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Ethnic Inequalities in the German
School System

Richard D. Alba,
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Redaktionelle Notiz:

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ABSTRACT

On the basis of previous research, the degree and nature of the disadvantages faced by immigrant minorities in the school system of the Federal Republic of Germany remain uncertain. We address these issues by the analysis of two major data sets: the Microcensus of 1989 and the Socio-Economic Panel. Our analysis of the Microcensus reveals the extent of ethnic disadvantage remaining after the socio-economic origins and generational status of students are taken into account. The findings show that children from three groups, Italians, Turks, and Yugoslavs, are more likely than German children to be placed in the least desirable track of the school system, the *Hauptschulen*, and to leave the system without an apprenticeship (i.e., without a *Lehre*). Greek children, by contrast, are more likely even than Germans to be found in the most desirable track, the *Gymnasium*, which feeds into the higher educational system. Our analysis of the Socio-Economic Panel indicates that these ethnic disadvantages are associated with the cultural climate at home and with whether or not the student has had a continuous educational career in Germany. In closing, we discuss these findings in terms of theories about the nature of ethnic disadvantage.

Introduction

The degree and nature of the disadvantages faced by immigrant minorities in the Federal Republic of Germany remain uncertain. With respect to the labor market, two rather opposing positions have been put forward in the recent literature. On the one hand, Baker and Lenhardt (1991), in a study based largely on aggregate employment data, argue against the theses of ethnic discrimination and segmentation (*Unterschichtung*), and claim that ethnic disadvantages are quite modest, once the lower qualifications of ethnic workers are taken into account. On the other hand, Seifert (1992; see also Heckmann, 1992), in a study of the early work careers of the second generation in the Socio-economic Panel data, paints a decidedly more negative picture. He maintains that members of the second generation show a number of substantial disadvantages in comparison to native Germans of the same ages, ranging from a much lower frequency of vocational training to higher frequencies of unemployment and of employment as un- and semi-skilled jobs. However, Seifert also argues against the thesis that minorities are increasingly subject to a segmentation process. Both studies agree that the labor-market situations of foreigners and Germans are not the same, but differ in their emphases and, to some extent, their interpretations.

Similar positions could be argued in the sphere of educational attainment. It is well known that the educational accomplishments of foreign children in the German school system do not match those of their German age peers (Boos-Nünning, 1983, 1994; Geiersbach, 1989; Esser, 1990; Köhler, 1992; Seifert, 1992). Nevertheless, Baker and Lenhardt (1988) have argued that the school system is functioning as an agent of integration for foreign children and that, from an institutional perspective, German and foreign children are subject to the same regime of standards and opportunities. This position, of course, does not exclude the possibility of rather different educational outcomes for the two groups.

Yet much that is necessary to interpret ethnic differences in education remains unknown. Many studies employ regional, rather than national, data, focus on a single ethnic group (especially the Turks), or do not make ethnic differentiations within the non-German population. Other problems concern the adequacy of controls for other important factors, such as socioeconomic

background or length of residence in the Germany. The current study intends to address these gaps with a strategy based on the analysis of two major bodies of data. First, we use the 1989 Microcensus to establish the precise extent of ethnic disadvantage in the German school system (more precisely, in the West German states, where the vast majority of non-Germans reside). The Microcensus is large enough to allow us to examine educational outcomes for each of the four largest immigrant groups—Greeks, Italians, Turks, and Yugoslavs—and also to take into account generational and parental socioeconomic status. Second, we use several waves of the Socio-economic Panel to explore possible explanations for the ethnic differences we find. The Panel offers a wide range of potential explanatory variables, from the cultural climate in the home, to the parents' intention to return to the homeland, to the ethnic composition of the residential neighbourhood.

1. Theoretical background: The nature of ethnic disadvantage

Ethnic inequalities in such spheres as the educational system and the labor market have undoubtedly received more attention than any other topic in the vast, world-wide literature on ethnicity. It is quite typical to find that ethnic minorities are disadvantaged in varying degrees and in a wide variety of ways compared to members of the majority ethnic group, with the exception perhaps of immigrant minorities that bring unusually high amounts of human capital with them or are concentrated in entrepreneurial endeavors. For the United States, where these themes have perhaps been most developed, see such diverse works as those by Wilson (1987), Massey and Denton (1993), Portes and Rumbaut (1990).

Major differences are found in the way ethnic disadvantages are interpreted. Some scholars tend to emphasize differences in the socioeconomic, or social class, origins of majority and minority. Particularly in the discussion of immigrant minorities, it is argued that immigrants, who often come ultimately from rural areas in less industrialized societies, tend to enter the labor force of the receiving society on its lower rungs (Piore, 1979; Portes and Rumbaut, 1990). Thus, their children, even when raised in the receiving society and exposed to its "opportunities," tend to attain less than do the average

members of the majority, because of the impact of socioeconomic disadvantages. In the United States, this kind of argument has been applied to quite diverse groups, such as second-generation Italian Americans (Gans, 1962) and even African Americans, a non-immigrant group (Wilson, 1978, 1987).

In a somewhat related vein, it has been claimed sometimes that the source of a minority's disadvantage lies in its distinctive cultural value and belief systems, which themselves can be argued to be derived from its social-class position, broadly construed. Rosen (1959) provides the classic statement of the claim that cultural differences, such as the degree of fatalism, explain subsequent socioeconomic inequalities among minorities, and Steinberg (1981) that for the argument that the roots of such differences lie in class-related experiences. The cultural explanation is not as popular as it once was, but its influence can still be seen in the contemporary literature.

A different type of argument, which, like the preceding ones, still relies on characteristics of the minority group itself, focuses on minority intentions with respect to the host society. Here, minorities are seen to be disadvantaged when they define themselves as "sojourners," i.e., temporary residents in the receiving society, because, so the argument goes, their sights remain set on their society of origin and they thus fail to draw up long-term plans based on a permanent stay. Sojourner status leads them, for instance, to withdraw their children as early as possible from school and send them into the labor market to contribute to the family income, in the hope (often illusory) of speeding the return home. For the European migration to the United States, this argument has been made in the case of the Italians (see Alba, 1985; Perlmann, 1988); in Germany, it is often heard in relation to the Turks (see, e.g., Geiersbach, 1982; Schiffauer, 1991; Korte, 1990).

Not all explanations of inequality focus on minority characteristics alone, of course. A very different approach sees minority disadvantage as the product of majority exclusion, or discrimination. In this view, the majority excludes minorities, either through individual acts of discrimination or through institutionalized, discriminatory mechanisms, in order to defend its privileges (Blauener, 1972). This type of explanation generally takes center stage when, for instance, the high degree of residential segregation between whites and

blacks in the United States is under scrutiny (Massey and Denton, 1993). However, the empirical verification of explanations relying on discrimination is more problematic than is the case for most other explanations of inequality because discrimination is usually not directly measured. Thus, its presence must be inferred from ethnic differences that exist after all other relevant factors are controlled. Since one can rarely be certain that all such factors have been taken into account, discrimination as an explanation tends to remain a hypothesis.

Beyond explaining the extent of existing inequality, other important questions concern the evolution of ethnic inequality over time. Here, the most significant body of theory is probably assimilation theory (Gordon, 1964; Esser, 1980; Hirschman, 1983). It leads to the expectation that, in many cases, especially where immigrant minorities are involved, inequalities should diminish over time and, in particular, across different generations of the same ethnic group (see, for the U.S., Neidert and Farley, 1985; for Germany, Esser and Friedrichs, 1990). The reasons for this expectation are not difficult to derive from the explanations given above. Thus, insofar as inequality is culturally rooted, it should be reduced as a minority assimilates culturally to the receiving society (see, for example, Nauck and Özel, 1986). Insofar as it derives from socioeconomic differentials between minority and majority, it may be eroded by the intergenerational social mobility of the minority, even if this is modest. If discrimination lies behind inequality, it may be affected by assimilation, since discrimination requires the "visibility" of minority-group membership and many (but not all) forms of visibility--e.g., language, dress--are reduced by assimilatory processes.

In any event, in the case of immigrant minorities, these considerations indicate that one must take generational position into account in the measurement of ethnic inequalities. The first generation, composed of the immigrants, is too shaped by socialization in the society of origin and by disadvantages associated with migration itself to take full advantage of the opportunities in the new society. Thus, it is with the second generation, raised in the receiving society, that ethnic inequalities per se manifest themselves clearly. Our analysis relies on this key distinction.

2. Data and Measures

Two sources of data are employed in our analysis. In order to have a large, representative sample of the youthful members of various immigrant minorities, we first analyze data from the 1989 Microcensus, a 1% sample of the resident population of the "old" Federal Republic (i.e., before reunification). Then, in order to measure such potential explanatory variables as the cultural climate in the parents' home and the intention to return, we turn to the Socio-economic Panel, a longitudinal sample of the German population, supplemented with disproportional samples of the five largest non-German groups (the four analyzed in detail here, plus the Spanish). We explain our specific use of each data source in turn.

