the same time, softening the effects of academic failure in the lower streams. It institutionalizes the principle, that it is better to be a big frog in a small pond than a small frog in a big pond. By segregating students according to ability homogeneous reference groups are created, so that the weak student no longer needs to compare himself with all students, but only with the other weak students in his stream. By reducing the ability span, streaming seems to facilitate the adjustment of the downward mobile student who does well in the lower stream and, in general, produces a more favourable attitude toward the school than would be expected otherwise. On the upper level, the opposite occurs. The finding that the below average middle- and upper class student in the upper stream experiences school as a burden suggests some interesting theoretical and practical implications. It increases the likelihood that, when the enrollment of upper- and middle class students in upper stream institutions, like Universities, goes up, so will the dissatisfaction with school and the uneasiness about academic competition, as long as the number of positions available at the top does not grow proportionately. The implications of this fact for educational policy are obvious. From a theoretical perspective, this may throw some light on the causes of present-day students' reaction against school and grading practices in particular.

4. Streaming contributes to maintaining a pattern of deference to the opinions of an educated elite. It does so by giving institutionalized recognition to intelligence as a mark of superiority. The early division of the student population into several groups, each homogeneous with regard to ability and each having unequal prestige as a result of being oriented toward a particular segment of the outside occupational hierarchy, tends to accustom

the students to submitting to prestige differences as a fact of life and to equating high intelligence with high prestige. The effects of streaming on the chances of providing adequate political socialization for democracy seem to be an important area of study.

The more general purpose of this study was to demonstrate the importance of analyzing schools as mechanisms of social selection. The Netherlands was chosen as a research-site because streaming was a firmly established educational practice there and the social consequences of educational selection would therefore be more pronounced. It is important to realize that streaming represents only in a more pure form a tendency which is prevalent in the educational system of all industrial societies, namely, to rely on the school as the main arbiter of occupational and, hence, social advancement. The above findings have, therefore, a much wider range of applicability than just the Netherlands and they may illustrate the importance of taking class of destination as a crucial variable in further research. One of the reasons why this variable has been neglected in the past is a methodological one. We would like to stress the importance of making a clear distinction between aspirations and expectations and of measuring level of aspiration not as a dichotomous, but as an ordinal variable. The intensity with which a particular aspiration is held, constitutes an important datum for sociological research. Measuring its degree rather than simply its occurrence prevents us from making too hasty assumptions about the amount of homogeneity existing within a particular population.

Summary.

In our technological society the school has become the major instrument for the discovery, training and allocation of talent. This has created a close relationship between the educational system and the stratification system. Educational selection implies increasingly a selection for a particular occupation and, hence, a particular position in the social hierarchy. The ramifications of the fact that the school has become the main determinant of social advancement, have been insufficiently explored in the past. The present study was undertaken in order to demonstrate the importance of analyzing schools as mechanisms of social selection.

Since the consequences of educational selection will be particularly pronounced where streaming is a well-established practice, the Netherlands was chosen as a research-site. A non-probability sample of 44 secondary schools, representing all levels, was selected and questionnaires were administered to all the boy students in their fourth year of secondary education. The general objective of the study was to identify some of the social consequences of streaming: its contribution toward maintaining and legitimizing social inequality in our society. More specifically, the following problems were investigated:

1. To what extent is the function of the school as the arbiter of social stratification recognized by the students?
2. Is this function accepted by the students?
3. How does educational selection affect the attitudes of students toward the school?

The results indicated that streaming tends to maintain the present system of social stratification in two ways: it functions as a "cooling-out" mechanism by bringing aspirations in line with expectations and secondly, it reduces the chances of distributing talent objectively by creating a social distance between certain classes and certain types of school. It is pointed out that to stop the loss of talent which occurs as a result of this latter factor, more fundamental changes

in educational policy than are presently envisaged, are required. Although students in the upper stream expected to be more successful in life than their lower stream colleagues, they expressed more dissatisfaction with school. This is a result of the greater academic pressure to which they are exposed in a streamed system. Finally, streaming was found to contribute to the maintenance of patterns of deference to the opinions of the educated elite.

