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“Identity Economics: College Major and Identity”

Immigrants: Education, Economics, and Politics

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**Abstract (Group)**

Greater levels of globalization facilitate the movement of individuals across national boundaries, bringing immigration to the forefront of societal conversations regarding education, economics, and politics. Immigration adds an issue of complexity to transnational and national issues. The process of migration entails more than just a movement of individuals, but a diffusion of language, religion, social values, foods, political beliefs, and economic systems.

Increased numbers of immigrants from a variety of nations has transformed Berlin into global city with new residents. Berlin’s culture, therefore, has changed in response to this influx. One such example is the prevalence of Turkish food and specialty shops to connect immigrants to their home countries. Another is the surge in artistic output from the children of immigrants, who express their frustration at being considered ‘outsiders’ in the only country that they have known.

Germany, and other European Union nations, have unique policies towards immigrants due to their connection to a regional organization. German immigration laws are therefore affected by both EU and German policy, and Germany must consider the regional relations of Europe. This research project hopes to examine if, and how, the relationships with the European affects immigration policy in Germany.

Regarding education in Germany, immigrant students face an education system that does not specifically address their unique needs. For example, immigrant students face challenges with German proficiency, and oftentimes teachers are not adequately trained to teach these students.

Due to the divisive structure of the German education system, immigrant students are disproportionately placed into lower track schools. In these schools, immigrant students face slimmer career opportunities and teaching instruction that does not specifically address the needs of these students.

One economic aspect this research project seeks to understand is how ethnic/immigrant identity affects choice of college major, an important determinant of future career choice, social status, and life course. Identity, traditionally excluded from economic analysis, is inextricably tied to understanding individuals’ preferences, their willingness to sacrifice economic well-being for social inclusion, and the existence of externalities.

Another economic aspect of this research project is to look at the unemployment rate for Turkish immigrants in comparison with that for the local Germans. Even though the government provides job-training programs for school leavers, participation of Turks in the job-training program is lower than that of German youths, which might lead to fewer and less paid career choices for immigrants in the future.

**Question**

Choosing a college major is an important decision that has long-term impacts on an individual, especially with regards to career trajectory and future income. This decision is therefore an economic one: each major must be scrutinized through a cost-benefit analysis. There are a variety of factors that influence a student’s decision to major in a particular subject. These may include projected future earnings, degree of prestige, personal interests, academic strengths, and the desired amount of time spent in higher education. Other factors, related to identity, may also explain student’s choice of major—ethnic identity, gender, and citizenship status. The field of identity economics is still newly burgeoning, and I aim to align my research topic within this sub field.

I will investigate the impact of ethnic and immigrant identity on college students’ choice of major in Germany. I am primarily interested in how ethnic identity and immigrant status affects student decisions; however, college major is inextricably tied to other factors, such as gender and socioeconomic background.

Identity “explains behavior that seems detrimental to economic success,” as identity creates externalities, affects payoffs, changes preferences, and contains “consequences for economic well-being” (Casey 2010).  Identity can be viewed as both an externality (for both the individuals and third parties), as well as a choice that may or may not be proscribed—individuals who have no physical characteristics outside of the norm may be able to construct their own identities, while individuals who are marked outsiders may have their identities predefined by society (Akerlof 2000). Theories of ethnic identity and its relation to economics posit that ethnic identity can be thought of as a bipolar linear model, where “strong ethnic identity implies a weak sense of majority,” and “the more an individual commits to and feels for one country, the less he/she commits to and feels for the other country” (Casey 2010 , Constant 2008). In addition, identity may force individuals to “trade off economic gain for social reassurance” (Pendakur).

Identity is clearly related to economic outcomes, yet identity is rarely discussed in traditional economic textbooks. Evidence from Germany and the United States demonstrates that ethnic identity can impact economic outcome, even for generations after the initial immigrant cohort. In the United States, for instance, the children of better-educated immigrants tend to be better educated, earn higher wages, and are more likely to marry outside of their father’s ethnic group (Card 2007). One poignant example of this trend is the gap in achievement between the children of East Asian and Latin American immigrants: the former group tends to be well-educated and have positions in high-paying STEM-fields, while the latter group tends to cluster in low-wage, unskilled labor.