Our multivariate analysis of the Microcensus data focuses on children whose school careers are sufficiently developed that one can characterize their educational track. Adapting the strategy of Köhler (1992), we divide these children into two groups: 13-15 year-olds, who are then characterized by whether they are in *Hauptschule*, *Realschule*, or *Gymnasium* tracks of the system; 16-18 year-olds, who add the further possibility that those who attain an apprenticeship can be distinguished from those who leave the educational system without one.¹ The overwhelming majority of children in these age

1 Because jurisdiction over education is constitutionally assigned to the *Bundesländer* (the federal states), the educational system is not entirely uniform. However, in most of the states, the system provides, after four years of primary education, three different secondary tracks: *Hauptschule*, *Realschule* and *Gymnasium*. They are clearly ranked in terms of prospects for tertiary education and occupational career. Generally, only the *Gymnasium* (and its final examinations: the *Fachhochschulreife* or the *Abitur*) provides, following eight or nine years of school attendance, a direct route to universities or other institutions of tertiary education. Successful completion of six years at the *Realschule* leads to the *Mittlere Reife* certificate (a certificate of intermediate secondary education). While the transition to the *Gymnasium* is possible from the *Realschule* (and, in a limited number of cases, occurs), it is extremely rare in the case of the *Hauptschule*. The last is clearly the least prestigious track. It offers the least demanding curriculum and has more and more become the track for educationally disadvantaged children and foreigners. A fourth kind of school - the *Gesamtschule* - provides the option to combine more and less demanding courses. However, it is only of marginal importance and is collapsed with the *Realschule* in the present paper.

As is well known, vocational apprenticeships (*Lehren*) play a central role in the German system, linking the educational and labor-market systems. Such apprenticeships can be entered following any of the tracks of secondary education. But the higher the track, the better are the opportunities to obtain apprenticeship places in occupations with good labor market prospects. Such apprenticeships are a

groups live with their parents (Köhler, 1992), and this allows us to control for their socioeconomic origins, since parental data are also present in the Microcensus.

Based on the numbers of cases of different immigrant minorities in the two selected age groups, it is appropriate to examine educational trajectories separately for four groups: Turks, Yugoslavs, Italians, and Greeks.² (Our criterion is that an ethnic group should be represented by a minimum of approximately 100 cases in each group; all but the Greeks are well over this minimum.) Other non-Germans are retained in a residual category, and German children of the same ages form the comparison group.

Logistic regression analysis is used to analyze the educational placement of these different groups. Location in the school system, formulated as a series of dichotomies (e.g., *Hauptschule* vs. other possibilities), constitutes the dependent variables. Ethnic origin is represented as a series of dummy variables, with Germans as the omitted category and thus the reference point. A number of other control variables, capable of explaining ethnic differences, are introduced:

1. length of residence and generational status. This critical variable is derived from birthplace and year of immigration. As members of the second generation, we count foreign children who were born in Germany or who arrived before their fifth year. Such children have obviously had time before

virtual necessity for students coming from the *Hauptschulen*, who are otherwise qualified only for the lowest rungs of the labor market.

In analyzing stratification within this system, Köhler used two-year age groups: 13-14 and 17-18 year-olds. We have expanded these age groups by one year in each case, in order to have as many cases as possible in specific ethnic groups.

2 A few words need to be said about the measurement of "ethnicity," which is different in Germany from that in some other countries, most notably, the United States. In theoretical discussion, ethnicity is generally defined in terms of either ancestry or cultural identity. In American surveys ethnicity is usually operationalized as self-identification in terms of ethnic categories of ancestry; in German ones, as citizenship, which is legally linked to ancestry. Of course, all operationalizations have their blind spots; a measure derived from citizenship misses those individuals who have obtained German citizenship but are nevertheless members of minority groups. Given the low rate of naturalization in Germany, this error can be presumed to be small. Given the equation of ethnicity with citizenship in Germany, non-Germans are often referred to as "foreigners" (*Ausländer*), even when they have been born in Germany; and we will sometimes use this terminology here.

the onset of school to adjust to German language and society. Other categories include: arrival between 5 and 9 years of age; arrival between 10 and 14 years of age; and later arrival.

2. parental socioeconomic status. This critical factor is represented by four different variables--education (in 8 categories) of the household head (i.e., the reference person), the household head's occupation (15 categories), the self-employment status of the head, and whether or not the household depends on unemployment insurance or social welfare payments (*Sozialhilfe*).³

3. geographic location. The complexity of the school system and the relative availability of certain tracks depend upon location. The probability that foreign children are segregated from German children also depends upon location, since in some regions there are too few foreign children to concentrate them in separate classes (Baker and Lenhardt, 1988). Our analyses include two relevant variables--state (*Land*), represented as a dichotomy contrasting states with above average foreign concentrations with others; and community size, represented as a trichotomy (categories: 100 thousand or more inhabitants; 20-100 thousand; less than 20 thousand).

Other control variables include: gender, which is essential here because our models include both sexes (we address below the issue of statistical interactions of gender with other variables); and number of children in the household. With the exception of the last variable, all independent variables are represented as sets of dummy variables, to preserve their categorical definitions. Further, since key variables such as socioeconomic status are interpreted as indexing parental statuses, the multivariate analyses (but not simple tables) are restricted to members of the two age groups who are the children of the household head.⁴

Our goal in the analysis of the Socio-economic Panel (SOEP) is not to measure the extent of ethnic disadvantage net of the background variables

3 The category schemes for the head's education and occupation are, with a few minor changes in detail, those of Blossfeld (1985).

4 Our analyses of the Microcensus are unweighted because we are skeptical that the weights adequately represent foreign populations. We are grateful to Bernhard Schimpf-Neimanns of the *Zentrum für Umfragen, Methoden und Analysen* in Mannheim for his advice on this issue.

outlined above, but to explore whether other features of the social contexts of foreign children can explain why the members of some groups seem especially disadvantaged. To this end, we view the following variables, found in various waves of the Panel, as especially relevant for the general classes of explanations discussed earlier (one class is omitted below, the socioeconomic one, because it is investigated in our multivariate analysis of the Microcensus):

A. cultural differences. The available measures correspond only partly with cultural traits that plausibly have a direct effect on academic outcomes. This correspondence is clearest in the case of language in the home, but other measures reflect embeddedness in a non-German cultural context, clearly a precursor to the impact of distinctive cultural values.

a. language at home (first wave). This variable is defined as the self-estimated German-speaking ability (in 5 categories) of the parent whose German is weaker; presumably, it is the weaker German facility (often that of the mother) that tends to define which language is used at home (or, at a minimum, in parent-child interactions).

b. cultural climate in the home (fifth wave). This variable is defined as a sum (0-3) of 3 items concerning the cuisine, newspapers, and music present in the home. For each item, if the household head reports that the corresponding practice in the home is mainly or exclusively non-German, a 1 is added to the variable.

c. social embeddedness of the family (fifth wave). This variable is a count (0-3) of the number of co-ethnic friends of the household head. Children from households whose head names fewer than 3 friends are not included in the analysis for this variable.

B. orientation to the society of origin. Except for the last, the variables below are defined in terms of the household head, rather than the child, to avoid confounding possible causes of school success with consequences of it.

a. intention to return (first wave). This is the declared intention of the household head, classified in 3 categories (return within a year, after a year, or remain in Germany).

b. money sent to homeland (first wave). This is a measure of the household's investment in the homeland, which self-evidently reflects

its long-range intention to return. It is a two-category variable, contrasting any remittance (as reported by the household head) against none.

c. identity as a German or non-German (first wave). Identity is related to the intention to return in the sense that persons who intend to return to their homelands presumably make little or no effort to identify with German society, but continue to define themselves largely or exclusively in terms of homeland identities.

d. continuity of school career (first wave). This variable measures the extent to which a student's school career has taken place entirely in Germany, or alternatively in Germany and the homeland. It is analytically distinguishable from generation, because of the possibility that some children of the second generation are sent to their homelands for at least part of their education by their parents. Doing so, presumably, reflects the parents' aim to return. There are three categories: educated only in Germany; in Germany and a homeland; or only in a homeland. Because of a substantial amount of missing data, a fourth category is added for multivariate analysis: continuity unknown.⁵

C. discrimination. Direct measures of discrimination are, of course, not possible, so one must seek for characteristics that might be associated with it. To be sure, some of the measures cited above might correlate with discrimination--for example, coming from a home with a very ethnic cultural climate, since children who do so presumably stand out in the classroom. From the standpoint of institutional discrimination, however, the most plausible of the available measures is probably the character of the residential neighborhood. Neighborhoods with many foreign residents may be served by schools that are attended by mainly foreigners or that establish classes populated mostly by foreigners.

a. ethnic composition of the neighborhood (third wave). This variable classifies the child's neighborhood into one of 4 types: one with many foreigners of the same nationality as the child; one with many

5 Because education in a homeland is only discovered when the child is subject to a regular interview, which occurs no earlier than age 16, one must search through several succeeding waves of data in order to define this variable for the 13-15 year-olds of the first (or any) wave. In this case, we searched the first through fifth waves.

foreigners of other nationalities; one with some foreigners, whatever their nationality; and one with few foreigners.

It should be noted that some of these variables are measured by SOEP in more than one wave. In such cases, we have selected the data from one wave only, in order to keep the analysis manageable.

