ASSIMILATION IN A NEW CONTEXT:
SECOND GENERATION EDUCATIONAL ATTAINMENT IN GERMANY

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September, 2009

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I. Introduction

It is widely agreed that educational attainment is the most critical intervening variable between social origins and destinations (Hout and Diprete 2005; Breen and Lujikx 2004). Although immigrants to Germany generally are of lower socioeconomic status, if their descendents obtain educational and vocational qualifications, their life chances are much more likely to converge with those of the descendents of native Germans. The educational attainment of the children of immigrants is therefore a key indicator of future assimilation. Given that 30% of the former West German population under the age of 25 reports a "migration background" – that is, at least one parent who is foreign born or has a foreign nationality (Educational Report 2008: Tab. A1-4A) - the educational attainment of this group is critical demographically as well.

Most research reports poor educational outcomes amongst immigrants and their children (Kalter et al. 2007; Gang and Zimmerman 2000; Worbs 2003; Fertig and Schmidt 2001). On the one hand, many researchers argue that the children of immigrants perform poorly because their parents are low skilled and economically disadvantaged (Granato 2004; Kalter et al. 2007), and that after controlling for the social background of immigrant children, very little ethnic inequality remains. On the other hand, other scholars argue that migrant specific disadvantages such as institutional discrimination in German schools (Gomolla and Radtke 2002; Education Report 2006), a lack of citizenship (Ministerium Nordrhein-Westfalen 2008), school segregation (Stanat 2006; Kristen 2002), and language ability (OECD 2006), are largely responsible for creating immigrant/non-immigrant inequality in educational attainment in Germany, even after controlling for socioeconomic background.

Unfortunately, both empirical and theoretical generalizations drawn from current research remain tentative. Relying primarily on the German Socio-Economic Panel Study (GSOEP) and the German Mikrozensus, nearly all such studies focus on only *one major migrant group* - former guest workers and their children. Yet as of 2005, foreigners from the former guest worker countries comprise less than half of German residents with a migration background (Statistisches Bundesamt 2007:316). Former guest workers are also a fairly homogeneous group, sharing low levels of human capital, concentration in unskilled blue collar sectors, a similar timing and context of migration, and fairly low levels of naturalization. This group therefore lacks variation across many of the variables hypothesized to determine second generation educational success. In contrast, the ethnic German *Aussiedler,* asylum seekers, and more recent EU migrants who comprise the remainder of the migrant population display a bifurcated human capital distribution and arrived through different legal channels that are likely to impact their and their children's integration outcomes. Given these differences, it is impossible to extrapolate from the experiences of guest workers and their children to the situation of immigrant integration in Germany more generally.

My paper addresses this gap in our understanding of second generation integration by focusing on a broader population of immigrant groups as permitted by the latest 2005 and 2006 Mikrozensus data. While earlier Mikrozensus

years have been used to study this topic before (Kristen and Granato 2007; Riphahn 2003), I improve on this prior research in three ways.

First, starting in 2005, the Mikrozensus began including country of birth information, allowing naturalized immigrants to be identified for the first time. Naturalized immigrants and their descendents currently represent over 9% of the entire German population and nearly half of all those with a migration background (Bundesamt für Migration und Flüchtlinge 2007). Most importantly, I can now include naturalized ethnic German *Aussiedler* and their children in my analysis. One of the largest foreign born groups in Germany, the *Aussiedler* present a unique example of a positive legal and social context of reception, and the performance of their children remains poorly understood. Capturing German citizens with a migration background also allows me to include smaller origin groups, such as those from (non-guest worker sending) European countries, Africa, the Middle East, and Southeast Asia. Examining this more diverse and representative group of second generation adolescents yields two important new findings: first, inter-ethnic differences remain strong between different second generation groups, though not necessarily conforming to theoretical expectations; second, a distinct immigrant *advantage* is found, with many groups reporting higher educational attainment than native Germans after the application of background controls.

Second, my paper also departs from prior work with the Mikrozensus by directly testing the impact of first generation integration on second generation attainment. I include in my analysis two indicators of parental integration: parental intermarriage with a native German (being a member of the "2.5 generation") and parental naturalization. Children of a native German parent are ensured birthright citizenship, and are also expected to benefit through increased ties to German networks and higher levels of parental understanding of the educational system. Similarly, because of the stringent naturalization requirements in Germany, children of a foreign born parent who has naturalized are more likely to grow up in a household where German is spoken, and where the parent is a less recent immigrant with more permanent settlement aims. Directly testing the impact of parental integration in this paper reveals surprising results: after controlling for parental education, parental citizenship has no effect on second generation educational attainment. Moreover, having a native German parent has a *negative* association with attainment. Below, I explore these findings is greater detail and discuss their implications.

Third, I introduce new modeling strategies that allow a more nuanced approach to second generation educational inequality. I take into account the stratified structure of the German school system. The German educational system is marked by competing paths, requiring models that account for ethnic differences in high, middle and low educational tracks. Doing so reveals a U-shaped pattern in second generation educational attainment that closely corresponds to observations of immigrant aspirations, where second generation children are pushed to pursue the highest educational tracks (Kristen et al. 2008; Education Report 2006:165). I also test not only for the main effects of different national origins but also for the interaction between national origins and parental education, allowing me to estimate differences in educational attainment *between* immigrant origin groups as well as across respondents with

different parental backgrounds *within* them. This analysis suggests that the second generation is less adversely impacted by having low educated parents than are native Germans, resulting in greater convergence in the educational attainment of children with and without a migration background than would be expected by parental characteristics alone.

III. Immigration and Integration in Germany

For readers unfamiliar with German migration history, I briefly review the German case below[1]. It is important to note that the empirical analysis here focuses on second generation youth whose parents arrived prior to 1993[2] – thus, discussion of the immigrant comparison groups focuses on the time period from 1955-1993. Key points from this discussion are also summarized in table 1.

[TABLE ONE ABOUT HERE]

The German Case

The most studied immigrants in Germany are "foreign" (un-naturalized) former "guest workers." To aid in post-WWII reconstruction, Germany recruited over one million unskilled workers primarily from Italy, Spain, Greece, Turkey and the former Yugoslavia from 1955 until 1973 for one year contracts. The provisional nature of the program discouraged investment in learning the German language or networking with Germans (Dustmann 1999; Diehl and Schnell 2006), and recruitment into the worst jobs marginalized guest workers in the labor market, blocking their mobility (Constant and Massey 2003; Bender and Seifert 1998; Fertig and Schmidt 2001) and placing them in occupations most susceptible to unemployment (Kogan 2004; 2007). Through restrictive naturalization laws and the introduction of return incentive schemes, the German government attempted to encourage migrants to return home throughout the 1970s and 1980s. Despite these efforts, most guest workers stayed and through their right to family reunification (Joppke 1999) were later joined by their families.

Though former guest worker foreigners receive the bulk of research attention, naturalized Germans currently represent nearly half of the foreign born population in Germany (Statistisches Bundesamt 2007). While they are difficult to identify in governmental data, ethnic Germans, or foreign born immigrants of German descent, comprise a large share of this group. Ethnic Germans are people of German ancestry who resided in Eastern Europe. As linguistic and cultural minorities many of them faced considerable discrimination, most importantly massive expulsion from the former Eastern German territories and the *Sudentenland* following WWII. Partially in response to this mass expulsion, German citizenship and integrative assistance, including language assistance, recognition of foreign credentials, and housing support, are a legal guarantee for ethnic Germans, following the Basic Law of 1949.

[1] For more detailed reviews, see Liebig (2007) and Diefenbach (2007)

[2] This study focuses on the children of immigrants who were educated in Germany, and thus more recent immigrants are omitted.

To be recognized as ethnic Germans, potential migrants need to prove German ancestry, discrimination, and since 1997, some German language ability. While the legal and societal context of reception of ethnic Germans is more positive, and more permanent, than that of guest workers, ethnic Germans receive lower returns on their education in the labor market (Konietzka and Kreyenfeld 2001). Ethnic Germans from the Soviet Union and the highly skilled, in particular, face downward mobility in Germany (Kogan 2007; Dietz 2000; Greif et al. 1999). It is likely that the disruption of migration in both the career and social fields of *Aussiedler* may have outweighed their positive context of reception.

Finally, there is much less literature on the remaining immigrant groups in Germany. EU migrants, counted here as immigrants from the (non-guest worker sending) EU countries before the 2004 enlargement, enjoy the legal right to live and work in Germany, with a high level of social acceptance. Many of the EU members are highly skilled workers, business owners, and students taking advantage of the free movement of workers within the EU (Geddes 1998; see also high levels of entrepreneurship and human capital among this group reported by Tolciu and Schaland 2008). This group is also likely to intermarry with native Germans; over two thirds of EU origin adolescents in my sample report a native German parent. Third country nationals, in contrast, typically entered Germany as asylum seekers. Third country nationals therefore were not selected as economic migrants, nor do they share the political advantages of *Aussiedler* or EU nationals. These groups display the bifurcated skill and labor market distributions characteristic of refugee streams. While more of the first generation of these groups is employed as service sector salary earners, rather than blue collar *Arbeiter* (my tabulations with Mikrozensus 2005/2006), they are also much more likely to be unemployed. The legal status of third country immigrants varies greatly depending on the success of their appeal for refugee status, though as the third country parents in my sample immigrated before the 1993 asylum reforms tightened asylum eligibility, they were likely to have a favorable decision. The diversity found among third country nationals makes their context of reception difficult to generalize, therefore I disaggregate the groups as far as my data will allow in analyses, and maintain a more descriptive aim by including them in my paper.

The Next Generation: Second Generation Educational Attainment

The German education system is highly stratified, and children are streamed into different kinds of secondary schools after only 4 years of schooling. While school systems vary by region, the most common options are *Hauptschule, Realschule,* and *Gymnasium. Hauptschule* is the lowest track, covers general topics from grades 5-9 or 10 and concludes with a *Hauptschulabschluss* that has relatively little worth on the labor market but serves as a basis for further vocational training. *Realschule* is a middle track, also from grades 5-10, that provides a more extensive general education and ends in a *Realschulabschluss,* allowing the opportunity to go on to higher secondary level courses that lead to vocational or higher education entrance qualifications. Finally, *Gymnasium* is academically orientated and extends to "upper secondary" levels, lasting from the fifth to the 13th grade. Only the *Gymnasium* automatically leads to an *Abitur* or *Fachhochschulreife*, the credentials required for access to tertiary education.