In Germany, there are marked differences in the economic outcomes of the initial immigrant cohort, the first generation, and the second generation. In the initial immigrant/first generation group, no significant relationship exists between possessing a strong German identity and economic outcome. For females in this group, however, a stronger German identity correlates to slightly higher employment prospects. In the second generation, the only statistically significant relationship exists between males, a strong ethnic identity, and employment: higher levels of ethnic identity correlate to higher employment prospects. This could be attributed to second-generation males drawing upon ethnicity-based networks for career prospects, especially given that self-employment and entrepreneurship among ethnic minorities in Germany is on the rise (Casey 2010, Volker 1976). Ethnic minorities need not be viewed as a monolithic entity: economic prospects vary between different ethnic groups. In Germany, for instance, second-generation male Greeks and Yugoslavs find their economic outcomes to be a significant improvement from previous generations, while second-generation male Italians, Central/Eastern Europeans, and Turks find that their economic outcomes are worsening. For women, only second-generation Yugoslavs and Greeks find their economic outcomes improving (Algan 2000).

College major fits in with the general topic of identity in that the choice of a major can represent a radical departure from the norm or solidify expectations. A college major may signal that an individual is attempting to break free of the conventional, or may be a continuation of a pattern that is entrenched in a family’s history. In terms of ethnic identity, choosing a prestigious college major, one with a high expected rate of return, may be a mechanism for integration or even assimilation. Due to xenophobia and an ethnically-based definition of nationalism, Germans with ‘hyphenated identities’ may be “better assimilated than their parents [but] less well-integrated” (Shaeffer 2014). A college major that is viewed as contributing to society may help with integration efforts. In the United States, for instance, Asians are statistically overrepresented in engineering and science fields, while immigrants tend to choose business and technical fields, emphasizing how minorities may choose college majors based on the subjective notion of what constitutes contributing to society (Ma 2009).

College majors also impact identity in that a college major “affects placement on the social ladder and movement along the social ladder” (Woniak 2008). Students from socioeconomically disadvantaged families may favor majors that are relatively risk-averse, such as those in STEM, because they tend to have a high rate of return and may help them move up the social ladder. Students from socioeconomically well-off families may also be pressured by parents’ expectations to take a relatively risk averse course as well, to avoid “downward mobility”. However, an interesting trend is that of students from socioeconomically well-off families choosing to major in the liberal arts/humanities, possibly because they can choose to enter fields with significantly less expected earnings. (Ma 2009). Socioeconomic status, when combined with ethnicity, may present a more robust picture of ethnic minorities’ choice of college major, since ethnic minorities in Germany typically have higher unemployment rates and lower salaries (Kim 2008).

Ethnic identity and socioeconomic status are not the only factors that go into making a decision about college major. Expected earnings are a key factor, more statistically significant for men than women; perceived probability of success is another, lesser discussed determinant. Students who major in the liberal arts or education perceive their probability of success in science fields to be less than it actually is statistically. For females, the perceived probability of success in education is greatest (Montmarquette 2002). Gender is another important factor. Male concentration in technical fields is greater than female concentration by a factor of three while females lead in life, health, the social sciences, and education (Ma 2009).

To my knowledge, a study that investigates all these factors simultaneously does not exist; I will attempt to collect data that will allow me to look into how all of these factors affect students’ college major decisions.

**Background (Group)**

The events of the second half of the twentieth century set the tone for Germany’s future path. From the rubble of WWII, Germany rebuilt itself economically, politically, and socially. Immigrants played key parts in the re-imaging of Germany. Economically, immigrants filled the demand for labor, in short supply after demographic loss due to the war and the effects of the Berlin Wall. Politically, immigrants presented a new challenge for the nation-state: how to deal with ethnically non-German individuals trying to carve out new lives for themselves in Germany. In education, the children of immigrants complicate traditional notions of education by virtue of the differences they bring to the classroom: different languages, ethnicities, religions, and values.

Our group research project focuses on immigrants and the role that they play in German society. Individually, we examine different aspects of the immigrant experience in Germany: education, economics, and politics. Further examination of immigrants and their relationship to these three pillars of society is fundamental for understanding the place of immigrants in a nation-state as a whole. A case study of Germany is particularly relevant as historically, Germany’s attitude towards immigration was that it was not a country of immigrants, despite its status as one of the top immigration destinations. Furthermore, the German state, much like other European nations, is comprised of an ‘ethnic core,’ making it a nation-state with regards to how its policies, traditions, and culture are historically the product of a particular form of German nationalism.

***Individual Background***

Germany is a land of immigrants, but for decades it has shunned that classification. Germany is a “reluctant land of immigration,” yet one of the top destinations for immigrants. The *menschen mit Migrationshintergrund* (people with a migratory background—immigrants) make up around twenty percent of Germany’s population, including five million “native born” second and third generation individuals. Around one-fourth of these foreign national residents are of Turkish origin. Fifty-five percent are from Central and Eastern Europe (Kim 2009).