In analyzing the Panel data, we compare the four immigrant groups distinguished in the first phase of the analysis in terms of the variables just described; in addition, we examine how these variables correlate with placement in the school system. The analysis is conducted for 13-18 year-olds in each of the waves in which the relevant variables are present (waves one, three, and five). Because of the limited numbers of cases in the different ethnic groups, no further differentiation by age is made; for the same reason, school placement is defined in terms of a simple dichotomy, *Hauptschule* vs. *Realschule* or *Gymnasium*.⁶

3. Ethnic differences in educational placement

Table 1 presents the distributions of school placement and/or outcome for Germans, Turks, Yugoslavs, Italians, Greeks, and other foreign children between the ages of 13 and 21. Education is defined both in terms of current location in the system and credentials earned in the past;⁷ for instance, students who are currently in, or have already completed, an apprenticeship

6 Defining this variable also required us to search through several waves, in part because of missing data but also because the school track of 13-18 year-olds who are in an apprenticeship or out of school in a given wave would otherwise be unknown.

7 A few simplifications have been imposed to make the distributions more readily intelligible. The most important is that students currently in comprehensive schools (i.e., *integrierte Gesamtschulen*) were assigned to the category for the middle branch of the system, the *Realschulen*. This affects 5 percent of the 13-15 year-olds, 2 percent of the 16-18 year-olds, and none of the 19-21 year-olds. Since these percentages are quite similar across ethnic groups (except for an unusual concentration in comprehensive schools on the part of the children in the residual non-German category), the practical effect on ethnic comparisons is minimal.

Another difficulty is that a small percentage of students in a vocational training program possess no general diploma and thus cannot be traced back to the original branch of the system from which they came. In this table, these individuals are retained in a separate category labeled "vocational training".

Table 1: Educational placement and/or outcome by ethnic group and age (13-21 year-olds)

	Haupt- schule without appren- ticeship	Haupt- schule with appren- ticeship	Real- schule without appren- ticeship	Real- schule with appren- ticeship	Gymna- sium	Abitur (Gymna- sium comple- ted)	Vocatio- nal education	No educa- tional certificate /no answer	N
13-15 year-olds									
German	34.1	1.3	32.7		31.4		0.5		(9521)
Turkish	66.7	2.9	22.3		7.1		0.9		(645)
Yugoslav	54.9	1.9	27.7		14.6		1.0		(206)
Italian	66.7	3.2	23.0		6.3		0.8		(126)
Greek	56.3	0.0	19.8		24.0		0.0		(96)
Other foreign	46.1	0.7	29.2		23.6		0.4		(267)
16-18 year-olds									
German	8.7	23.5	15.7	18.3	28.8	0.8	4.0	0.3	(12298)
Turkish	31.8	29.5	17.4	5.9	7.0	0.3	7.1	1.1	(661)
Yugoslav	24.0	26.9	12.6	12.0	16.8	0.0	7.8	0.0	(167)
Italian	33.6	32.9	11.9	7.0	7.7	0.0	5.6	1.4	(143)
Greek	15.8	14.9	15.8	4.0	35.6	7.9	5.9	0.0	(101)
Other foreign	24.4	18.2	14.1	9.3	24.7	1.3	6.2	1.7	(291)
19-21 year-olds									
German	9.3	24.9	6.7	30.2	17.5	9.7	1.0	0.7	(16139)
Turkish	47.2	25.9	7.3	7.0	3.7	4.3	1.0	3.6	(618)
Yugoslav	24.2	34.7	6.3	18.9	7.4	3.2	2.1	3.2	(95)
Italian	38.1	24.9	12.2	12.2	6.1	3.4	2.2	1.1	(181)
Greek	28.8	23.1	11.5	11.5	13.5	10.6	1.0	0.0	(104)
Other foreign	19.5	18.0	9.6	14.2	17.0	15.5	2.8	3.4	(323)

Source: Microcensus 1989

or other vocational training program (*berufliche Ausbildung*), are further classified by their general diploma (*Abschluß*). Those who have already left the system, who form only a small fraction of those in those 18 or younger, are of necessity classified according to completed credentials.

In some ways, the differences revealed in the table are well-known; in others ways, they are not. Consider, in this light, the data for 13-15 year-olds. These distributions show school placement almost solely in terms of the three major tracks of the school system, for few children in this age group have begun a vocational training program. It is readily apparent that foreign children of all groups are considerably more likely than German children of the same ages to attend *Hauptschulen*. The order of magnitude of these differences is quite large, approaching 2:1 in some cases—thus, while approximately one-third of German children are found in *Hauptschulen*, two-thirds of Turkish and Italian children are in this track. Germans, on the other hand, are more likely than foreign children to attend the *Gymnasien*. Again, the order of magnitude of the differences between Germans and most groups is quite substantial, and is largest (4 or 5:1) in relation to the Turks and Italians. But differences among the ethnic groups are also noteworthy. Aside from the residual category, in which children from such countries as France and the United States figure importantly, Greek and, to a lesser extent, Yugoslav children are more likely than Turks and Italians to be in the *Gymnasium* track.

The data for 16-18 year-olds add the possibility of entry to an apprenticeship or other vocational training, primarily for those who attended *Hauptschulen* or *Realschulen* (a small percentage of children in this age group have already left the school system, but for our analysis we have placed them according to their diploma and further training). In terms of the three-way division among the *Hauptschule*, *Realschule*, and *Gymnasium* tracks, not much has changed between the previous age group and this one. The percentages of the various groups who have attended *Hauptschulen* is somewhat lower, but in general these differences are closely matched by the percentages in the "vocational training" category (for whose members the type of general education is not recorded), suggesting that many of these students were originally in *Hauptschulen*. Another noteworthy difference is that, in the 16-18 age group, the Greeks have caught up with, and even exceeded, German children in terms of *Gymnasium* attendance.

But it is in terms of entry to an apprenticeship, especially after attending a *Hauptschule*, that the results for 16-18 year-olds appear most interesting. Among German students, to take one extreme, *Hauptschule* students who

enter an apprenticeship outnumber those who do not by a large margin, nearly 3:1. (This margin is somewhat reduced by the presence of 16 year-olds, some of whom are still in the general school system.) Only a small fraction of Germans in this age group, about 9% at worst, appear to be destined to leave the school system with a *Hauptschule* diploma without an apprenticeship. Among foreign *Hauptschule* students, those who have entered an apprenticeship are about equal in number to those who have not. The result among the groups that have large fractions in the *Hauptschule* track, the Turks and Italians, is that a substantial proportion of students, about a third, have at this point only their *Hauptschule* experience. Most of them appear destined to leave the school system with the most minimal of credentials. Similar differences, but not as striking in magnitude, appear among *Realschule* students.

However, a glance at the next older age group, 19-21 year-olds, suggests that the present picture for foreign children still represents a considerable improvement over the recent past. In this age group, where education is complete for most students (aside from those attending technical colleges or universities), even larger fractions of foreign children completed their schooling with no more than a *Hauptschule* diploma (at best). For the Turks, this was true for about half; for the Italians, for about 40%. Greeks, too, show a large concentration in this category.

How much of these differences can be potentially explained by the fact that substantial fractions of foreign children come to Germany after the age of school entry and after already having attended schools in their home countries? In short, how much can be explained by generation and length of residence? Table 2 shows the generational/length of residence distribution for the different groups. The first point to be noted is that, in the three age categories under consideration here, large fractions of most groups are members of the second generation, which, by our definition, encompasses those who were either born in Germany or immigrated before the age of 5. In the 13-15 age group, three-quarters or more of children from the main immigrant groups (i.e., aside from the residual category) are members of it. But the second critical point is that the generational distribution of these groups is shifting. In general, the proportions belonging to the second

Table 2: Generation / age of immigration for age cohorts of different ethnic groups

	second generation		first generation			unknown	N
	born in Germany	immigrated at age 0-4	immigrated at age 5-9	immigrated at age 10-14	immigrated at age 15 or older		
13-15 year-olds							
Turkish	49.9	25.6	9.0	9.5	1.6	4.5	(645)
Yugoslav	55.3	28.6	2.4	7.8	1.5	4.4	(206)
Italian	50.0	23.0	6.3	8.7	2.4	9.5	(126)
Greek	60.4	19.8	3.1	8.3	3.1	5.2	(96)
Other foreign	26.6	24.0	18.7	17.6	1.5	11.6	(267)
16-18 year-olds							
Turkish	25.1	27.8	22.2	8.8	8.9	7.1	(661)
Yugoslav	44.3	24.0	10.2	6.0	12.0	3.6	(167)
Italian	39.2	25.2	7.7	9.8	12.6	5.6	(143)
Greek	57.4	19.8	4.0	4.0	9.9	5.0	(101)
Other foreign	27.5	18.9	14.4	13.1	18.9	7.2	(291)
19-21 year-olds							
Turkish	8.7	22.8	19.3	25.9	19.4	3.9	(618)
Yugoslav	22.1	34.7	11.6	9.5	15.8	6.3	(95)
Italian	34.3	23.8	6.1	4.4	26.0	5.5	(181)
Greek	28.8	26.0	19.2	2.9	17.3	5.8	(104)
Other foreign	17.3	15.8	5.0	14.2	39.0	8.7	(323)

Source: Microcensus 1989

generation are lower among 16-18 year-olds. To take the extreme case, barely half of the Turkish children belong to it, although otherwise clear majorities of the remaining groups (again, aside from the residual category) do.⁸ The size of the second generation is further reduced in the 19-21 year-old group, where it makes up barely a third of Turks, and slightly more than half of the remaining groups. This pattern indicates that the fraction

⁸ Of course, the generational composition of the older group may be different because it includes individuals who immigrated after the ages included in the younger group. However, a glance at the oldest ages of immigration in the table suggests that this explanation is inadequate to explain all of the shift.