Research from multiple data sources demonstrates that children with a migration background are much more likely than native Germans to be streamed into a *Hauptschule* and much less likely to obtain a *Fachhochschulreife* or

Abitur[3] (Kirsten 2002; Education Report 2008; Ministerium Nordrhein Westfalen 2008; Gamolla and Radtke 2002; Kirsten and Granato 2007; Söhn 2008; Fuchs and Sixt 2008). The most dominant explanation for this inequality in second generation achievement is the lower socioeconomic background of migrant families. Controlling for parental background generally accounts for most of the inequality between the children of immigrants and Germans without a migration background. However, the children of Italian (Kristen and Granato 2007) and Turkish (Alba et al. 1994; Riphahn 2003) immigrants continue to have lower attainment even after controls, and a positive coefficient sometimes remains for Greek as well as Portuguese and Spanish children (Alba at al 1994; Kristen and Granato 2007). Initial work with foreign born ethnic German youth (Söhn 2008; Fuchs and Sixt 2008), likewise reveals better performance among ethnic Germans as compared to other migrant groups – yet consistent disadvantage relative to native Germans. Unfortunately, due to the different variables available in different datasets, there is little consensus as to *why* ethnic disadvantage remains (for a discussion of inconsistencies between results, see Diefenbach 2007). Similarly, the *positive* coefficients observed for some groups are rarely theorized in the German literature, though Alba et al. (1994) and Kirsten and Granato (2007) attribute Greek academic success to the availability of alternative Greek-language schools. Initial explanations for the superior performance of *Aussiedler* relative to other migrant groups usually point to their superior language abilities and integrative assistance (Söhn 2008), though their continued disadvantage relative to native Germans is less understood.

IV. Explaining Variation in Integration

Prior research on integration in Germany has been hampered by the fact that the German second generation is just now coming of age (over 90% are under the age of 40), the historical difficulty in identifying naturalized immigrants and their children, and the preoccupation with former guest workers in the academic literature. Comparative work between second generation youth of different origins is therefore still in its beginning stages in Germany. An important starting point for this new line of inquiry is the application of the assimilation theories reviewed above, combined with the more general related literature on *boundaries* (for recent work that applied US-centered assimilation theories and boundary work on integration in the German case, see Wimmer 2008; Alba 2005; 2008; Diehl and Schnell 2006; Diehl and Blohm 2008; Kalter 2007). From the segmented assimilation theory (Portes and Zhou 1993; Portes and Rumbaut 2001), I draw on the concept of the context of reception to formulate hypotheses regarding differences in performance between different immigrant origin groups. From recent work on the influence of legal and social boundaries (Diehl and Blohm 2008; Alba 2005) I develop hypotheses regarding the association between parental boundary crossing (in terms of intermarriage and naturalization) and second generation attainment. Finally, applying recent research on immigrant aspirations and the "second generation advantage" (Kristen et al. 2008; Kasinitz et al. 2008; Smith 2008; Raiser 2007), I

[3] Though the Educational Report 2008 finds considerable heterogeneity by national origin, which this study confirms.

discuss the role of socioeconomic background on second generation attainment and possible differences in its effect on immigrants of different origins.

Context of Reception

The context of reception is defined by Portes and Rumbaut (2001) as the combination of three factors: governmental reception, societal reception, and the characteristics of the co-ethnic community. The importance of the context of reception on second generation outcomes has been repeatedly confirmed in the US case (Portes and Rumbaut 2001; Portes et al. 2008; Rumbaut 2008; Hirschman 2001; Kasinitz et al. 2008). Applied to the German case, former guest workers and *Aussiedler* present opposite ends of the spectrum in terms of their governmental context of reception, along with variation between guest worker groups in terms of their societal reception and coethnic community.

Whereas citizenship and integration assistance are a legal guarantee for *Aussiedler,* guest workers were explicitly recruited as temporary labor, discouraged from settling and obtaining citizenship, and actively encouraged to return to their home countries[4]. This *governmental* context of reception had a strong impact: as temporary labor migrants, former guest workers had little incentive to invest in German language skills (Diehl and Schnell 2006), make contact (including intermarry) with native Germans (Schroedter and Kalter 2008), or acquire cultural or professional competencies as many expected to return to their home country[5]. In contrast, *Aussiedler* have a strong incentive - indeed, since 1997, an *obligation* to prove language ability and the desire to live as "Germans with Germans"- to improve or acquire German language skills and familiarize themselves with the "cultural toolkit" of their new home country (see also Maas and Mehlem 2003). The children of *Aussiedler* are therefore likely to benefit from their parent's increased investments and resulting cultural knowhow.

Societal reception of ethnic Germans and guest workers also differs, with important variation between different national origin groups. Though there is some evidence of discrimination against *Aussiedler,* particularly among newer arrivals who are more likely to have mixed parentage (Dietz 2000; Eckert et al. 1999), the boundaries between ethnic Germans and natives, whether conceptualized as race, citizenship, or religion, are much more "blurred" than those between the former guest workers and natives (Alba 2005). In contrast, self reports of former guest workers as well as experimental tests reveal that foreigners of all backgrounds, but in particular those of Turkish backgrounds, experience

[4] After the end of the recruitment, the German government attempted to discourage immigrant settlement by restricting working permits for family members and prohibiting continued immigration into regions with guest worker concentrations over 12% (Eryilmaz and Jamin 1998: 397). In 1984, the German government also offered a lump sum to defray travel costs for guest workers to return home.

[5] for the impact of temporary intent on the first generation, see Dustmann (2000); as an extreme example of its impact on the second generation, see Rist (1979), who describes the separate curriculum created for the children of migrants in Bavaria, complete with teachers recruited from their home countries to prepare them for their return home

discrimination in access to jobs and housing (Goldberg et al. 1996; Faist 1993; Nauck 2001) as well as in daily life interactions such as visiting a bar or making friends at a university (Klink and Wagner 1999). Moreover, within guest worker origin groups, there is also increasing evidence of a Turkish/non-Turkish divide, both in the popular media as well as observed in qualitative studies. Most important perhaps is the perception of Turks as both "non-European" and devoutly Muslim, with the latter seeming more dangerous and assuming greater significance after 9/11 and the London bombings (Alba 2005; Korteweg and Yurdakul 2009; for less acceptance of non-EU groups, see Fertig and Schmidt 2001).

Finally, drawing on the third dimension of Portes and Rumbaut's context of reception, the characteristics of the *coethnic community* also differ between *Aussiedler* and guest workers, and between national origin groups among the guest workers (for my sample, see table 2). A key difference is exposure to schooling: the average education levels of *Aussiedler* are much higher than that of the former guest worker groups, and among the former guest workers, Turks are by far the least educated, with two thirds having the lowest level degree or less, with no further occupational training. The correlation between parents' and children's attainment is especially strong in Germany (OECD 2006); when compounded with a lack of information about schooling options in some immigrant communities (see Kristen 2005 and Kristen et al. 2008 for research on Turkish origin families), differences in the educational profile of the coethnic community are likely to have an impact on second generation performance.

Similarly, the financial resources and occupational position of the coethnic community may also have an impact on second generation performance. Inequality in employment is very high: though all former guest worker origin groups (except for Iberians) have somewhat higher unemployment than native Germans, the percentage of Turkish households where both parents are unemployed or out of the labor force is over three times as high as all other groups, with the exception of very high unemployment also among former Yugoslavian origin households. Differences in education and employment are also reflected in income: *Aussiedler,* while disadvantaged relative to Germans, have lower percentages in the lowest household income categories than the guest worker groups, and among the guest workers, Turks are by far the most impoverished. Finally, all guest worker origin groups, as well as the more highly educated *Aussiedler,* have much higher percentages employed as *Arbeiter (*working class) employees than native Germans. This is due to difficulty in transferring foreign certifications in the German labor market (Konietzka and Kreyenfeld 2001; Pischke 1992). However, it is important to note that Greek origin households, as well as many of the other immigrant groups in my sample, *also* report fairly high levels of self employment. The presence of employers within the coethnic community is found to have a positive effect on social capital and solidarity; this, combined with their fairly low unemployment rates, and the presence of private Greek schools in the community (Alba et al. 1994), suggest the possibility for a more supportive environment among Greeks than the other guest workers groups. In contrast, a large literature on aggregate community effects shows that, even independent of individual characteristics, the extreme disadvantage observed among the Turks can serve to stifle ambition, promoting an adversarial stance towards mainstream success (Portes and

Rumbaut 2001). Though my sample is a specific subset of the total population (households with at least one 18-20 year old born in Germany or arrived before the age of 6) – the substantive patterns observed in table 2 are similar to those in other published results (see Statisches Bundesamt 2008: Table 15; for *Aussiedler* see Konietzka and Kreyenfeld 2001).