The history of modern immigration to Germany is that of wartime adjustment. Between 1945 and 1949, 11.6 million refugees arrived in Germany. Between 1949 and 1961, 3.5 million individuals crossed the East/West border to settle in Western Germany. By the time the Berlin Wall went up in 1961, West Germany was faced with a scarcity of labor in certain sectors of the economy. Labor recruitment agreements were signed with various nations, starting with Italy in 1955 and continuing with Greece, Spain, Turkey, Morocco, Portugal, Tunisia and Yugoslavia between 1960 and 1968. Fourteen million migrants came into West Germany between 1961 and 1973, 11 million of whom eventually left; by 1989, the number of foreign residents in the Federal Republic of Germany had risen to almost 4.9 million individuals (Card 2007).

Initially, that these immigrants would reside permanently in Germany was not taken into account. However, by the mid-1970s, many immigrants began to stay in Germany after their labor contracts ended. German politicians began offering Turkish guest workers 10,000 marks as an incentive to go home, but the number of takers on this offer was disappointing (Steinborn 2011). The immigration law, unchanged since 1913, was finally formed in 2000. The *jus soli* concept of citizenship was extended to the children of immigrants born in Germany. The sojourn time for adult foreigners was decreased from fifteen to seven years, but a language test was added. Furthermore, a green card initiative to make employment of high-qualified foreign IT skilled workers was added (Card 2007).

Immigrants have contributed immensely to Germany’s ‘miracle’ economic growth post-WWII. Immigrants have a high net contribution the pension system, and although they also place a burden on this system, the longer they stay in Germany, the less of a burden they place (due to years’ worth of paying into the system). Economic analysis estimates that the miracle economic growth of the 1960s and the 1970s would not have been possible at the same pace as without guest workers. The GNP in 1992, for instance, was 6% higher with the contribution of immigrants, and the GNP growth rate with immigrants was 3.5% (versus 2.0% without immigrants). In addition, immigrants create jobs. 1.4 million immigrants were employed in 1992, and 90,000 jobs were created. The unemployment rate would have been 0.2% higher in 1992 without immigration (Card 2007, Kerr 2008).

Despite their positive impact on the economy, immigrants have been criticized in Germany for many of the same reason they are criticized in the United States. Some concerns include the burden immigrants place on the pension system due to their higher population growth rate. Other concerns include immigrants ‘taking’ native German’s jobs and depressing wages. Based on data from 1975 to 1997, a ten percent increase in the share of immigrants in the workforce lowered wages by less than one percent and did not increase unemployment. In addition, it may not be true that immigrants are substitutes for German workers due to immigrants’ lower education and experience levels (Bonin 2005). Nearly half of foreign migrant workers are employed in labor-intensive and low-wage industries—jobs that native Germans may not desire because they have higher education levels that allow them to secure high-paying, high-skill jobs (Kim 2008).

Immigration is a reality for individuals who live in developed countries, as much as it is a reality for individuals who migrate from less developed nations. Even in nations that embrace multiculturalism, such as the United States, anti-immigrant sentiment exists. While this sentiment may not be in the form of explicit racial epithets or discriminatory language, it is often shrouded in false economic and social arguments. In Germany, the language used to discuss immigration is quite distinct in that it clearly demarcates between ethnic Germans and ‘aliens.’

For instance, *auslandiche Mitburger* refers to ‘foreign co-citizens’ and *Jugend mit Migrationshintergrund* is the term for ‘youth of migrant background.’ German citizens ‘of foreign descent’ are referred to as *Deutsche auslandisher Herkunft.* These vocabulary terms “protects the cultural integrity of German national identity while ‘claiming’ to allow various ethnic groups full citizen rights” (Baban 2006). This ‘us vs. them’ language is also prevalent in the United States, emphasizing that immigration is still a contested issue in the so-called ‘mixed salad.’

**Methodology**

I used a variety of methods in order to collect data, in a somewhat unorthodox way in terms of consistency. My intent was to compare results between the United States and Germany; I used different methods to collect these two spheres of data. The United States data comes from a survey passed out to forty-five high school seniors in Vancouver, WA, brief interviews with four American students I met at Humboldt University, interview data collected from a previous research project, personal experience, and pop-culture references. The data for Germany is a product of interviews with students at Humboldt University and Friedrich-Schiller University, input from students and teachers at Heinrich-von-Stephan Schule and Leibnitz Gymnasium, an interview with a German gymnasium student via Facebook (he had done a yearlong exchange at my high school), a case study of a mixed-immigrant family, and discussions with faculty at Humboldt and a myriad of individuals I encountered in Berlin. I will discuss each of these two spheres in more detail.