Table 3: Educational placement and/or outcome for the second generation of different ethnic groups

	Haupt- schule without appren- ticeship	Haupt- schule with appren- ticeship	Real- schule without appren- ticeship	Real- schule with appren- ticeship	Gymna- sium	Abitur (Gymna- sium comple- ted)	Vocatio- nal education	No educa- tional certificate /no answer	N
13-15 year-olds									
Turkish	64.1	1.8	24.6		8.6		0.8		(487)
Yugoslav	52.6	2.3	27.7		16.8		0.6		(173)
Italian	69.6	2.2	19.6		7.6		1.1		(92)
Greek	58.4	0.0	20.8		20.8		0.0		(77)
Other foreign	44.4	0.7	29.6		25.2		0.0		(135)
16-18 year-olds									
Turkish	28.9	26.3	17.4	7.4	10.6	0.0	8.9	0.6	(350)
Yugoslav	21.1	20.2	14.9	14.9	22.8	0.0	6.1	0.0	(114)
Italian	27.2	30.4	15.2	7.6	10.9	0.0	7.6	1.1	(92)
Greek	12.8	14.1	19.2	3.8	37.2	7.7	5.1	0.0	(78)
Other foreign	17.0	15.6	15.6	11.1	30.4	0.7	8.9	0.7	(135)
19-21 year-olds									
Turkish	32.8	29.7	7.7	8.7	6.7	7.2	3.1	4.1	(195)
Yugoslav	14.8	42.6	5.6	25.9	5.6	1.9	3.7	0.0	(54)
Italian	33.3	28.6	10.5	18.1	2.9	2.9	2.9	1.0	(105)
Greek	19.3	31.6	8.8	10.5	14.0	14.0	1.8	0.0	(57)
Other foreign	12.1	18.7	11.2	25.2	17.8	11.2	3.7	0.0	(107)

Source: Microcensus 1989

constituted the second generation is increasing over time among foreign school-age children.

Table 3, which is restricted to the second generation, allows us to determine whether generation alone can explain the profound differences in educational placement and outcome between German and non-German children. The table shows quite clearly that they cannot. Among the 13-15 year-olds, the percentages in the *Hauptschulen* are quite similar to what they were in Table 1. Some reductions, quite modest, seem noticeable among the 16-18 year-olds, and somewhat more substantial ones are found among the 19-21 year-

olds. Generational distribution does appear to explain the differences noticed earlier between the oldest age group and the younger ones. In this sense, one can conclude that a rising percentage belonging to the second generation tends to bring some improvement in educational attainment for immigrant groups, but obviously, a great disparity remains between Germans and non-Germans of this generation.

4. Multivariate models from the Microcensus

We now consider whether other differences among groups, such as those arising from socioeconomic origins or geographic placement, can explain the very substantial differences we have found between foreign and German students. Table 4 presents logistic regression models for various educational tracks/outcomes in the 13-15 and 16-18 age groups, constructed in the manner described earlier.⁹ In each age group, we contrast *Hauptschule* placement with that in a *Realschule* or *Gymnasium* (in equations 1 and 3), and *Gymnasium* placement with that in the other two tracks (in equations 2 and 4). In a final equation (numbered 5), we investigate for the 16-18 year olds whether *Hauptschule* graduates subsequently enter an apprenticeship. The ethnic group variable in these models is constructed with Germans as the omitted category; thus, each ethnic group coefficient (and its significance) measures the difference between members of the group in question and Germans who are similar in terms of the other independent variables.

9 Note that the 19-21 year-old group cannot be meaningfully subjected to this kind of analysis, because few of its members live with their parents (and those who do are undoubtedly unrepresentative of the whole age group) and thus most cannot be characterized in terms of parental statuses.

Also to be noted is that individuals who are not the children of the heads of the households where they reside are eliminated from the multivariate analysis (they were included in earlier tables). Among the 16-18 year-old group, this is likely to affect disproportionately individuals who are in the labor market and live on their own. It is thus a somewhat conservative step, because members of immigrant groups are more likely than Germans to be out of school.

Table 4: Logistic regression analyses of educational placement / outcome

	13-15 year-olds		16-18 year-olds		
	Gym., Real- schule Hauptschule	Gymnasium vs. Real- Hauptschule	Gym., Real- schule Hauptschule	Gymnasium vs. Real- Hauptschule	Hauptschule with appr. vs. Hauptschule without appr.
	(1)	(2)	(3)	(4)	(5)
Ethnicity					
<i>German**</i>	0	0	0	0	0
Turkish	-.515*	-.691*	-.320*	-.400*	-.423*
Yugoslav	-.310*	-.176	-.379*	.002	-.207
Italian	-.739*	-.889*	-.712*	-.503	-.671*
Greek	-.001	.734*	.796*	1.609*	-.523
Other foreign	.008	.127	-.041	.318	-.699*
Generation / Age of arrival					
<i>German - second generation**</i>	0	0	0	0	0
Came 5-9 years old	-.525*	-.720*	-.243	-.429	.157
10-14 years old	-.757*	-.699*	-1.002*	-.970*	-.389
15 + years old	—	—	-1.264*	-.843*	-.570*
Unknown	.228	-.310	-.134	-1.708*	-.019
Households head's education					
no diploma (or no information)	-2.327*	-2.139*	-2.657*	-2.487*	.641
Hauptschule without apprenticeship	-2.385*	-2.516*	-2.684*	-2.809*	.951*
Hauptschule with apprenticeship	-1.945*	-2.216*	-2.121*	-2.390*	1.034*
Realschule without apprenticeship	-1.434*	-1.362*	-1.183*	-1.516*	.439
Realschule with apprenticeship	-1.205*	-1.573*	-1.245*	-1.577*	1.006*
Abitur (Gymnasium)	-.732*	-1.275*	-.956*	-1.185*	.493
Technical college	-.608*	-.847*	-.663*	-.760*	.418
<i>College or university**</i>	0	0	0	0	0
Households head's occupation					
Agricultural	-.858*	-.930*	-.823*	-.817*	-.739
Simple manual	-1.272*	-1.236*	-.785*	-1.024*	-.677
Qualified manual	-.993*	-.962*	-.605	-.734*	-.627
Technical	-.127	-.148	.176	-.032	-.441
Engineering	-.095	.026	.135	-.004	-.475
Simple service	-1.184*	-1.157*	-.762*	-.961*	-.584
Qualified service	-.541	-.198	-.264	-.215	-.934
Semi-professional	-.486	-.280	-.145	-.051	-.797
<i>Professional**</i>	0	0	0	0	0
Clerical / simple administrative	-.505	-.294	-.421	-.224	-.341
Qualified administrative	-.179	-.161	.120	-.002	-.628
Managerial	-.155	.030	.042	.241	-.914
Unemployed / Social welfare	-1.894*	-1.789*	-1.228*	-1.170*	-1.205
Other employment	-.953*	-.597*	-.562	-.365	-.674
Unknown	-1.071*	-.523	-.460	-.645*	-.870
Self-employed	.116	.058	.286*	.246*	.339*

* = (p < .05);

** = Italics indicate reference category.

..... //

Table 4 continued

Table 4: Logistic regression analyses of educational placement / outcome

	13-15 year-olds			16-18 year-olds		
	Gym., schule Hauptschule	Real- vs. Hauptschule	Gymnasium vs. Real- Hauptschule	Gym., schule Hauptschule	Real- vs. Hauptschule	Gymnasium vs. Real- Hauptschule with appr. vs. Hauptschule without appr.
Family-size, Gender						
Number of children in household	-.168*		-.108*	-.149*		-.106*
Male	-.352*		-.156*	-.556*		-.151*
Residence						
In Bundesland with high proportion of foreigners	.041		.029	-.106*		-.040
<i>Small city**</i>	0		0	0		0
Medium-sized city	.106		.194*	.237*		.293*
Large city	.531*		.427*	.322*		.396*
Age						
<i>16 years old**</i>	0		0	0		0
17 years old	—		—	.011		.088
18 years old	—		—	-.159*		-.052
Constant	3.361*		1.598*	3.444*		1.531*
X ²	2.426,0		2.652,9	2.589,5		2.966,7
	with 35 d.f.		with 35 d.f.	with 38 d.f.		with 38 d.f.