Taken together, then, these indicators suggest a clear hierarchy among the foreign born in Germany, with *Aussiedler* having a more positive governmental and social reception, and a more highly educated and less impoverished community than guest worker origin groups. They are followed by Greeks, Iberians, and former Yugoslavians, who have a negative government reception and weakly negative societal reception, along with disadvantaged aggregate socioeconomic characteristics. Finally, Turkish origin immigrants display an extreme form of interlocking disadvantage that separates them from the other guest workers. Drawing from this summary, we should expect:

> *H1: Aussiedler to perform the best, Turks the worst, and other guest worker origin groups falling in the middle. This relationship should exist both before and after the application of individual controls.*

Boundary Crossing and Parental Integration

Immigrants and natives can be separated across several different kinds of boundaries – racial, linguistic, religious, and legal. These boundaries are situationally specific and may have different salience in different national contexts – in the US, for instance, racial boundaries are particularly salient, whereas in the European context, religious boundaries carry higher social significance. As argued by Alba (2005), in Germany, citizenship is a "bright" boundary with important social consequences (Alba 2005). Though the actual rights or status conferred by citizenship may be minimal (Soysal 1994), naturalization is positively associated with educational and occupational attainment, permanent settlement aims, linguistic ability, and – for Turks – with social integration as well (Diehl and Blohm 2008). All of these are positively associated with children's achievement (Dustmann 2000; Alba and Nee 1997). The direction of causality, however, remains unclear. Is it simply that more integrated immigrants both choose to naturalize as well as have higher performing children, or might parental naturalization itself yield an independent effect on children's outcomes? We might expect that the cognitive and emotional impact of naturalization, combined with a greater sense of entitlement from being a citizen (see Tucci and Groh-Samberg forthcoming) , might encourage immigrant parents to become more involved in community affairs (including schools), to demand greater attention for their children, and to impart an obligation to succeed in the family's new permanent home. On the other hand, first empirical tests of the impact of citizenship on attainment with other data have found that the association between citizenship and second generation outcomes disappears after applying controls for socioeconomic background (Riphahn 2001; Gang and Zimmerman 2000). I therefore test a second hypothesis in the empirical analysis to follow:

> *H2: Second generation children who have at least one parent who is a German citizen will perform better than children who have two foreign parents, but this advantage will disappear after the application of background controls.*

Perhaps the most significant indicator of the decline in an ethnic boundary between two groups is high rates of intermarriage. Though intermarriage, like naturalization, may be the effect of social and structural integration rather than the cause, it may also bring benefits to the second generation not captured by traditional socioeconomic measures. For instance, even net of the occupation or education level of the parent, a German parent is more likely to be familiar with the German educational system and important cultural references and practices in German childrearing, and the children of German-immigrant marriages are less likely to be in a migrant-majority school (Educational Report 2006:163). I therefore hypothesize that:

H3: Second generation children who have at least one German parent will perform better than children of two foreign born parents, and that this advantage will remain after the application of background controls.

Socioeconomic Background

Finally, this paper assesses several aspects of socioeconomic background: parental educational and occupational attainment, household income, and children in the household. Though generally applied as control variables in second generation research, there are also theoretical reasons to expect that the effect of these variables might impact the second generation differently from the children of native Germans.

In general, the most important social background variable in predicting the educational attainment in Germany is parental education (OECD PISA 2006; Educational Report 2008; 2006). The degree of educational intergenerational mobility is lower in Germany than in nearly every other industrialized nation (Pfeffer 2008). Students are chosen for tracking after only 4 years of formal schooling, and have fewer hours in school than many other European nations (Crul and Schmidt 2003). Therefore, there is little time for students from a disadvantaged home environment to "catch up" before they are tracked, and movement between tracks is rare. In contrast, other parental resources are less important in Germany. Access to high quality public schools is obtained through teacher recommendations and student performance, and private schools and supplementary instruction play a much smaller role in Germany than in other countries. Household income and parental occupation should have a relatively small effect on children's outcomes in Germany after controlling for parental education. Therefore, I hypothesize:

H4: Parental educational differences will have a very strong effect on educational attainment and account for the largest amount of inequality observed between second generation children and native German children.

In addition to this main effect, I also expect the effect of parental education on child's educational attainment to differ by origin. Former guest workers arrived from countries that, at the time of their schooling, had much less developed educational systems and lower average levels of education. For these immigrants, their schooling level, though low for Germany, may represent the "average" or even better for their country of origin, and thus be less correlated with other characteristics that will negatively impact their children's performance (for the US case, see

Feliciano 2005). In other words, for a guest worker migrant, having less than a secondary degree may not be reflection of particularly poor performance in school or low ambition, as it might be for a German parent of the same age cohort. Moreover, immigrant parents may involve their children in the "immigrant bargain", emphasizing children's educational success as justification for the sacrifice of migration (Raiser 2007, RC Smith 2008). Finally, as US scholars have found, the children of immigrants may enjoy an immigrant advantage from selective acculturation practices that shield them from negative peer effects and low aspirations found among native youth of a similar social background (Portes and Zhou 1993; Kasinitz 2008).

Though the vast majority of the literature on the second generation focuses on explaining *worse* performance among immigrant children, differences between immigrants and natives of the same educational level outlined above could lead the children of poorly educated immigrants to perform *better* than the children of native Germans with the same educational attainment. I therefore hypothesize that:

H5: The second generation will experience less of a negative effect from low parental education than native Germans.

In addition to unobserved heterogeneity between immigrant and native parents of the same education levels, there is considerable evidence that immigrant parents apply different decision making processes about their children's education than native parents (Kristen 2005; Kristen et al. 2008). Most important appears to be an emphasis on obtaining the highest academic tracks: immigrant parents are more likely to push their children to pursue the *Abitur* (Educational Report 2006:165), and to attend University rather than technical colleges (Kristen et al. 2008). Due to a lack of knowledge about Germany's dual system of educational training, immigrant parents are less likely to encourage their children to pursue the "middle" tracks more likely to lead to vocational or technical training, therefore I expect:

H6: The second generation will display a "U-shaped" educational distribution, with lower probability of pursuing the Realschulabschluss. This relationship will hold after the application of background controls.

Limitations of this Study

Despite its strength in sample size and representativeness, the Mikrozensus does not allow the inclusion of all relevant explanatory variables in predicting educational attainment. Most important are language use, cultural aspects of the home environment, and school characteristics. The importance of language ability on second generation educational attainment finds consistent empirical support, and language ability is often at the forefront of integration debates (OECD 2006; Nordrhein Westfalen Report 2008). Although differences in household language ability are partially captured by parental education, citizenship and intermarriage, considerable heterogeneity in home language use likely remains across my independent variables. A further obstacle to second generation attainment could be cultural aspects of the home environment, most importantly access to educational materials in the home. Cultural aspects of home life

may also include the ability to navigate the German school system and gender norms for children (Phalet and Schönflug 2001; Crul and Vermuelen 2003; Mueller 2006). Though some of these differences partially align with national origins, they are not fully accounted for in my analysis. Finally, social ties and school environment may also explain second generation disadvantage. Second generation students are unequally distributed in Germany, both regionally and due to their overrepresentation in *Hauptschule* (PISA 2006; Education Report 2008). While scholars debate the effects of a high percentage of minority youth in the school on educational achievement, both Stanat (2006) und Kirsten (2002) find that the representation of foreign children in a school has an inverse relationship with the likelihood of recommendation for *Gymnasium* or *Realschule* among the children of guest workers.

Unfortunately, no data set exists that allows researchers to test *all* of these competing explanations (Diefenbach 2007). Moreover, none of these explanations could explain any ethnic *advantage* in second generation educational attainment. While the 2005/2006 Mikrozensus data does not have the variables necessary to test these competing explanations, it is unique in its size, representativeness of the *entire* second generation population, and inclusion of both country of birth and nationality variables. I therefore focus on differences between immigrant origin groups, and between second generation youth with more versus less integrated parents – economically, socially, and in terms of citizenship status.

IV. Data and Sample

I utilize the German Mikrozensus, a nationally representative survey containing demographic and education data in which 1 percent of all households in Germany are involved in an ongoing household sample, with one quarter of the sample exiting each year. My sample includes the 100% Sample for 2005 and the "incoming quarter rotation" from 2006 to maximize cases without repeating observations. The very large sample size and representativeness of the Mikrozensus enables finer national origin distinctions than other datasets, and each member of the household is included in the survey, enabling links between parents' and children's information. Critical to my research objective, in 2005 the Mikrozensus began to ask about place of birth, enabling the identification of ethnic Germans and the naturalized first and second generation for the first time.

In order to control for both socioeconomic and migration background, I must restrict my analysis to only those second generation youth still living at home with their parents, allowing me to take advantage of the household sampling structure to obtain parental characteristics. I therefore include in my sample only respondents ages 18-20 who are living at home with their parents. These respondents have thus progressed past the 10^{th} grade, old enough to either have obtained a *Haupt-* or *Realschulabschluss*, or to pursue an *Abitur*, but are still young enough to be living at home. As 96% of the respondents with a migration background live in the West, I also restrict my sample to respondents living in the former western German states (including former West Berlin). Finally, in order to control for the schooling history of

my respondents, I include only respondents born in Germany or who arrived before the age of 6, omitting the first generation youth from my sample.

This sample is largely representative of the German-schooled West German 18-20 year old age group in Germany; however, restricting the sample to those living at home is a critical limitation, as leaving schooling and leaving the home are correlated. I include in Appendix A sensitivity tests and additional descriptive information on respondents living away from home[6]. Standard errors are adjusted to account for the stratified sampling design of the Mikrozensus, and probability weights adjusted for my analytic sample are used in all analyses[7].

V. Variables

Dependent Variable

The goal of this paper is to describe and explain differences in the educational attainment of different ethnic groups in Germany. Following Breen and Jonsson (2000), I utilize a multinomial approach, measuring educational attainment as the odds of one of three possible outcomes: a) *Hauptschulabschluss* or less, b) *Realschulabschluss*, or c) being en route to or obtaining an *Abitur* or *Fachhochschulreife*. Being en route to an *Abitur* or *Fachhochschulreife* is coded positive (=1) if respondents are in grades 11-13 (at a Gymnasium), or in another upper secondary school that confers an *Abitur* or a *Fachhochschulreife* at its completion[8].

[6] Among 18-20 year olds living at home, only 2.68% are still in the 10th grade. The restriction of the analysis to youth living at home is a critical limitation of the study, as youth living in the parental household have higher attainment, on average. Fortunately, when predicting the likelihood of living at home, there is not a significant interaction effect between origin and attainment; similarly, when predicting attainment, there is not a significant interaction effect between origin and living at home. Therefore, although youth living at home have higher attainment on average than youth outside of the home, this relationship does not differ between the origins under consideration. This suggests that the ethnic differences that are the focus of this paper are unlikely to be biased by restricting my sample to youth in the home. This conclusion is further supported by the fact that a replication of the analysis restricting the sample to 18 year olds resulted in substantively similar findings as those with the full sample. Further information can be found in Appendix A.