*United States Methodology*

I did not feel the need to interview students in the United States; through informal conversations with friends and experience with a STEM-biased educational system, as well as my personal ethnic minority/immigrant background status, I felt that I was able to speak to the general attitude towards college major and ethnic/immigrant status in the United States. However, because I did not want to solely rely on my subjective stance, I also conducted a survey among high school seniors to create a quantitative relationship between various factors that play into choice of college major, including individual ethnic identity, parental ethnic identity, and socioeconomic status.

The survey I handed out consisted of the following questions (note that the blank spaces under some of the questions was filled by a horizontal line exactly ten centimeters long that went from 0 = very weak to 100 = very strong; the students were instructed to draw a short vertical line along this scale):

1) Are you a citizen of the United States? Y N

2) Did you immigrate to the United States? Y N Age of immigration: \_\_\_\_\_\_\_\_\_\_\_\_\_

3) Gender: Male Female Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4) How would you ethically identify yourself?

* White
* African-American
* Asian-American
* Native American or Pacific Islander
* Hispanic/Latino
* Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5) How strong is your connection to your ethnic heritage?

6) Is Parent 1 a citizen of the United States? Y N

Did Parent 1 immigrate to the United States? Y N

How would you ethnically identify Parent 1?

* White
* African-American
* Asian-American
* Native American or Pacific Islander
* Hispanic/Latino
* Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

How strong is Parent 1’s connection to their ethnic heritage?

5) Is Parent 2 a citizen of the United States? Y N

Did Parent 2 immigrate to the United States? Y N

How would you ethnically identify Parent 2?

* White
* African-American
* Asian-American
* Native American or Pacific Islander
* Hispanic/Latino
* Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

How strong is Parent 2’s connection to their ethnic heritage?

11) What are the three most important factors that are a part of your decision to major in what you are currently are thinking of majoring in?

* Expected future income
* Parental influence/expectations
* Interest in subject
* Career prospects
* Opportunity to be creative
* Exploring an unfamiliar subject
* Flexibility (due to desire to have a family)
* Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12) How likely is it that you will major in:

STEM (Science, Technology, Engineering, Math):

13) What are the top three majors you are considering?

1)

2)

3)

14) Where does your family’s income fall roughly?

<$23,000 $23,000-$50,000 $50,000-$75,000 $75,000-$100,000 >$100,000

I was able to create several linear regression models from this data and to find various categorical patterns. This quantitative data is perhaps the most unbiased of all the data I collected, however, due to the small sample size (n = 45), the regression models are most likely not entirely accurate (this is also compounded by the general character of the classes I interviewed, two Advanced Placement classes at a high school that is known for its strength in STEM). The population of these two classes mostly self-identified either as ‘white’ or ‘Asian-American.’

The interviews with the American students at Humboldt were short, but I was interested in gaining the perspective of American students from other areas of the United States. I initially approached these students believing that they were German university students. However, I find that the information I received from the interviews with these students corroborates trends that I observe as a University of Washington student.

*Germany Methodology*

The bulk of the data collected in Germany comes from interviews with twelve students at Humboldt University and two students at Leibnitz Gymnasium. I attempted to phrase my interview questions in such a way that the connection between immigrant status and college major would not be forced (for instance, I did not explicitly ask if students felt that their immigrant status propelled them towards a certain major). I posed the following questions to the students at Humboldt (as well as asking them to state their first name and their age):

*1) What are you studying?*

*2) Why did you choose to study this?*

*3) Are you or your parents immigrants? If so, from where?*

*4) Do you feel pressured to choose a course of study that will make a lot of money?*

*5) How important is prestige in choosing your course of study?*

I chose the students I interviewed at random, and attempted to have a male/female balance. Since students from a ‘migration’ background are not very well represented in the general university student population, however, most of the students I interviewed were not from a migration background. Some students, however, had one parent who had immigrated from another European nation.

In addition to student interviews, I also spoke with two professors and a lecturer in the English/American Studies departments at Humboldt University: Professor Kipf, Professor Isensee, and Herr Lohse. The format of these interviews was more relaxed, as I did not have a standardized set of questions. Each individual spoke to me regarding aspects of their research that they believed aligned most closely with my research aims. Furthermore, I pulled key quotes and findings from visits to Heinrich-von-Stephan Oberschule and Leibnitz Gymnasium and lecturers given at Humboldt to our group (Professor Georgi, Professor Isensee, Professor Varghese). Finally, I received more insight into my research project through discussions with students from Friedrich-Schiller University in Jena. These discussions were mostly informal, although an education student sat down with me and found statistics that were relevant to my research project.