* = (p < .05);

** = Italics indicate reference category.

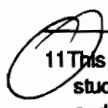
Source: Microcensus 1989

In general, these other variables have the effects one would anticipate. As an example, consider equation (1), contrasting *Realschule* or *Gymnasium* placement (scored as 1) vs. *Hauptschule* (scored 0) for the 13-15 year-old group.¹⁰ The educational attainment of the household head has the most pronounced impact in the equation. The chance of placement outside of the *Hauptschule* track declines with each step away from the category containing

¹⁰ In constructing a 3-category scheme from the data in Table 1, we have assumed that individuals in vocational training who have no general diploma have come from the *Hauptschule* branch; this is a reasonable assumption given our earlier discussion. We have assumed the same about individuals who report no diploma and no current educational involvement (present only among the 16-18 year-olds); since the reporting of educational data is a legal duty (*Pflicht*), we believe that most of these individuals have, in fact, no diploma and thus should be ranked at the lowest educational step.

household heads with a university education (the omitted category). The distance between extreme categories is quite large, approximately 2.4 in logit terms, roughly corresponding with a difference of nearly 50 percentage points in the average probability of placement in a *Realschule* or *Gymnasium*.¹¹ Compared to this, the effects of other socioeconomic background characteristics are more modest in magnitude. To be sure, the occupation of the household head also contributes to determine the educational track of 13-15 year-olds. Compared the children of parents with professional occupations, those whose parents perform simple manual or service occupations are the most likely to be in *Hauptschulen*. The difference between the extremes is about 1.2 in logit terms, about half the magnitude of the difference associated with head's education. Also having markedly lower chances to attend a *Realschule* or *Gymnasium* are the children of parents with manual occupations requiring qualifications or agricultural occupations. Even more disadvantaged are the children of parents whose main income comes from unemployment compensation or social welfare payments. Children of the self-employed are, however, not different from the children of parents who are employed by others. Children who come from large families are more likely to be found in the *Hauptschulen*.

Geography plays a role, too. In particular, children who grow up in substantial-sized cities (with 100 thousand or more in population) have an advantage compared to other children when it comes to attending a *Realschule* or *Gymnasium*. Presumably, this advantage occurs because places in these tracks are more available in these cities than elsewhere. However, location in a state with a large foreign population does not affect the kind of school a child attends (thus confirming at the individual level results attained in the aggregate by Baker and Lenhardt [1988]).

✓  ¹¹This difference can be derived in the following manner: the overall percentage of students in this age group who are in *Realschulen* (including comprehensive schools) and *Gymnasien* is 60.8. This percentage corresponds with an odds of 1.55 (i.e., $.608/[1-.608]$). Assume that it characterizes the educational distribution of students in the omitted category of head's education. Having a parent (head) who has only a *Hauptschule* diploma multiplies this odds by $.0921$ ($\exp(-2.385)$), producing an odds of $.143$. This latter odds corresponds with a percentage of 12.5 (i.e., $.143/[1+.143]$), which is almost exactly 50 points lower than the starting percentage. For more on the interpretation of coefficients in log-linear models, see Alba (1987).

Gender is also relevant. Our equations include both sexes, and male children are consistently more likely to be placed in the less favored tracks (in the equation under consideration here, the *Hauptschulen*). Nevertheless, in some of these equations, such as that for *Gymnasium* vs. other tracks in the 13-15 year-old group, the gender difference is quite small in magnitude, even though statistically significant as a result of the large number of cases involved in the analysis. A related issue is whether the effects of other variables vary by gender. To address this, we have examined statistical interactions of gender with the key cluster of socioeconomic variables (and also with ethnicity). Although a few of these interactions are statistically significant, their magnitude (as indicated by the chi-square differences associated with them) is quite small on the whole. From this, we conclude that the models can be interpreted without interactions.

The models demonstrate that, for foreign children, educational placement is affected by generation and length of residence. In general, children of the second generation are more likely to be placed in more favored tracks of the educational system than are children who came to Germany after their fifth birthday.¹² There is also a tendency, though it is not consistent, for educational disadvantage to rise as the age of arrival does. But there is also some variation in the patterns from equation to equation, particularly between the two age groups. For instance, in the equation predicting placement in the *Hauptschulen* vs. other tracks for the 13-15 year-old group, children who arrived after their 10th birthday are the most likely to be in the *Hauptschulen*, while children of the second generation are the least likely; those who came between the ages of 5 and 9 fall in between.¹³ In the equivalent equation for the 16-18 year-old group, children in this last group

12 The second generation, along with Germans, forms the omitted category in Table 4. The relative advantage of this category is indicated in the generally negative, statistically significant coefficients of the categories of age of arrival that are explicitly included in the models.

It is not possible to add a separate dummy variable to represent the second generation of the foreign groups, since, if one were added, the generation/age of arrival variables and the ethnic-group ones would then span exactly the same population and perfect multicollinearity between the two sets of variables would result. Something must be omitted, and we have chosen the second-generation variable.

13 In the equations for 13-15 year-olds, children who arrived in Germany at the age of 15 have been grouped with those who arrived between 10 and 14 years. This avoids the creation of a very small category of age of arrival.

are not significantly different from those of the second generation. Those who came after their 10th birthday appear to be even more disadvantaged, however.

What is left of ethnic differences with these various controls in place? A substantial portion, it appears. The most salient aspect of ethnic disadvantage lies, according to Table 1, is the concentration of the children from non-German groups in the *Hauptschulen*. Equation (1), which contrasts the *Hauptschulen* with other tracks, demonstrates that, independently of socioeconomic origin, generational status, and other control variables, Italian, Turkish, and Yugoslav children are more strongly concentrated in the *Hauptschulen* than are German children. They are, in other words, less likely to attend *Realschulen* and *Gymnasien*. But the degree of disadvantage differs by ethnic category. For Greek children, there is in fact no difference from German children, while for Yugoslavs the difference is not very large (-.31 in logit terms). The same cannot be said for Turkish and Italian children, however, who have a 12-18 percentage point greater probability of attending *Hauptschulen* than comparable German children.¹⁴ If one now asks whether their lesser presence in the two higher tracks is mainly due to underrepresentation in the highest one, the *Gymnasium*, equation (2) shows that this appears to be the case. For both groups, the effect of ethnic membership on selection into the *Gymnasium* track is stronger than it is on that into the two higher tracks, considered together (i.e., in equation [1]). For Greeks and Yugoslavs, the pattern is, once again, different. In terms of *Gymnasium* attendance, Yugoslav children are not disadvantaged compared to Germans, and the children of Greek parents even appear, *ceteris paribus*, to be advantaged.¹⁵ Calculated in terms of probability differences, the logit coefficients in equation (2)—about -.7 for the Turks and -.9 for the Italians—imply that their chances (odds) of attending a *Gymnasium* are 13-16 percentage points lower than those for German children of comparable socioeconomic origins. To be sure, this is smaller than the magnitudes in

14 This is calculated by the procedure shown in footnote 11 by assuming that 64.1% of German children, the figure shown in Table 1, attend *Realschulen* or *Gymnasien*.

15 The findings from equations (1) and (2) indicate that Greek children are relatively unlikely to attend the *Realschulen*.

Table 1 (24-25 points in this age group); in this sense, some of the original difference has been explained. But much remains.

The equations for 16-18 year-olds reveal a very similar ethnic pattern, although the magnitudes of disadvantage appear reduced in some cases. In equation (3), contrasting the *Hauptschule* with other tracks, Turkish, Italian, and Yugoslav children are again disadvantaged compared to their German counterparts. The magnitude of Turkish disadvantage is less than before, but the Italian disadvantage remains considerable. According to equation (4), which contrasts the *Gymnasium* to other tracks, the magnitude of disadvantage for Turkish children (-.40) is also smaller than among 13-15 year-olds, and the coefficient for the Italians is, in this one case, not statistically significant (though, following the general pattern, it remains negative). Greek children are conspicuous in both equations, because they are more likely than their German contemporaries to be found in the higher tracks, especially that of the *Gymnasium*.

The analysis of the 16-18 year-old group adds the possibility of examining ethnic disadvantage in relation to apprenticeships. The last equation sheds light on this.¹⁶ With students from the *Realschulen* and *Gymnasien* excluded, it contrasts those who enter apprenticeships after the *Hauptschule* with those who do not (and thus have at best the *Hauptschule* credential). The results shows that all foreign groups have relatively low access to this typically German educational outcome. For Greek and Yugoslav children, the relevant coefficients are, to be sure, not significant, but they are nevertheless negative in direction. Significant and decidedly negative are the coefficients for Turkish and Italian children, the very groups that are most highly concentrated in the *Hauptschulen*, in the first place. If one takes both kinds of effects into consideration simultaneously and contrasts (in an equation which we do not present here) a *Hauptschule* education without an apprenticeship, the minimal education outcome, against all other possibilities, the cumulative effect of various educational selection processes manifests itself clearly. Children of Yugoslav, Turkish, and Italian origins leave, with

¹⁶ In order to take into account the changes in apprenticeship entry across the three years of age included in this part of the analysis, a set of dummy variables has been included in this equation.

increasingly greater frequency from first to last, the school system with only the legally required minimum of schooling, while Greek children are not distinguishable from Germans in this respect. The magnitude of the differences is considerable. For the Yugoslavs and Turks, the probability of finishing school with the least valuable credential is 1.5-1.6 times that for comparable Germans; for the Italians, it is 2.2 times.