[7] The Mikrozensus is a stratified cluster sample. I was unable to obtain permission to access the Regional strata variable to fully adjust for the sampling design (see discussion by Schimpl-Neimanns and Müller 2001). Instead, I use stratification variables that *were* present (Bundesland and Housing size) plus the primary sampling unit (Auswahlbezirknummer), resulting in conservative measures of statistical significance.

[8] It is important to note here that, given the young age of the sample, most of these youth are still in school, and that some of the youth pursuing the *Abitur* or *Fachhochschulreife* may not actually attain this degree; likewise, some of the youth who have only obtained a *Hauptschul-* or *Realschulabschluss* may pursue higher degrees later in their educational careers. Indeed, though only 8% of those at a University pursued an alternative educational path (including occupational schools, dual system schools, or entrance without an *Abitur*) over half (52%) of those pursuing a tertiary degree in a Technical college (Fachhochschule) arrived through alternative education paths (Educational Report 2008: 176). The importance of "second chances" through alternative schooling paths have been shown to be very important for the eventual attainment of second generation youth in particular (Initial TIES report 2008). While I partially account for this by including *pursuit* of *Abitur* through non-traditional paths (i.e. upper secondary schools

Independent Variables

In order to test the competing hypotheses outlined above, I include the following control and independent variables:

1. Control Variables

To control for age, regional or gender differences between the different origin groups that may impact educational attainment, I insert dummy variables for age (age 18 omitted), sex (women omitted) and *Bundesland* of residence (North Rhein Westphalia omitted) in all analyses.

2. Socioeconomic Background

The socioeconomic background is measured with three different indicators: the highest educational attainment of the parent(s), the occupational attainment of the parent(s), and the household income.

Parental educational attainment is measured for the highest educated parent living in the household: a) parent has no or only a general or intermediate educational certification with no further training, b) general or intermediate certification with vocational training, c) a higher level vocational certification, such as a master technician certification or d) tertiary certification. Occupational status is indicated with dummies for four large occupational categories: a) out of the labor force or unemployed, b) wage worker (*Arbeiter*) or family helper, c) salary worker (*Angestellte*) or public servant (*Beamte*), or d) self employed. Though large, these categories are fairly accurate indicators of general class standing such as prestige and pay (Pollack and Müller 2004). I record the parental occupational status as father's occupational status and substitute mother's occupational status if father is out of the labor force or missing information. Household income is the total monthly wage and nonwage income of the household. I recode this variable into a continuous variable, and used the modified OECD equivalence scale (Hagenaars et al. 1994) to adjust for the number of people in the household. From this adjusted household income I created three income categories: low, middle, and affluent. Because families must divide not only financial resources, but also time and attention as well, I further add a control for the number of children under the age of 18 in the household[9].

3. Origins

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that are not Gymnasium) it is important to remember that this analysis provides a snapshot of inequality at a particular point in time, and that the picture may change in later years.

[9] The operationalization of the socioeconomic background variables used here roughly follows existing work with the Mikrozensus for migration studies, see for instance Kristen and Granato ,2007; Diehl and Blohm, 2008; Riphahn, 2001;2005). Alternate specifications, as well as substituting continuous variables for the categories, were tested: parental occupational status was coded as the highest parental ISEI score, the full CASMIN scale of the highest educated parent was substituted (both as a continuous variable and series of dummy variables), and adjusted household income was included as a continuous (logged and unadjusted) variable. Results are robust to all specifications. Tables available from author.

I utilize both parents' and the respondent's information to identify origin. If the respondent reports a foreign nationality *or* is a naturalized German who reports a foreign nationality before naturalization, I characterize him as that nationality. If the respondent is missing foreign nationality information or is a non-naturalized German, I use first the nationality (or reported pre-naturalization nationality) of the mother to characterize the respondent, and the father's nationality information if both the respondent and the mother are non-naturalized Germans[10].

The classification above accounts for the children of immigrants though does not distinguish *Aussiedler* from other migrants. As reviewed above, the *Aussiedler* represent a very special case of positive governmental reception, and thus need to be identified. To identify this group, I rely on country of origin and time to naturalization, as nearly 100% of *Aussiedler* are from Eastern Europe and only *Aussiedler* can naturalize in less than 3 years[11]. I utilize the following definition: if the respondent and/or *both* parents naturalized in less than three years since their arrival in Germany, and report an Eastern European country as their former nationality, I count them as *Aussiedler*. As a large percentage of *Aussiedler* report that they are Germans without naturalization (Birkner 2007), I also include as *Aussiedler* respondents who report both parents as born abroad as non-naturalized Germans.

Finally, I create a catch-all "migratory German" category for all non-naturalized German respondents who report either self or a parent as foreign born but are missing origin information and do not fulfill the requirements to be marked as *Aussiedler*. It is possible that some respondents who are classified as a migratory German may have one *Aussiedler* parent, but I choose this restrictive definition to exclude the children of foreign spouses of German nationals or German expatriates (Germans born abroad but not *Aussiedler* are less likely to have migrated to Germany with a foreign born spouse). Including the migratory German category in my sample, that may contain some *Aussiedler,* provides a useful comparison to this more restrictive definition. The full origin information of my sample can be found in Appendix B.

4. Parental Integration

I combine information on parental origins and nationality to categorize my respondents as follows: as the omitted category, I identify children with a) two foreign born parents, with at least one parent naturalized, and compare them to b) two foreign born parents, both parents without German citizenship and c) one foreign born parent and one native German parent. As described above, the direction of causality between parental integration and naturalization

[10] Overlap in mother and father's foreign nationality is nearly perfect: no more than 6% of any origin group had parents of two different foreign nationalities; in these cases, the nationality of the mother is used. Five percent of the respondents reporting a foreign origin have either naturalized or foreign nationality parents who were both born in Germany; they can thus be conceptualized as third generation. Omitting these respondents from the analysis had no effect on the results.

[11] The spouses of German citizens can naturalize after 3 years, and two thirds of these three years must be spent in Germany.

and intermarriage is difficult to untangle, but these variables allow me to test whether a positive association between naturalization and intermarriage exists independent of socioeconomic factors.

Citizenship, generation and origin information for all respondents is complete. All respondents missing information on the dependent variable (N=529), parental education (N=298) or occupational status (N=36) are excluded from the sample. Respondents missing family income information (N=1,579) are coded as missing on this variable and included in the model. My final sample totals 17,449 Germans, 2nd generation, and 2.5 generation 18-20 year olds living at home with their parents.

VI. Results

I now turn to the empirical findings of the paper, first providing descriptive statistics and then the results of the multivariate models.

Descriptive Statistics

Distributions for all variables are available in Table 2.

[TABLE TWO ABOUT HERE]

As already discussed above, there is considerable variation across the origin groups in terms of their socioeconomic background: Turkish adolescents stem from the poorest and least educated households, with other guest workers performing somewhat better, and *Aussiedler* better than former guest workers on most measures though still lagging well behind native Germans, in particular in their overrepresentation in working class jobs. Intermarriage and naturalization is low to moderate among most of the guest worker groups, with Turks reporting lower intermarriage with native Germans, though higher percentage naturalized than other guest workers.

Some of these differences are reflected in the educational outcomes of the second generation: as expected from their positive context of reception, *Aussiedler* perform very well; despite coming from poorer households with working-class parents, *Aussiedler* educational attainment nearly matches that of native Germans. Differences observed among the guest workers are less consistent with expectations. Although Turkish youth have the highest percentages in the lowest educational outcome, *Hauptschulabschluss* or less (HS), they do *not* perform worse, on average, than do former Yugoslavians, despite their uniquely disadvantaged position. The fact that the relatively advantaged Yugoslavians perform just as poorly as Turks, and that the similarly advantaged Italians perform much worse than Iberians, presents an interesting puzzle. It is also worth noting that 11 out of the 16 immigrant origin groups I identify have *higher* rates of *Abitur* or *Fachhochschulreife* pursuit and completion (AFH) than native Germans, despite the fact that only one group, EU immigrants, are on par with Germans across the socioeconomic indicators. These results suggest that differences in socioeconomic background will not fully explain ethnic differences in educational attainment.

Multivariate Models

To model the likelihood of different educational certifications, I use weighted multinomial logistic regression, adjusting for the stratified sampling design. For ease of interpretation, the results are reported in odds ratios, or the antilog (e^b) of the logged odds beta coefficients. Results for several models, with explanatory variables added in stepwise fashion, are found in table 3. The discrete changes in predicted probabilities associated with each independent variable are also presented in Table 4.

[TABLE THREE HERE]

1. *Baseline Group Differences*

In Table 3, I start first with country of origin as an indicator for the context of reception (model 1), then I include parental citizenship and intermarriage indicators (2), followed by demographic controls (3), parental educational attainment (4), and finally the full socioeconomic background controls. The top panel compares the odds of obtaining a *Hauptschulabschluss* (HS) or less, relative to a *Realschulabschluss* (RS), and the second panel the odds of AFH, relative to RS. Finally, to properly account for all comparisons, in the third panel the odds of obtaining an AFH, relative to HS, are compared. Model 1 in Table 3 is simply another way of displaying the origin differences observed in the descriptive statistics, though allowing direct comparisons between outcomes. Because fewer second generation youth attend *Realschule*, the level of inequality observed is sensitive to the omitted category chosen. It is therefore important to use a multinomial framework when examining second generation educational outcomes in Germany, as the substantive interpretation depends on the comparison used. As compared to completing the middle certification (RS), all guest workers (with the exception of Iberians) have higher odds of the lowest credential than native Germans. However, contrary to theoretical predictions, it is the positively received *Aussiedler*, as well as Italian origin youth, that are also *less* likely to obtain the highest credentials (AFH) than native Germans. The story changes when we compare the odds of the highest degree to odds of the lowest degree, however. Among the guest workers, only Portuguese and Greek youth have the same odds as Germans of the highest degree, rather than the lowest degree, and *Aussiedler* are no longer disadvantaged relative to native Germans.