The need for more studies along these lines is stressed and some methodological considerations are advanced.

References.

1. Blau, Peter M. and Duncan, Otis Dudley. The American Occupational Structure. New York: John Wiley and Sons. 1967.
2. Boyle, Richard F. "On Neighborhood Context and College Plans (III)". American Sociological Review, vol. 31. 1966. pp. 706-707.
3. Cicourel, Aaron and Kitsuse, John I. The Educational Decision-Makers. New York: Bobbs - Merrill. 1963.
4. Clark, Burton R. "The "Cooling-Out" Function in Higher Education". American Journal of Sociology, vol. 65. 1960. pp. 569-576.
5. Coleman, James S. et al. Equality of Educational Opportunity. Washington: U.S. Government Printing Office. 1966.
6. Ekstrom, Ruth B. Experimental Studies of Homogeneous Grouping. Princeton: Educational Testing Service. 1959.
7. Ginzberg, Eli et al. Occupational Choice. New York: Columbia University Press. 1961.
8. Goldberg, Miriam L., Passow, A. Harry and Justman, Joseph. The Effects of Ability Grouping. New York: Teachers College, Columbia University. 1966.
9. Goodlad, J.I. "Classroom Organization" in: Harris, Chester W. (ed.): Encyclopedia of Educational Research. New York: Macmillan Company. 1960. pp. 223-225.
10. Goslin, David A. Teachers and Testing. New York: Russell Sage Foundation. 1967.
11. Heek van, F. and Vercruysse, E.V.W. "De Nederlandse Beroepsprestige-Stratificatie" in: Publicaties van het Instituut voor Sociaal Onderzoek van het Nederlandse Volk, vol. I: Sociale Stijging en Daling in Nederland. Leiden: Stenfert Kroese. 1958. pp. 11-48.
12. Idenburg, Ph.J. Schets van het Nederlandse Schoolwezen (Outline of the Dutch Schoolsystem). The Hague. 1960.
13. Mac Dill, Eduard L. and Coleman, James S. "High School Social Status, College Plans, and Interest in Academic Achievement." American Sociological Review, vol. 28. 1963. pp. 905-918.
14. Mac Dill, Eduard L. and Coleman James S. "Family and Peer Influences in College Plans of High School Students." Sociology of Education, vol. 38. 1965. pp. 112-126.

15. Michael, John A. "On Neighborhood Context and College Plans (II)" American Sociological Review, vol. 31. 1966. pp. 702-706.
16. Miller, Herman P. "Annual and Lifetime Income in Relation to Education: 1939-1959." American Economic Review, vol. 50. pp. 962-986.
17. Netherlands Central Bureau of Statistics. The Netherlands Youth and its Education. 1964/1965. Hilversum: De Haan N.V. 1966.
18. Netherlands Central Bureau of Statistics. Typology of the Netherlands Municipalities according to Degree of Urbanization, May 31st 1960. Zeist: De Haan N.V. 1964.
19. Passow, Harry A. "The Maze of the Research on Ability Grouping" in: Yates, Alfred (ed.) Grouping in Education. New York: John Wiley and Sons. 1966. pp. 161-169.
20. Sewell, William H. and Armer, J. Michael. "Reply to Turner, Michael, and Boyle." American Sociological Review, vol. 31. 1966. pp. 707-712.
21. Sewell, William H. and Armer, J. Michael. "Neighborhood Context and College Plans". American Sociological Review, vol. 31. 1966. pp. 159-168.
22. Stephenson, Richard M. "Mobility Orientation and Stratification of 1,000 Ninth Graders." American Sociological Review, vol. 22. 1958. pp. 204-212.
23. Stinchcombe, Arthur L. Rebellion in a High School. Chicago: Quadrangle Books. 1964.
24. Turner, Ralph H. "Sponsored and Contest Mobility and the School System." American Sociological Review, vol. 25. 1960. pp. 855-867.
25. Turner, Ralph H. The Social Context of Ambition. San Francisco: Chandler Publishing Company. 1964.
26. Turner, Ralph H. "On Neighborhood Context and College Plans (I)." American Sociological Review, vol. 31. 1966. pp. 698-702.