Consistent differences of such magnitude open up a series of questions about how they arise. One possible direction of explanation is that ethnic differences exist in the way certain statuses (generation, for example) affect educational outcomes. To test for this possibility, we have examined a series of statistical interactions. For example, we have tested, albeit somewhat crudely, for the possibility that generation/age of arrival does not have consistent effects across the ethnic groups. In order to avoid problems of statistical instability, we contrasted the effects of generation/age of arrival in the two most disadvantaged groups (Italians and Turks) against their effects in the remaining groups.¹⁷ In none of the equations were these interactions significant. We have also tested for the possibility that socioeconomic origins have different effects according to ethnic background. Here, too, our test had to take into account the sparse cells that would arise if a full set of interactions were tested. Consequently, it focused on those categories of household head's education and occupation (respectively, *Hauptschule* without an apprenticeship and simple manual occupations) where the most foreign heads are found. The dummy variables for these categories were multiplied by a dummy variable for foreign status, but none of the resulting interactions were statistically significant.

A final set of interactions investigated gender differences across ethnic groups. Here is the one case where a statistical interaction appears meaningful. In the equation predicting *Hauptschule* placement versus other alternatives for the 13-15 year-olds, the gender-ethnicity interaction is significant (chi-square=21.30 with 5 d.f., $p < .001$). Its source appears to lie in a placement difference between Turkish boys and girls. In this case, Turkish

¹⁷ This simplification is necessary because, the specific categories of age of arrival are represented by few cases in most groups. To test the interaction, then, a single dummy variable was constructed to represent Italians and Turks, and the dummy variables representing age of arrival were multiplied by it.

boys are not disadvantaged compared to German boys, once the gender-ethnic interaction is taken into account; the disadvantage of Yugoslav boys is also questionable (although the interaction term is not significant in the Yugoslav case). The other side of the coin, of course, is that the disadvantage of Turkish girls has grown in magnitude. Gender-ethnicity interactions are not significant in other equations, however. This is true, in particular, for the parallel equation in the 16-18 year-old group. The lack of consistency indicates a need for caution in concluding that Turkish boys have achieved any parity with Germans. We have not included this interaction in the models reported in Table 4, as a consequence.

In sum, a rather consistent picture emerges from these analyses. The recency of arrival of many foreign families and their lower socioeconomic origins do not appear capable of entirely explaining the substantial disadvantages borne by the children of some ethnic groups in the German educational system. The most consistently disadvantaged groups are the Italians and the Turks, who are considerably less likely than their German peers to attend *Gymnasien* and consistently more likely to be found in *Hauptschulen* and to emerge from them without apprenticeship training. There is some evidence that Yugoslav youths are also more likely to be allocated to the *Hauptschule* track and not to be accorded an apprenticeship. But not all foreign groups are disadvantaged: Greek students are more likely than Germans and other groups to enter the *Gymnasium* track. Nevertheless, the heterogeneity of the disadvantaged groups indicates that a common-sense explanation fails. The groups include, on the one hand, a non-European Community group whose history in Germany is rather recent and which stands out because of its religious and cultural differences, but, on the other, the EC-group with the longest history of migration to the Federal Republic. Are there, then, other ways these disadvantages might be explained?

5. Other explanatory variables: The Socio-economic Panel

We turn now to the Socio-economic Panel data in the search for other factors that might explain the ethnic disadvantages revealed in the previous section. Following the main dimensions of our earlier conceptual discussion, we have grouped various indicators to be found in the Panel data into three broad categories: (1) cultural features, which include the German-speaking ability of a student's parents, an index of the cultural climate in the home, and a count of the same-ethnic friends of the parent who is named as household head; (2) intentions to return home, which are measured by remittances to the homeland (often a form of investment), the desire to return as expressed by the household head, the self-identification (as German or non-German) of the household head, and whether the child has been educated at least partly in the homeland (understood here as a reflection of the desire to prepare the child for return); (3) discrimination, measured as the ethnic composition of the neighborhood, which presumably correlates with such forms of institutional discrimination as separate classes for foreign students. Most of these variables have been constructed using the first wave of data, thereby simplifying subsequent multivariate analyses, since other necessary variables (e.g., the head's education) are also measured at the same time.¹⁸ (The only exceptions are: the neighborhood composition variable, the index of cultural climate, and the count of same-ethnic friends.) Because of the smaller number of cases available in the Panel, the data analyses treat 13-18 year-olds as a single age group and focus only on the division between *Hauptschulen* and other school tracks.

Table 5 shows the distributions of the ethnic indicators across the four major ethnic groups and also their relationship to placement in a *Hauptschule* (In the case of those who are no longer students, placement is measured as the last school attended).

¹⁸ However, as our earlier discussion of variable construction in SOEP reveals (see footnotes 5 and 6) for two critical variables, generation/age of arrival and school placement, we had to search through several waves of data following the wave containing the ethnic indicators. This occurred because data necessary for the variable construction—e.g., general diploma and country of birth—are measured in the data only when a child reaches the age of 16.

One sees, first of all, that the differences among the groups in terms of the indicators in Table 5 only partly correspond with their ranking in educational disadvantage. In general, the Turks appear to be the most ethnic in all dimensions and the Yugoslav groups the least, though both patterns are not consistent across every indicator. Italians and Greeks, therefore, occupy the middle ground, which thus includes the least disadvantaged group (the Greeks) and one of the two most disadvantaged (the Italians).

Turkish distinctiveness is reasonably clear. Consider, for example, the language likely to be spoken at home: in two-thirds of Turkish students' families, at least one parent speaks German poorly; this is true for no more than one-third of the families of students from other groups. Turks are equally distinctive when it comes to the food, music, and newspapers at home. Further, Turkish parents are the most likely to have educated their children partly in the homeland, and Turkish children are the most likely to grow up in a neighborhood with many co-ethnics (this is, of course, partly a function of the large size of the Turkish group). In some cases, the Turks are roughly tied with one of the other groups for ethnic distinctiveness. For instance, Turkish and Greek household heads are least likely to express a wish to remain indefinitely in Germany, and they are also the least likely to identify, even partially, as Germans.

At the other pole, the distinctiveness of the Yugoslav groups is not quite so sharply defined. True, they have the most German cultural climate at home (at least as measured by cooking, listening, and reading), and Yugoslav parents are the most likely, and by a good margin, to identify as Germans. In a similar vein, Yugoslav parents are the least likely to have only co-ethnic friends. But, when it comes to the ability to the parents' speak German, Yugoslavs are just slightly ahead of Italians. They are also not much ahead of the Italians in terms of the household head's desire to remain in Germany. Further, Yugoslavs are more likely than Italians to send remittances to the homeland, while they are less likely than Italians to reside in a neighborhood dominated by Germans.

Table 5: Characteristics of the home and cultural environments of ethnic groups

German-speaking ability of parents					% in Hauptschulen		
	good / very good	fairly good	poor / not at all	N	good / very good	fairly good	poor / not at all
Turkish	8.2	23.2	68.5	(280)	Turkish	61.9 (21)	80.7 (181)
Yugoslav	36.0	38.4	25.6	(86)	Yugoslav	38.7 (31)	71.4 (21)
Italian	28.4	40.4	31.2	(109)	Italian	43.3 (30)	79.4 (34)
Greek	21.4	51.2	27.4	(84)	Greek	50.0 (18)	50.0 (22)
					Overall	47.0 (100)	77.1 (258)
Cultural climate in the home (0-3 scale)					% in Hauptschulen		
	0	1	2	3	N	0-1	2-3
Turkish	12.0	23.9	27.7	36.4	(184)	Turkish	61.5 (65)
Yugoslav	58.1	23.7	12.9	5.4	(93)	Yugoslav	36.8 (76)
Italian	39.6	31.9	14.3	14.3	(91)	Italian	54.7 (64)
Greek	32.0	38.0	18.0	12.0	(50)	Greek	48.6 (35)
						Overall	50.0 (240)
Number of ethnic friends of household head (0-3 scale)					% in Hauptschulen		
	0	1	2	3	N	0-1	2-3
Turkish	7.1	10.9	26.9	55.1	(156)	Turkish	46.4 (28)
Yugoslav	17.1	29.3	26.8	26.8	(82)	Yugoslav	26.3 (38)
Italian	15.7	20.5	21.7	42.2	(83)	Italian	30.0 (30)
Greek	0.0	16.3	30.2	53.5	(43)	Greek	57.1 (7)
						Overall	35.0 (103)
Remittances to homeland				% in Hauptschulen			
	yes	no	N	yes	no		
Turkish	57.3	42.7	(279)	Turkish	71.7 (145)		
Yugoslav	47.7	52.3	(88)	Yugoslav	45.0 (40)		
Italian	25.5	74.5	(110)	Italian	66.7 (27)		
Greek	69.0	31.0	(84)	Greek	56.1 (57)		
				Overall	63.9 (269)		
Intention of household head to return to homeland					% in Hauptschulen		
	next year	in some years	remain	N	return	remain	
Turkish	5.8	78.6	15.6	(276)	Turkish	77.6 (215)	
Yugoslav	0.0	51.8	48.2	(85)	Yugoslav	53.5 (43)	
Italian	3.7	56.5	39.8	(108)	Italian	62.5 (64)	
Greek	0.0	77.4	22.6	(84)	Greek	48.4 (64)	
					Overall	67.6 (386)	