This baseline model further reveals that the impact of context of reception is *not* as clear cut as expected: although *Aussiedler* have lower odds of the lowest achievement, they are not more likely to reach the highest credentials; rather, it is the negatively received Greeks and Iberian youth who have the most consistently positive outcomes as compared to Germans, regardless of the comparison used. Although Turks do have the highest rates of HS or less, so too do former-Yugoslavs, despite their more positive context of reception. I therefore tentatively conclude that:

H1: Aussiedler will perform the best, Turks the worst and other guest worker origin groups falling in the middle

is incorrect.

To ascertain whether these surprising findings can be explained by differences between the origin groups in parental integration (H2 and H3), or differences in socioeconomic background (H4) I turn to the models 2-5 in Table 3.

2. The Role of Parental Integration

In model 2 of Table 3, we see that parental integration has a rather weak effect on educational attainment- having two foreign national parents, rather than at least one with German citizenship, is associated with a 24% drop in the odds of AFH pursuit or completion (relative to HS or less), but this is the only comparison where either 2.5 generation status or parental citizenship are significant. Moreover, the addition of these variables does nothing to change the substantive ethnic comparisons observed in model 1. I therefore tentatively conclude that the first part of hypothesis two is correct:

H2: Second generation children who have at least one parent who is a German citizen will perform better than children who have two foreign parents,

but that hypothesis three:

H3: Second generation children who have at least one German parent will perform better than children of two foreign born parents, and that this advantage will remain after the application of background controls.

is incorrect.

The unexpected findings regarding the effect of ethnic origins and having a German parent on educational attainment remain unchanged when controls for *Bundesland* of residence, age, and sex are added (Model 3). I next examine the role of parental socioeconomic background in explaining second generation outcomes.

The Impact of Parental Socioeconomic Background

In models 4 and 5, I successively introduce first parental educational attainment, and then parental occupation, household income, and number of children in the household under 18.

First, we see confirmation for hypothesis 4:

H4: Parental educational differences will have a very strong effect on educational attainment and account for the largest amount of inequality observed between second generation children and native German children.

Parental educational attainment has a large and highly significant effect on all secondary education comparisons. After controlling for parental education, the disadvantage faced by all guest worker origin groups as well as *Aussiedler* disappears – the only remaining significant disadvantage is that Turks and former Yugoslavs continue to experience

higher odds of the lowest credentials than native Germans, relative to middle credentials, and that former Yugoslavs experience lower odds of obtaining the highest credentials, rather than the lowest credentials. As in prior research (Kristen and Granato 2007), in this sample the bulk of second generation disadvantage is accounted for by parental education.

In addition to this known finding, however, we also see something new: an immigrant *advantage* after the application of education controls that grows still larger after controlling for occupation, income, and the number of children in the household. Of the 16 groups under consideration, half of them have significantly *higher odds* than native Germans of the obtaining the highest, rather than the middle credentials, and no group has significantly lower odds of the highest attainment. Even for Turks and former-Yugoslavs, there is no negative effect after application of background controls, but rather a positive one – and this positive effect is strongest amongst the most *negatively* received group, Turks.

Not only does controlling for parental education eradicate second generation disadvantage, it also fully accounts for the positive impact of parental naturalization on achievement. As expected, the positive effect of parental legal integration is explained by the fact that more highly educated immigrants naturalize, confirming the second part of hypothesis two:

> *H2: Second generation children who have at least one parent who is a German citizen will perform better than children who have two foreign parents, but that this advantage will disappear after the application of background controls.*

Finally, controlling for parental education reveals that, within educational categories, having a native German parent decreases the odds of the highest secondary degree, and increases the odds of the lowest secondary degree. This is a very surprising finding; however, it is robust to extensive sensitivity testing[12]. It appears that, once we take into account that better off parents are more likely to intermarry with native Germans, having a German parent actually decreases the immigrant advantage observed.

To further illustrate these findings, I also provide the discrete change in predicted probabilities associated with each independent variable for model 5. These computations are found in table 4. This is the effect of a dummy variable

[12]Testing the significance of interactions between 2.5 generation status and other explanatory variables confirmed that the negative effect of 2.5 generation status does not differ by gender, origin, or age. Including separate indicators for having a German mother or German father reveals some difference in earlier models (1-3), however, after controlling for socioeconomic background, the only difference is that having a German father decreases the odds of the highest achievement (relative to middle achievement) and having a German mother decreases the odds of attaining the highest achievement (relative to the lowest achievement). In no comparison does having a German parent increase the odds of higher achievement, after controlling for socioeconomic background.

changing from 0 to 1 on the predicted probability of each educational outcome, with all other explanatory variables held at their mean or mode.

[TABLE FOUR HERE]

In table 4, we see that nearly all second generation groups display lower predicted probabilities of the lowest and middle secondary qualifications than do native Germans, and higher probabilities of the highest attainment. This is a sign of clear immigrant advantage. Yet as shown above, the immigrant advantage is *weakest* among the most positively received immigrant origin group: the children of ethnic Germans report only a slightly higher probability (3 percentage points) of obtaining the highest credentials than Germans with the same socioeconomic background. In contrast, Turkish origin youth, the most disadvantaged group, have a probability of attaining and AFH that is 13 percentage points higher; Iberian and Greek youth have a 20 percentage point higher probability than native Germans. However, a closer comparison between the discrete changes in the probability of HS or less and RS reveals a more nuanced picture in the advantage among guest worker origin groups. We see that these groups display a U-shaped education distribution – their lower likelihoods of the *middle* educational categories, not the lowest, are what is driving their advantage. In other words, they are not less likely than native Germans to obtain the lowest credentials, but they are more likely than Germans to achieve the highest, rather than the middle credentials. Moreover, when I compute predicted probabilities at higher parental education levels (not shown), Turks, former-Yugoslavs, and American origin youth display *higher* probabilities of the lowest attainment than native Germans. The guest worker immigrant advantage is less pronounced in regards to obtaining the lowest credentials, and the advantage even turns to disadvantage when we compare the children of Turkish, former-Yugoslavian, and American immigrants and the children of Germans with higher educated parents. In contrast, immigrant groups that are less culturally distant from native Germans, for instance Italians and *Aussiedler,* converge with Germans in their educational distribution, and do not display the U-shaped pattern. These groups are more likely to pursue the middle education track. I therefore conclude that:

> *H6: The second generation will display a "U-shaped" educational distribution, with lower probability of pursuing the Realschulabschluss. This relationship will hold after the application of background controls,*

is not only correct, it is provides a key insight into the immigrant advantage observed.

We also see that the effect on predicted probabilities is by far the largest for parental education, as predicted, with the effect of having a working class or unemployed parent exerting a smaller effect. Finally, the integration variables, as discussed above, have only a negative or neutral impact. Parental naturalization has no effect, and having a native German parent increases the probability of the lowest attainment, and strongly decreases the probability of the highest attainment by 9 percentage points.

3. Within Group Differences

[TABLES FIVE AND SIX ABOUT HERE]

In the models reported in tables 5 and 6, I formally test whether second generation youth are less negatively impacted by low parental education than native Germans. Given the large number of interactions, the fact that positive origin effects were most consistently observed in terms of the odds of the highest educational outcome, and the relatively small numbers among many of the origin groups in my sample, I restrict this analysis to a comparison of *Abitur or Fachhochschulreife* pursuit and completion and all other outcomes.

Table 5 shows consecutive models adding control variables to predict *Abitur* or *Fachhochschulreife*, and table 6 shows the results when education and origin are interacted. The addition of interactive effects between parental education and origins are collectively highly significant (Wald Test Chi^2 (48) =113.80, p<.001), suggesting different returns to parental education by immigrant origins. Given the small numbers within some of the parental education*origin interactions, these findings need to be interpreted with caution[13], but comparisons by origin and parental education reveal that the immigrant advantage is concentrated among second generation youth with parents with the lowest educational attainment.

Interpretation of interaction effects in nonlinear models is difficult (Norton et al. 2004); therefore, I follow Long and Freese (2003) and discuss discrete changes in the predicted probabilities of AFH for different origin groups with different parental educational backgrounds. These predicted probabilities are found in table 7.

[TABLE SEVEN HERE]

Observing the probabilities across educational categories, we see a clear trend: among those with the lowest level of parental education, nearly all immigrant origin groups have much higher predicted probabilities of *Abitur* or *Fachhochschulreife* pursuit or completion than native Germans. In particular, the most disadvantaged guest worker origin groups have a large advantage in the lowest educational categories that sharply declines or even reverses at higher levels or parental education. Once again the patterns of ethnic difference do not follow the context of reception: in contrast to the children of guest workers, the most positively received group, ethnic German *Aussiedler,* have no educational advantage over native Germans. Yet for the majority of the second generation groups:

> *H5: The second generation will experience less of a negative effect from low parental education than native Germans,*

is correct. Clearly children of immigrant parents with a low educational background are not as disadvantaged as the children of native Germans with similar backgrounds in obtaining the highest educational credentials.

[13] Some parental education*origin cells contain less than 10 cases, see table 2

VII. Discussion

This paper provides several contributions to current understanding of second generation educational attainment in Germany. The comparison of the attainment of the children of guest workers with the children of ethnic German *Aussiedler* allows me to assess whether a positive context of reception for the immigrant generation positively impacts the performance of the second generation. At first glance, it would appear that it does: the children of *Aussiedler,* despite having parents who are more likely to be blue collar workers and less likely to be affluent, have very similar educational distributions as the children of native Germans, whereas the children of guest workers have higher percentages in the lowest educational category and are underrepresented in the highest. When we control for parental background, however, the pattern turns on its head: second generation guest workers, in particular Turks, Iberians and Greeks, show a significant immigrant advantage, not shared by the more positively received *Aussiedler.* Turkish origin youth do have higher odds of the lowest educational outcomes, but so do former Yugoslavs, a finding that casts doubt on the common perception of Turks as the future "underclass" of Germany. Moreover, the most positively received group, rather than experiencing rapid upward mobility, appears instead to follow a path more in line with traditional assimilation – converging with native Germans to have similar distributions as native counterparts that share their class position. Thus, the predictions of divergence emphasized in the segmented assimilation framework – of *compounded disadvantage* (or, poor outcomes for poorly received groups) as well as *compounded advantage* (accelerated progress for positively received groups) does not appear to hold in the German case. I therefore conclude that ethnic origins *do* matter, but not in the ways consistent with assimilation theories as they are applied in the United States.