..... //

Table 5 continued

Table 5: Characteristics of the home and cultural environments of ethnic groups

Education in homeland					% in Hauptschulen	
	only in homeland	partly in homeland	only in Germany	N	only/partly in homeland	only in Germany
Turkish	4.2	49.3	46.5	(215)	Turkish 81.1 (111)	67.0 (97)
Yugoslav	2.7	24.7	72.6	(73)	Yugoslav 77.8 (18)	45.3 (53)
Italian	3.2	14.9	81.9	(94)	Italian 82.4 (17)	57.1 (77)
Greek	1.4	17.6	81.1	(74)	Greek 42.9 (14)	55.0 (60)
					Overall 77.5 (160)	57.8 (287)

Self-identification (of household head)					% in Hauptschulen	
	entirely or mainly as German	partially German partially Foreigner	entirely or mainly as Foreigner	N	entirely or mainly as Foreigner	entirely or mainly as German
Turkish	2.1	18.6	79.3	(280)	Turkish 75.4 (203)	80.4 (56)
Yugoslav	19.7	43.0	37.2	(86)	Yugoslav 70.0 (30)	45.3 (53)
Italian	16.5	22.0	61.5	(109)	Italian 68.7 (67)	48.8 (41)
Greek	6.0	20.2	73.8	(84)	Greek 48.3 (60)	68.2 (22)
					Overall 69.2 (360)	60.5 (172)

Ethnic composition of neighborhood					% in Hauptschulen	
	many co-ethnics	many other ethnics	mainly German	N	many ethnics	mostly German
Turkish	24.9	26.7	48.3	(217)	Turkish 74.8 (107)	74.7 (99)
Yugoslav	2.4	41.5	56.1	(82)	Yugoslav 62.9 (35)	52.2 (46)
Italian	11.2	18.4	70.4	(98)	Italian 65.5 (29)	63.8 (69)
Greek	7.7	43.1	49.3	(65)	Greek 42.4 (33)	61.3 (31)
					Overall 66.2 (204)	65.7 (245)

Source: SOEP, various waves

Thus, the profile of these indicators seems consistent with the Turkish disadvantage in the school system, but not with the Italian one or with Greek advantage. Of course, the explanatory usefulness of these indicators should not be decided on the group level, but the individual one. A first step in this direction is to investigate whether the indicators correlate with the placement of students in the *Hauptschulen*. This issue is addressed by the right-hand panel of Table 5.

This panel of the table demonstrates that only some of the indicators are potentially of value in explaining ethnic disadvantage. The most consistently positive findings are for the cultural measures. For each of these indicators, students who come more ethnic homes are more likely to be found in the

Hauptschulen. For instance, three-quarters of students from homes where at least one parent speaks German badly are in the *Hauptschulen*, compared to half of those whose parents both speak German well. Likewise, two-thirds of students from homes where the household head has mainly co-ethnic friends are in the *Hauptschulen*, compared to one third from homes where the head has mainly friends of other backgrounds (usually Germans). These patterns also hold separately within three of the four groups—the exception is the Greek group, where none of the cultural indicators bears any relationship to placement in a *Hauptschule*. This finding suggests that a different force is at work in Greek school placement.

In general, the non-cultural indicators do not show much relationship to *Hauptschule* attendance. This is especially striking for the multiple indicators of the intention to return. Neither money sent to the homeland nor the expressed desire to return there has a significant relationship to *Hauptschule* placement. There is only a modest relationship in the case of the head's self-identification; and while this relationship seems more pronounced for the Italians and Yugoslavs, it is missing for the Turks (and perhaps even reversed among the Greeks). The neighborhood composition measure, included as an indicator of the potential for institutional discrimination, also displays no relationship to school placement.

The one non-cultural measure with possible explanatory value derives from the child's school career and expresses whether it has been only in German schools or partly (or wholly) in schools in the homeland. Although, according to the SOEP data, the great majority of children from all groups but the Turks have attended only German schools, the measure is still relevant because it reflects a contingency that is quite likely to influence school placement. As the right-hand panel shows, those children who received at least some of their education in their homelands are considerably more likely than others to have been placed in *Hauptschulen* (or their equivalents in their homelands). Only the Greeks appear to deviate from this pattern.

Several of the measures in the SOEP data are related, then, to educational placement (and thus outcome). The next question to consider is whether these measures exert some independent influence or, alternatively, merely reflect the effects of such variables as generation and parental education,

with which they are likely to be correlated. To address this issue, we have constructed some multivariate models that are similar to the models used in analyzing the Microcensus. However, a few limitations must be recognized. To begin with, it is not feasible to construct variables in SOEP that precisely match in every detail those used in the case of the Microcensus. Further, even when age groups are combined, the number of cases available is considerably smaller in the SOEP than in the Microcensus, reducing our ability to model in fine detail the effects of a variable such as parental occupation (encompassing 14 categories in the Microcensus analysis). Accordingly, we have employed a streamlined set of variables, reflecting the major effects to emerge from the previous analysis.¹⁹ For the analysis of ethnic effects, the crucial point to be noted is that we have included all foreign children in a single category, thereby ignoring nationality differences. For each measure of interest, we test whether it contributes significantly to a model that already includes an ethnic dummy variable and other background variables. The decision to include all foreign children in a single category obviously eliminates the possibility of testing for ethnically specific effects (but, given the modest numbers of cases available in different groups, this would probably not be feasible in any event). It was reached after some experimentation with alternative model specifications.²⁰

19 The control variables are as follows: community size (defined in the same way as in Table 4); household size (as a replacement for number of children in Table 4); gender; generation/age of immigration; head's education (in the categories: no diploma or no information; *Hauptschule* without apprenticeship; *Hauptschule* with apprenticeship; *Realschule* or *Gymnasium*; college or university); and head's occupation (in categories: no occupation; un- or semi-skilled worker; all others). The simplification of head's education was necessitated by the SOEP reporting of education for foreign-educated parents; the simplification of occupation is intended to retain the occupational category where foreign household heads are concentrated. state of residence and head's self-employment, which had slight or no relationship to school placement, have been dropped.

20 In particular, when a series of ethnic dummy variables are entered into the basic model, they are individually not significant, except for the Turkish one (and that for the fifth foreign group in the data, the Spanish). This adds to the difficulty of using changes in the effect of ethnicity as a test of the explanatory power of the cultural and school-career measures. We therefore opted for the simplicity of a single ethnic dummy variable, though this turns out not to be significant in the basic model in the fifth wave. We do not view the weakness of the results as reflecting on our earlier conclusion that children from several foreign groups are educationally disadvantaged, because the

Table 6 presents the key results for the 3 cultural indicators and the school career measure (results for other measures confirm the absence of effects visible in Table 5 and are not reported here). The table presents only selected coefficients (the others, for the control variables, are quite consistent with the findings in Table 4). The top line reports the coefficient of the foreign dummy variable in a model that contains various control variables (for community and household sizes, gender, head's education and occupation, and generation). These coefficients differ among the columns because they are estimated in two different waves and the numbers of cases vary within the same wave as a result of missing data. The next lines report in each column the foreign coefficient after the variable under consideration in that column has been added to the basic model and also present the coefficients of that variable. Note that, because of data limitations, we test each of these variables separately.

The results in the table suggest that the culture in the parental home and the child's earlier school career do play roles independent of parental socioeconomic status and other control variables. These results are clearer in the first wave, where more cases are available and variable construction difficulties are less (because variables are measured simultaneously). The coefficient of the foreign dummy variable in the basic model shows that, net of the control variables, foreign children are more likely to be found in *Hauptschulen* and is thus consistent with our earlier results. However, taking into account the German-speaking ability of the child's parents, reduces this disadvantage considerably. In fact, the foreign dummy variable is no longer significant in the resulting model, and the coefficients for the language dummy variables indicate that children with at least one parent who speaks German badly are more likely than others to wind up in *Hauptschulen*.²¹

Microcensus data are superior to the SOEP data for drawing such a conclusion, given the greater number of cases involved and the greater adequacy of control variables.

21 Foreign children whose parents speak German well are in the omitted category, along with German children. The same issue arises here as in the case of generation (see footnote 12). Adding a separate dummy variable for these children would create a situation of perfect multicollinearity, because of the presence of the foreign dummy variable.

Table 6: Effects of culture at home and school career on educational placement ²²

	German-speaking ability of parents (first wave) (1)	Cultural climate at home (fifth wave) (2)	Number of head's ethnic friends (fifth wave) (3)	School career (first wave) (4)	(1) and (4)
Foreign (without variables controlled below)	-.542*	-.106	-.087	-.546*	-.542*
Foreign	-.284	.178	.872*	-.367*	-.130
German ability					
Very good/good	—				—
Fairly good	-.214				-.200
Poor/not at all	-.611*				-.569*
Cultural climate					
No ethnic traits		—			
One ethnic trait		-.284			
Two ethnic traits		-.894*			
Three ethnic traits		-.324			
Head's ethnic friends					
None			—		
One friend			-.546		
Two friends			-1.316*		
Three friends			-1.296*		
School career					
German schools only				—	—
Both German and foreign				-.664*	-.609
Foreign schools only				-.388	-.414
Unknown				-.961*	-.941*
N of cases	1739	1191	1131	1740	1739

* = (p < .05)

— = Reference category

Source: SOEP, various waves

²² Educational placement is defined as: Hauptschule=0, others=1. All coefficients refer to a logistic regression model in which the following variables are controlled additionally: generation/age at immigration, gender, education and occupational status of head of household, size of household, size of place of residence.