Rather, I show fairly consistent evidence of immigrant advantage that does not appear to be contingent on the context of reception or parental boundary crossing. This advantage is likely the result of protective immigrant acculturation, unobserved heterogeneity between native and immigrant parents, or both. On one hand, the finding of general immigrant advantage concurs with findings of high aspirations and the use of the immigrant bargain found by qualitative researchers. On the other hand, most immigrants arrive from countries that, at the time of their schooling, had much less developed educational systems and lower average levels of education. Immigrants with a low level of schooling are therefore likely to be more heterogeneous in terms of their unobserved characteristics, such as ambition and intelligence, than a native German with a similar level of education. If this is the case, then we might expect that second generation advantage in educational outcomes among may not be the result of selective acculturation practices, but rather may be the result of unobserved variation between immigrants and natives with low socioeconomic characteristics. The children of immigrants with a low socioeconomic status do better in school than the children of natives of low socioeconomic status because they are different in ways that matter for educational outcomes. As the children of guest workers are disproportionately raised by parents with very low educational attainment, the finding that second generation advantage is most pronounced among the low educated is particularly heartening. The fact that parental integration has a neutral or even negative effect on achievement provides further support for a more general

immigrant advantage hypothesis: the advantage I observe is *not* just the result of including more integrated immigrants in my sample.

Finally, despite these generally optimistic findings which emerge when we compare second generation and native youth of the same socioeconomic background, this paper reveals two important points of concern as well. First, the relationship between parental and child education in Germany is exceptionally strong, as evidenced by the very large effects of parental education in tables 4-6. Although the finding that the children of low educated immigrants perform better than the children of low educated Germans presents an optimistic picture in terms of ethnic equality in opportunity, this does not point to general equality in outcomes for second generation youth. Given the high correlation between parent and child education, and the fact that so many second generation youth have parents with low education, even the relatively advantaged second generation groups have a very long road to reaching convergence in educational *distributions* with native Germans.

Second, a U-shaped educational distribution among many of the guest worker groups is also revealed when modeling educational attainment in a multinomial framework. This finding corresponds to qualitative and survey evidence that immigrant parents tend to be both highly ambitious and less informed about educational choices in Germany, encouraging their children to pursue only the highest educational paths that lead to university. While this helps explain the higher probability of the highest secondary outcomes among the most disadvantaged groups, it might also explain why so many are in the lowest tracks, as the less gifted children are not encouraged to pursue middle tracks due to a lack of information among the parents. This finding also suggests a longer road to convergence for the children of immigrants in Germany.

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Table 1. Characteristics of Major Immigrant Groups in Germany

	Major National Origins	Peak Arrival	Characteristics
Guest Worker Labor Migrants	Turkey, Italy, Greece, former-Yugoslavia, Spain, Portugal	1955-1973	Low skilled, high percentage of rural origins. Originally one year work contracts temporary contracts, eventually permanent residents and sponsored family members. Low naturalization rates due to historically restrictive naturalization laws and originally temporary intentions
Ethnic German *Aussiedler*	former Soviet Union, Poland, Romania	1989-2000	Similar skill distribution as native Germans. To be recognized, need to prove German ancestry, discrimination, and since 1997 German language ability. Immediate rights to citizenship and integrative assistance- including assistance in transferring foreign credentials- upon recognition.
Refugee Migrants	Very diverse group, with larger percentages from Iraq, Iran, Vietnam, former Soviet Union, Afghanistan, former Yugoslavia, and India	1985-1993	Bifurcated skill distributions. Asylum laws very generous until 1993, fairly easy access to permanent residency. Higher rates of naturalization, mostly permanent settlement aims
EU and the Americas	Diverse group, larger numbers from Austria and the United States	no clear peak	Generally higher skilled. EU citizens have right to move and work freely in Germany, the majority from the Americas are permanent residents. High percentage among this group married to Germans

Table 2. Sample Characteristics : Native German and Second Generation Youth ages 18-20 Living in their Parents Household (N=17,449)

	Secondary Degree			*Parental Integration*			*Parental Educational Attainment*			
	HS or Less	RS	AFH	Foreign Nationality	2nd Gen, Naturalized	2.5 Gen	Gen/Inter Education	Gen/Inter + Vocation	Abi or Higher Vocation	Tertiary
German	.228	.286	.486				.055	.559	.184	.202
Turkish	.485	.175	.340	.620	.338	.042	.666	.279	.035	.020
Former Yugo	.453	.208	.338	.624	.207	.169	.272	.570	.072	.086
Italian	.354	.320	.326	.544	.154	.303	.368	.512	.078	.041
Greek	.298	.204	.498	.620	.141	.239	.470	.355	.077	.099
Iberian	.242	.222	.536	.588	.119	.293	.396	.497	.042	.064
Aussiedler	.234	.318	.448		.955	.045	.082	.612	.179	.127
Polish	.172	.241	.586	.257	.531	.211	.035	.444	.348	.172
Austria	.172	.324	.504	.063	.088	.848	.074	.527	.142	.257
Other EU	.130	.203	.667	.119	.154	.727	.038	.288	.188	.486
Eastern Europe	.289	.255	.457	.183	.545	.272	.179	.314	.210	.297
SE Asian	.153	.201	.647	.075	.437	.488	.223	.363	.104	.310
African	.319	.188	.493	.245	.455	.300	.470	.204	.173	.153
American	.267	.151	.582	.125	.084	.792	.084	.314	.177	.424
Middle East	.215	.193	.591	.242	.601	.157	.346	.190	.171	.293
Other	.256	.243	.500	.228	.287	.485	.223	.310	.206	.261
Mig German	.193	.250	.557		.290	.710	.078	.472	.204	.246

	Parental Labor Force Status				*Household Income*					
	OLF/ Unemp	Worker	Salary	Self-Employed	Low	Medium	Affluent	Missing	Kids in HH	N
German	.068	.234	.544	.153	.129	.242	.532	.096	.605	13,647
Turkish	.231	.582	.121	.066	.434	.195	.304	.066	1.162	832
Former Yugo	.165	.526	.212	.097	.294	.248	.403	.054	.705	224
Italian	.088	.554	.246	.113	.273	.276	.397	.054	.634	243
Greek	.082	.544	.185	.190	.259	.336	.311	.093	.944	86
Iberian	.063	.495	.335	.107	.125	.369	.402	.104	.461	90
Aussiedler	.051	.640	.259	.050	.199	.311	.448	.043	.647	927
Polish	.172	.391	.347	.091	.145	.240	.553	.062	.667	107
Austria	.044	.270	.512	.174	.100	.312	.484	.104	.627	80
Other EU	.100	.150	.570	.180	.143	.210	.520	.127	.734	179
Eastern Europe	.182	.410	.297	.110	.148	.303	.503	.046	.629	116
SE Asian	.201	.285	.276	.239	.230	.284	.424	.062	.610	118
African	.432	.280	.260	.028	.520	.212	.235	.032	1.679	100
American	.090	.172	.635	.103	.147	.275	.476	.101	.813	107
Middle East	.365	.180	.293	.163	.432	.178	.333	.057	1.188	112
Other	.173	.307	.344	.177	.263	.261	.340	.136	.817	101
Mig German	.111	.251	.524	.114	.108	.255	.528	.110	.499	380

Table 3. Relative Risk of Secondary Degree, Native German and Second Generation Youth ages 18-20 Living in their Parents Household (N=17,449)

Odds of Hauptschule or Less, relative to Realschulabschluss	1	2	3	4	5
Turkish	3.482**	3.181**	3.481**	1.745**	1.489**
Former Yugo	2.731**	2.538**	2.885**	2.168**	1.854**
Italian	1.387+	1.326	1.450+	0.923	0.834
Greek	1.834+	1.715	1.899+	1.071	0.993
Iberian	1.368	1.296	1.576	0.926	0.925
Aussiedler	0.924	0.929	0.980	0.906	.786*
Austria	0.666	0.740	0.640	.460+	.431*
Other EU	0.806	0.872	0.974	0.902	0.804
Eastern Europe	1.424	1.435	1.520	1.242	1.080
Southeast Asian	0.955	1.008	1.200	0.754	0.640
African	2.135*	2.138*	2.433**	1.313	0.959
American	2.215*	2.417**	2.669**	2.155*	2.045*
Middle East	1.398	1.372	1.486	0.883	0.661
Other	1.322	1.330	1.444	1.063	0.914
Migratory German	0.972	1.071	1.175	0.911	0.839
Parental Integration (2nd Generation, Naturalized Omitted)					
2nd Gen, Foreign Nationality		1.165	1.161	1.014	0.971
2.5 Generation		0.873	0.812	1.156	1.242
Parental Educational Attainment (General Education Only or Less)					
General Education + Vocational				.339**	.396**
Abitur or Advanced Vocational				.197**	.257**
Tertiary				.138**	.191**
Parental Occupational Attainment (Salary and Public Servant Omitted)					
OLF/Unemployed					2.294**
Worker					1.604**
Self Employed					1.332**
Income (Low Omitted)					
Middle					.711**
Affluent					.722**
Missing					0.959
Number of Children in HH					0.977
Controls for Sex, Age and Bundesland			yes	yes	yes
Odds of AFH, relative to Realschulabschluss					
Turkish	1.143	1.239	1.117	1.783**	2.076**
Former Yugo	0.956	1.055	0.974	1.252	1.410
Italian	.599**	.667*	.626*	0.953	1.051
Greek	1.437	1.602	1.568	2.271*	2.599**
Iberian	1.418	1.585	1.445	2.268*	2.448**
Aussiedler	.829*	.834+	.776**	0.891	1.091

Polish	1.431	1.519	1.336	1.317	1.525
Austria	0.916	1.029	1.099	1.315	1.443
Other EU	1.935**	2.157**	1.891*	1.386	1.503
Eastern Europe	1.055	1.118	1.009	0.798	0.934
Southeast Asian	1.896*	2.038**	1.833*	1.951*	2.127**
African	1.547	1.657+	1.361	1.616	1.851*
American	2.265**	2.546**	2.390**	1.934*	2.131*
Middle East	1.797*	1.890*	1.714+	1.573	1.671+
Other	1.210	1.328	1.205	1.134	1.257
Migratory German	1.312*	1.438*	1.372*	1.508*	1.638**
Parental Integration (2nd Generation, Naturalized Omitted)					
2nd Gen, Foreign Nationality		0.881	0.885	0.940	0.964
2.5 Generation		0.881	0.939	.751*	.692**
Parental Educational Attainment (General Education Only or Less)					
General Education + Vocational				1.107	1.046
Abitur or Advanced Vocational				2.274**	1.921**
Tertiary				7.489**	6.123**
Parental Occupational Attainment (Salary and Public Servant Omitted)					
OLF/Unemployed					.834*
Worker					.599**
Self Employed					1.035
Income (Low Omitted)					
Middle					0.967
Affluent					0.917
Missing					1.002
Number of Children in HH					.931*
Controls for Sex, Age and Bundesland			yes	yes	yes
Odds of AFH, relative to Hauptschulabschluss					
Turkish	.328**	.389**	.321**	1.021	1.394*
Former Yugo	.350**	.416**	.338**	.577*	0.760
Italian	0.432	.503**	.432**	1.033	1.260
Greek	0.784	0.933	0.825	2.122*	2.618**
Iberian	1.036	1.223	0.917	2.449**	2.648**
Aussiedler	0.899	0.898	.793*	0.983	1.387**
Polish	1.595	1.716+	1.435	1.349	1.820+
Austria	1.375	1.391	1.717	2.856**	3.342**
Other EU	2.402**	2.475**	1.951**	1.537	1.870*
Eastern Europe	0.741	0.779	0.663	0.642	0.865
Southeast Asian	1.986*	2.023*	1.53	2.589**	3.323**
African	0.724	0.775	.559*	1.231	1.930*
American	1.023	1.053	0.895	0.897	1.042
Middle East	1.286	1.378	1.154	1.783+	2.527**
Other	0.915	0.998	0.835	1.067	1.375
Migratory German	1.351*	1.342+	1.168	1.656*	1.954**
Parental Integration (2nd Generation, Naturalized Omitted)					

2nd Gen, Foreign Nationality	.756*	.769*	0.927	0.992
2.5 Generation	1.009	1.156	.650**	.557**
Parental Educational Attainment (General Education Only or Less)				
General Education + Vocational			3.259**	2.638**
Abitur or Advanced Vocational			11.495**	7.461**
Tertiary			53.942**	32.024**
Parental Occupational Attainment (Salary and Public Servant Omitted)				
OLF/Unemployed				.364**
Worker				.374**
Self Employed				.776**
Income (Low Omitted)				
Middle				1.360**
Affluent				1.269**
Missing				1.044
Number of Children in HH				0.953
Controls for Sex, Age and Bundesland		yes	yes	yes

+p<.1, *p<.05, **p<.01

Table 4. Discrete Changes in the Predicted Probability of Secondary Schooling Outcomes, Native German and Second Generation Youth ages 18-20 Living in their Parents Household (N=17,449)

	HS or Less		RS		AFH	
	Discrete	Std. Error	Discrete	Std. Error	Discrete	Std. Error
Turkish	-.013	.010	-.114	.021	.127	.024
Former Yugo	.036	.025	-.069	.035	.032	.044
Italian	-.017	.015	-.004	.039	.022	.043
Greek	-.048	.015	-.136	.041	.184	.046
Iberian	-.049	.015	-.129	.042	.178	.047
Aussiedler	-.023	.007	-.010	.020	.033	.022
Polish	-.035	.018	-.065	.048	.100	.050
Austria	-.062	.014	-.050	.055	.111	.059
Other EU	-.036	.016	-.062	.042	.099	.045
Eastern Europe	.011	.027	.010	.054	-.021	.061
Southeast Asian	-.059	.012	-.109	.039	.168	.040
African	-.036	.017	-.094	.043	.130	.049
American	.012	.029	-.121	.041	.110	.053
Middle East	-.050	.013	-.076	.047	.126	.051
Other	-.020	.023	-.036	.054	.056	.063
Migratory German	-.038	.011	-.076	.026	.113	.030
Parental Occupational Attainment (Salary and Public Servant Omitted)						
Arbeiter	.047	.007	.050	.009	-.098	.012
Self Employed	.010	.003	-.004	.006	-.005	.007
OLF/Unemployed	.053	.010	.011	.009	-.065	.013
Parental Educational Attainment (General Education Only or Less)						
General Certification	-.184	.018	.045	.015	.140	.021
Advanced vocational	-.283	.024	-.023	.015	.306	.022
Tertiary	-.342	.029	-.120	.017	.462	.027
Income (Low Omitted)						
Middle Income	-.027	.007	.009	.009	.018	.013
Affluent	-.022	.007	.015	.010	.007	.013
Missing Income	-.004	.006	.000	.007	.004	.009
Parental Integration (2nd Generation, Naturalized Omitted)						
2nd Gen, Foreign Nationality	.000	.010	.005	.020	-.005	.024
2.5 Generation	.048	.017	.043	.021	-.090	.027

Table 5. Odds of AFH, Native German and Second Generation Youth ages 18-20 Living in their Parents Household (N=17,449)

	1	2	3	4	5
Turkish	.544**	.626**	.551**	1.287*	1.608**
Former Yugo	.541**	.628**	.556**	.840	1.018
Italian	.512**	.589**	.534**	1.015	1.174
Greek	1.049	1.226	1.155	2.256**	2.671**
Iberian	1.219	1.418	1.188	2.436**	2.635**
Polish	1.499+	1.611*	1.384	1.333	1.663*
Austria	1.075	1.151	1.308	1.789*	2.010*
Other EU	2.118**	2.279**	1.909**	1.451+	1.652*
Eastern Europe	.888	.942	.834	.732	.918
Southeast Asian	1.935**	2.031**	1.701	2.252**	2.650**
African	1.029	1.108	.869	1.439	1.907*
American	1.472+	1.592+	1.448	1.354	1.545+
Middle East	1.528+	1.631*	1.433	1.694*	2.055**
Other	1.059	1.167	1.024	1.119	1.325
Aussiedler	.859*	.861+	.782**	.925	1.205*
Migratory German	1.329**	1.391*	1.275+	1.583**	1.782**
Parental Integration (2nd Generation, Naturalized Omitted)					
2nd Gen, Foreign Nationality		.798*	.804*	.924	.963
2.5 Generation		.939	1.030	.701**	.625**
Parental Educational Attainment (General Education Only or Less)					
General Education + Vocational				2.045**	1.781**
Abitur or Advanced Vocational				5.152**	3.823**
Tertiary				18.950**	13.325**
Parental Occupational Attainment (Salary and Public Servant Omitted)					
OLF/Unemployed					.567**
Worker					.496**
Self Employed					.931
Income (Low Omitted)					
Middle					1.132+
Affluent					1.066
Missing					1.020
Number of Children in HH					.941*
Controls for Sex, Age and Bundesland			yes	yes	yes

+p<.1, *p<.05, **p<.01

Table 6. Relative Risk of AFH, Native German and Second Generation Youth ages 18-20 Living in their Parents Household (N=17,449)

		*Education*Origin Interactions (General or Intermediate with Vocational omitted)*		
		*General or less	*Abi or Advanced	*Tertiary
Origin (German omitted)	e^b	e^b	e^b	e^b
Turkish	1.321	1.751*	1.312	.442
Former Yugo	.757	2.500*	2.409	1.585
Italian	1.501*	.745	.236*	1.330
Greek	2.082+	2.154+	.862	.670
Iberian	2.674*	1.292	.351	.896
Aussiedler	1.203+	1.090	1.563**	.421*
Polish	1.749+	.593	.919	.856
Austria	2.290**	.794	1.290	.302*
Other EU	1.327	1.707	1.235	1.176
Eastern Europe	.782	1.780	2.017	.674
Southeast Asian	1.886+	2.144	1.275	2.147
African	2.027	1.763	.824	.174*
American	.928	3.835*	2.591	1.268
Middle East	1.276	2.108	7.022**	.861
Other	1.376	2.133	.838	.474
Migratory German	1.318	3.533**	1.508	1.285
Parental Integration (2nd Generation, Naturalized Omitted)				
2nd Gen, Foreign Nationality	.957			
2.5 Generation	.694**			
Parental Educational Attainment (General Education Only or Less)				
General Education + Vocational	.430**			
Abitur or Advanced Vocational	2.037**			
Tertiary	8.000**			
Parental Occupational Attainment (Salary and Public Servant Omitted)				
OLF/Unemployed	.567**			
Worker	.497**			
Self Employed	.930			
Income (Low Omitted)				
Middle	1.126*			
Affluent	1.062			
Missing	1.022			
Number of Children in HH	.936**			
Controls for Sex, age, and Bundesland	Yes			

+p<.1, *p<.05, **p<.01

Table 7. Discrete changes in the predicted probability of AFH, by education Level of parents and origin, Native German and Second Generation Youth ages 18-20 Living in their Parents Household (N=17,449)

	General Education Only or Less	General Education + Vocational	Abitur or Advanced Vocational	Tertiary
Turkish	.192	.070	.114	-.071
Former Yugo	.276	-.068	.123	.019
Italian	.022	.000	-.254	.058
Greek	.354	.179	.121	.032
Iberian	.292	.234	-.015	.068
Polish	.441	.138	.100	.038
Austria	.315	.200	.199	-.046
Other EU	.187	.071	.104	.041
Eastern Europe	.070	-.061	.096	-.088
Southeast Asian	.330	.156	.169	.090
African	.300	.173	.107	-.162
American	.299	-.018	.169	.017
Middle East	.230	.061	.299	.010
Other	.252	.080	.032	-.054
Aussiedler	.057	.046	.129	-.094
Migratory German	.363	.069	.139	.047