Ethnic disadvantage is also reduced, though not to insignificance, when the school career is taken into account. Children who have been educated both in Germany and their homeland are disadvantaged compared to those who have been educated only in Germany. Since generation is already contained in the basic model, this difference is not likely to be merely the effect of immigrating to Germany after the onset of schooling. We believe that it reflects also the school placement of children who migrate (*pendeln*) between Germany and their home countries, which has been reported as a pattern for some of these groups (for the Turks, see Schiffauer, 1991). Note should be taken also of the large negative coefficient for children whose school careers are, in this respect, unknown in the SOEP data. Because this was the case for a significant fraction of foreign children, we did not eliminate them from the analysis, but included them through this category. Membership in this category is also associated with substantial disadvantage in school placement. Obviously, we cannot directly interpret this.

Results for the cultural measures in the fifth wave are less clear-cut, but point in the same general direction. One problem in this wave is that, inexplicably, the foreign dummy variable in the basic model, while in the correct direction, is not statistically significant and is very small in magnitude. We have no explanation for this, other than to point to the considerable reduction in the number of cases for this wave, partly caused by panel mortality (but also by the generally smaller number of 13-18 year-olds at the time the data were collected). In any event, the cultural climate in the parental home does seem to be associated with school placement. In particular, foreign children from homes where two ethnic traits (food, music, newspapers) are present are disadvantaged compared to Germans and also to foreign children from homes where none of these items is present and thus a German climate prevails. Nevertheless, the findings for this variable are not wholly consistent, and children from homes where all three traits are present are not significantly different from the reference group. The effects are more consistent for the number of co-ethnic friends of the household head, a measure of the ethnic social embeddedness of the family. Children from homes where the head has mainly co-ethnic friends are disadvantaged compared to children from homes where the head has none. Here, too, there is a peculiarity--namely, the significantly positive coefficient for the foreign

dummy variable. This is somewhat troubling because it implies that foreign children from homes where the head has no co-ethnic friends are better off than German children (the net coefficient for such children is $+0.872+0$). Further, it leaves unclear the degree of disadvantage of children from even the most ethnic families in comparison to Germans, because for such children the net coefficient is rather modest ($-1.296+0.872=-0.424$).

We regard the results from the first wave as the more convincing, and therefore we have in this wave investigated a model that combines the culture at home and school career. The results, presented in the last column, suggest that both factors probably contribute independently to explaining ethnic disadvantage. Certainly, the coefficient of the foreign dummy variable is very small in this model, and the coefficients of the two variables under scrutiny are very close to the values obtained when the variables are considered separately. The one element of doubt is that the coefficient for students who have attended both German and homeland schools has dropped just below the zone of statistical significance ($p=0.06$). However, in our judgment, this is not enough to bring into question the explanatory potential of the variable.

In general, we regard the findings of this section as very suggestive that the cultural atmosphere in the family, along with continuity of the school career in Germany, contribute important elements to the explanation of ethnic disadvantage in German schools. We are nevertheless cognizant of the limitations of this part of the analysis, and accordingly the SOEP results should not be viewed as definitive proof of these relationships. Of the two types of variables that appear to be effective, the cultural type is probably the more important. In most of the major foreign groups, the majority of children attend only German schools (at least insofar as we can determine their careers from the SOEP data). But the cultural atmosphere is more variable, and if it is associated with disadvantages, these are presumably quite pervasive.

6. Conclusion

Our analysis has demonstrated unambiguously that some of the largest non-German groups in Germany are disadvantaged in its school system: their children are more likely to be placed in the lowest track of that system, the *Hauptschulen*, and to leave it with its least valuable credential, a *Hauptschule* diploma without an apprenticeship. The analysis demonstrates, further, that these disadvantages are not just the products of the lower socioeconomic origins of foreign children, in comparison to German, or of their recency of arrival. When these factors, along with others, are taken into account, substantial disadvantage persists for at least two groups, the Italians and Turks (and, arguably for a third, children of parents from the former Yugoslavia). Even simple tables make clear that birth in Germany or arrival before the age of school entry does not wipe out these disadvantages: They persist, then, into the second generation at least.

The differing social acceptability and legal situations of the two most disadvantaged groups suggest that no simple explanation of disadvantage can be fashioned from these two factors alone. One of these groups, the Turks, meets the criteria for a highly visible, socially stigmatised, and legally disadvantaged group. Studies of the Turkish group alone (e.g., Geiersbach, 1989; Schiffauer, 1991) often seem to suggest that such factors contribute heavily to disadvantage in school because, for instance, parents, reluctant to make a permanent commitment in an uncertain situation, must plan their children's school careers with the possibility of return ever in mind. But the same factors do not apply to the same degree to the second group, the Italians. Not only are they the longest residing guest worker group (Spaich, 1991), but they hold legal privileges associated with EC-status and are socially accepted by Germans to a much greater degree than Turks (this is indicated, incidentally, in a comparatively high rate of intermarriage with Germans, which can be found in the Microcensus).

The fact that Greek children are advantaged, even by comparison with Germans when it comes to *Gymnasium* attendance, would seem to suggest that group-specific explanations for school disadvantage must be sought. But the Greek case is ambiguous in its implications for larger ethnic patterns. On the one hand, it could be, as one analyst (Hopf, 1987) has argued, that

Greek school success is attributable to the selective character of Greek immigration. On the other, however, the Greek advantage is at least partly due to a peculiar aspect of Greek ethnic institutions in Germany--namely, the existence of a separate *Gymnasium* system, with instruction in Greek (this system is briefly described by Hopf, 1987). Although we cannot identify in the Microcensus or SOEP data whether Greek students attend such *Gymnasien*, we have demonstrated that the Greek educational pattern--in relation to cultural variables, for instance--is quite unlike that of other non-German groups. Given, then, the facts that such a separate system exists and that Greek students are more likely than others to attend *Gymnasien*, the conclusion that Greek *Gymnasien* play a significant role seems unavoidable. If it is correct, then the degree of Greek advantage in German *Gymnasien* is unclear and thus, for the moment, does not challenge our central conclusion that the children of the main foreign groups are, in varying degrees, disadvantaged in German schools.

On a more positive note, we have found that cultural factors, such as the language spoken in the home, and the child's school career, particularly whether it is divided between Germany and the home society, are strongly associated with ethnic disadvantage. The question that must now be asked is: what larger interpretation should be placed on these findings? At first sight, they seem to fit best with conventional explanations of disadvantage that focus on characteristics of ethnic minorities, such as their cultural heritage and their intentions to return eventually to their homelands. Thus, language is the cognitive matrix for communicating ethnically distinctive aspirations, values, etc.--cultural configurations, in sum--that may affect the ways different groups make use of schools. (Of course, speaking a non-German tongue at home may also frequently lead to educational disadvantage because it is linked with an imperfect knowledge of German.) A school career that is divided between two societies may reflect the intentions of parents to return to the homeland.

Nevertheless, we wish to caution against too quick an acceptance of such conclusions. Cultural traits may also stand out as visible signs of foreignness and thus may be pivotal to the often subtle discriminations that engender school disadvantage for minorities (this is suggested by American research, such as that summarized in Persell, 1976). Moreover, the intention to return

and the tenacity with which some families hold onto ethnic identities and aspects of their ethnic cultures could reflect the ultimate uncertainty they feel about their long-term prospects in a society where they are subject to social stigma and a variety of disadvantages because of their foreignness. Thus, we believe that the questions about the role of discrimination and broader social (and, for some groups, legal) disadvantage must remain open. They should not be foreclosed by our findings.

Another question that must remain open for the moment is whether ethnic disadvantage for the groups analyzed here is likely to decline in the future. In terms of generational change, our results are quite consistent with assimilation theories--thus, the educational disadvantage of second-generation children is, in general, considerably less than that of children who migrated after the onset of schooling (see also Esser, 1990). Generation matters, in short. Moreover, the second generation may not be the best for testing the ultimate socioeconomic integration of an immigrant group--it may be still too marked by cultural and social distinctiveness to fit into the receiving society. Further changes can be expected in the third generation. In the United States, the Italian group, for example, also stood out for its disadvantage in school (see Perlmann, 1988), until, in the post-World War II period, the third generation came of school age (Alba, 1985). Parity in schooling came, then, only after a half century had elapsed from the high point of Italian immigration to the U.S. Nevertheless, there is also a counterbalancing force in view--that of continued immigration into Germany. Virtually all sober forecasts indicate that Germany will need immigration for the foreseeable future to maintain its economic and demographic vitality (for an overview of the latest prognoses, see Bade, 1994). Thus, the generational distribution of the foreign population may not shift radically in the direction of the third and later generations, because new immigrants will repopulate the first and second. Accordingly, critical questions about the ultimate trajectory of immigrant groups in Germany must remain open for the time being.

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