APPENDIX A

A1: Mikrozensus 2005/2006: Sampling 18-20 Year Olds by Age and Attainment

	18 Years Old	19 Years Old	20 Years Old
Percent Still in Parental Household			
No Degree	.773	.684	.582
N	330	307	275
Hauptschulabschluss	.886	.796	.718
N	1978	2025	2105
Realschulabschluss	.891	.831	.756
N	2665	3096	3204
Abitur/Fachhochschulreife	.955	.887	.762
N	4226	4183	4190

Source: German Mikrozensus 2005 and 2006

A2. 18 Year Olds Only

Odds of Hauptschule or Less, relative to Realschulabschluss	1	2	3	4	5
Turkish	3.472**	3.468**	3.593**	1.841*	1.647+
Former Yugo	3.352**	3.339**	3.673**	3.128**	2.743*
Italian	1.227	1.214	1.162	0.768	0.705
Greek	3.199+	3.179	3.295+	1.951	1.889
Iberian	1.053	1.043	1.147	0.866	0.875
Polish	0.623	0.619	0.616	0.679	0.600
Austria	1.328	1.298	1.102	0.887	0.881
Other EU	0.602	0.590	0.611	0.495	0.418
Eastern Europe	1.004	0.996	1.098	1.126	0.947
Southeast Asian	0.980	0.967	1.100	0.763	0.588
African	3.239*	3.205+	3.752*	2.246	1.578
American	1.663	1.632	1.733	1.360	1.357
Middle East	1.980	1.973	2.181	1.107	0.899
Other	1.646	1.624	1.742	1.270	1.098
Aussiedler	0.930	0.929	0.976	0.862	0.783
Migratory German	1.222	1.199	1.283	1.033	0.954
Parental Integration (2nd Generation, Naturalized Omitted)					
2nd Gen, Foreign Nationality		1.001	1.019	0.819	0.793
2.5 Generation		1.027	1.002	1.406	1.492
Parental Educational Attainment (General Education Only or Less)					
General Education + Vocational				.306**	.361**
Abitur or Advanced Vocational				.199**	.254**
Tertiary				.141**	.187**
Parental Occupational Attainment (Salary and Public Servant Omitted)					
OLF/Unemployed					2.519**
Worker					1.480**
Self Employed					1.462**
Income (Low Omitted)					
Middle					0.815
Affluent					0.866
Missing					.805*
Number of Children in HH					0.983
Controls for Sex, Age and Bundesland			yes	yes	yes

Odds of AFH, relative to Realschulabschluss					
Turkish	1.111	1.333	1.168	1.775*	2.106**
Former Yugo	0.891	1.081	0.995	1.415	1.600
Italian	0.670	0.771	0.738	1.134	1.186
Greek	2.729	3.265+	2.985	3.967+	4.964*
Iberian	0.954	1.125	0.996	1.728	1.781
Polish	0.822	0.920	0.792	0.898	1.027
Austria	2.862*	2.981*	3.375*	4.298**	4.747**
Other EU	2.373*	2.545*	2.302*	1.500	1.592
Eastern Europe	0.868	0.923	0.862	0.538	0.654
Southeast Asian	2.099	2.190	1.932	1.806	2.006
African	2.879+	3.048+	2.373	2.322	2.641
American	3.424*	3.670*	3.627*	3.085*	3.342*
Middle East	2.659+	2.839*	2.362+	2.024	2.147
Other	0.922	1.006	0.910	0.828	0.885
Aussiedler	.787+	.789+	.730*	0.821	1.022
Migratory German	1.381	1.415	1.376	1.602+	1.721+
Parental Integration (2nd Generation, Naturalized Omitted)					
2nd Gen, Foreign Nationality		0.745	0.769	0.762	0.804
2.5 Generation		0.966	1.037	0.782	0.743
Parental Educational Attainment (General Education Only or Less)					
General Education + Vocational				0.942	0.898
Abitur or Advanced Vocational				1.927**	1.662**
Tertiary				7.013**	5.794**
Parental Occupational Attainment (Salary and Public Servant Omitted)					
OLF/Unemployed					1.002
Worker					.601**
Self Employed					0.946
Income (Low Omitted)					
Middle					1.042
Affluent					1.095
Missing					0.938
Number of Children in HH					.926+
Controls for Sex, Age and Bundesland			yes	yes	yes

A3. Sensitivity 3: Predicting Living at Home by Origin and Educational Attainment

	e^b	p-value
Turkish	2.177	.000
Former Yugo	2.469	.009
Italian	1.338	.398
Greek	4.590	.046
Iberian	7.818	.045
Polish	7.333	.055
Austria	4.404	.181
Other EU	1.886	.250
Eastern Europe	4.330	.021
Southeast Asian	6.229	.093
African	1.334	.608
American	5.232	.025
Middle East	.742	.491
Other	1.508	.474
Aussiedler	3.772	.000
Migratory German	.969	.910
Realschule	1.438	.000
AFH	2.241	.000
Turkish*RS	.914	.769
Turkish*AFH	1.513	.229
Former Yugo*RS	1.213	.755
Former Yugo*AFH	.817	.737
Italian*RS	1.882	.220
Italian*AFH	1.140	.809
Greek*RS	.319	.216
Greek*AFH	perfect predict	
Iberian*RS	.605	.733
Iberian*AFH	.453	.532
Polish*RS	.306	.361
Iberian*AFH	1.842	.677
Austria*RS	1.062	.969
Austria*AFH	.317	.346
Other EU*RS	2.401	.346
Other EU*AFH	.964	.956
Eastern Europe*RS	.379	.235
Eastern Europe*AFH	.388	.223
Southeast Asian*RS	.885	.936
Southeast Asian*AFH	.273	.269
African*RS	1.015	.985
African*AFH	2.798	.262
American*RS	.099	.012
American*AFH	.746	.761
Middle East*RS	2.317	.314
Middle East*AFH	7.705	.015
Other*RS	.832	.843
Other*AFH	1.310	.685
*Aussiedler**RS	1.011	.977
*Aussiedler**AFH	.777	.489
Migratory German*RS	3.368	.011
Migratory German*RS	3.271	.013

Controlling for Age, Bundesland, and Sex

INTERACTION EFFECTS Wald Test = 1.43, df=30 Prob > F = 0.0607

A4: Predicting Secondary Degree by Origin and Living at Home

	Odds of HS / RS		Odds of AFH /RS	
	eb	P-Value	eb	P-Value
Living at Home	0.696	0.000	1.557	0.000
Turkish	3.462	0.000	0.572	0.147
Former Yugo	2.933	0.043	1.213	0.761
Italian	2.615	0.035	1.024	0.964
Greek				
Iberian	1.273	0.865	1.888	0.597
Polish	0.312	0.350	0.525	0.602
Austria	0.688	0.809	2.961	0.348
Other EU	1.722	0.527	4.354	0.059
Eastern Europe	0.578	0.480	1.154	0.833
Southeast Asian	1.217	0.885	6.420	0.095
African	2.448	0.179	0.380	0.259
American	0.325	0.243	0.372	0.207
Middle East	2.819	0.165	0.337	0.252
Other	0.762	0.745	0.821	0.794
Aussiedler	1.014	0.970	1.089	0.800
Migratory German	2.992	0.013	1.287	0.636
Turkish*At Home	1.101	0.753	1.843	0.127
Former Yugo*At Home	1.030	0.958	0.737	0.646
Italian*At Home	0.558	0.229	0.554	0.277
Greek*At Home	0.000	0.000	0.000	0.000
Iberian*At Home	1.324	0.848	0.708	0.781
Polish*At Home	3.181	0.352	2.437	0.484
Austria*At Home	0.805	0.891	0.341	0.363
Other EU*At Home	0.482	0.421	0.407	0.269
Eastern Europe*At Home	2.606	0.249	0.833	0.800
Southeast Asian*At Home	0.980	0.989	0.272	0.256
African*At Home	0.969	0.966	3.630	0.152
American*At Home	7.269	0.051	5.995	0.032
Middle East*At Home	0.533	0.433	4.902	0.108
Other*At Home	1.838	0.494	1.396	0.677
*Aussiedler**At Home	0.958	0.912	0.728	0.366
Migratory German*At Home	0.341	0.023	1.009	0.987

Controlling for Age, Bundesland, and Sex

IINTERACTIONS Wald Test =1.51, df=16, p= 0.0866

APPENDIX B

Appendix B. Full Origin Information for Collapsed Categories

Former Yugoslavia	**Iberian**	**EU**	**Former USSR/Russia**
Bosnia	Portugal	Belgium	Former Soviet Union
Croatia	Spain	Danemark	Estonia
Herzogowina		Finnland	Latvia
Serbia		France	Lithuinia
Montenegro		Ireland	Russian Federation
		Luxembourg	Kazachastan
		Norway	
		Netherlands	
		Sweden	
		UK	
Eastern Europe	**Africa**	**Americas**	**Middle East**
Bulgaria	Morocco	USA	Iraq
Romania	Other North Africa	North America	Iran
Slovakia	Other Africa	Middle America and Caribbean	Other Middle East
Slovenia		South America	
Czech Republic			
Hungary			
Remaining Eastern Europe			
Southeast Asian	**Other**	**Ausiedler**	
Vietnam	Switzerland	*Both parents FB, Germans w/o naturalization or who*	
Afghanistan	Other Europe	*naturalized in < 3 years, and from:*	
Other South/Southeast Asian	Iceland	Bulgaria	Former Soviet Union
	Leichtenstein	Romania	Estonia
	Malta	Slovakia	Latvia
	Cyprus	Slovenia	Lithuinia
	China	Czech Republic	Russian Federation
	Other East Asia	Hungary	Kazachastan
	Other	Remaining Eastern Europe	
	Stateless		