I initially wanted to survey students at Humboldt and Friedrich-Schiller University in a similar manner as the American high school students. There were several reasons why this survey never manifested. The first was the language barrier—it would be difficult to translate the survey from English to German without losing important linguistic nuances. The second was that the difference in educational systems would most likely lead to a statistically skewed population, since minority students are not well represented in upper divisions of secondary education. The final reason, and the most important reason, was to maintain cultural sensitivity. I was much more comfortable asking students about their ethnic identity in the United States than I was with the idea of asking German students to quantify their sense of connection to their ethnicity. I was unsure how this would be interpreted by the students and if it would even be considered offensive. In addition, I was unsure how to communicate the idea of being an ethnic minority, because each nation has its own definition of who is considered a minority. This definition is the product of decades of historical events, political processes, social attitudes, and immigration trends, and it did not seem fair nor appropriate to impose my definition of “ethnic minority,” a very American conception of that term, onto Germany.

**Findings**

I have divided my findings into four sections in order to accommodate the breadth of my findings. My research project expanded to include a broader comparison of American and German higher education and expectations.

**Part I: Ethnic/Immigrant Identity & College Major**

The primary focus on my research project aimed to discern differences between what minority and non-minority students in Germany and the United States study. I defined ‘minority’ as an individual with a non-white background, although in Germany the definition of ‘minority’ included Eastern Europeans. Trends in the Germany and the United States are quite similar with regards to ethnic/immigrant identity and college major.

**Germany**

Ethnic minorities are underrepresented in German higher education, the reason being that they are also underrepresented in higher levels of the German secondary education system. Germany’s system of primary and secondary education is unique in that it features a “tracking system” designed to place students into four potential paths: hauptschule, realtschule, gesamtschule, or gymnasium. These four schools represent different life paths: attending a hauptschule or realtschule is considered a “dead end”—there is almost no possibility of taking the abitur (the university entrance exam) or attending university (Varghese). Usually around the age of ten, teachers make the decision where students will be placed; minority students are disproportionately placed in hauptschules and realtschules. As a consequence, few minority students are able to attend university. Only 4% of Germans of Turkish origin possess a university degree, compared to 17% of white Germans. 20% of Germans of Turkish origin have no formal educational degree, compared to 3% of white Germans (Varghese). In 2009, only 11.8% of German university students and only 5.4% of university professors had a minority background (data found by a Friedrich-Schiller University student; I was unable to find the report again as it requires a search in German, but it was published by the German ministry for education). Inequalities in educational attainment are clearly present based on these statistics.

The few students of minority background that do attend university typically choose to study fields that are considered prestigious, due to various cultural and economic reasons, as well as the abitur system. Culturally, there are fields that the immigrant community does not find acceptable, such as teaching. In Berlin, only 3-5% of teachers have a migrant background—this is especially low given that some neighborhoods in Kreuzberg and Neukölln have extremely high percentages of minority students. The attitude among many parents with an immigrant background is that their children should aspire to become physicians, businesspeople, and lawyers. These occupations carry a high social reputation, as well as higher paychecks. Teacher salaries in Germany, while higher than many other developed nations, are lower than potential earnings in these fields, and the teaching field does not carry with it a high social standing (Kipf).

The immigrant community’s disdain for fields such as teaching should not be attributed to faults in culture, however. Economics and language help explain why minority students in Germany prefer to study medicine, engineering, law and business over the liberal arts and humanities. A career in a high-paying field, such as engineering, can help elevate both economic and social status. An individual from an immigrant background who possesses economic security is more likely to be looked upon favorably by individuals with non-immigrant backgrounds, and this financial stability may transfer to successive generations, ensuring future success. For instance, this may explain why there are more minority students at Berlin’s Technical University than at Humboldt (which does not offer engineering). Persians have generally been successful in Germany because the first generation of Persian immigrants were highly educated and brought wealth with them (Lohse). The role of language should not be downplayed either; many of the liberal arts and humanities fields require students to be proficient in German, while engineering fields do not. Minority students whose German language skills are not at the level required for liberal arts fields may find engineering and medicine more attractive avenues (Lohse).

Another potential explanation for German minority students’ preference for non-liberal arts/social science fields is the numerus clausus abitur system. The ‘N.C.’ is a numerical abitur requirement for entry into a particular field. Many of the more difficult university majors (medicine, engineering, economics) require extremely high abitur scores, usually between 1.2 and 1.4 (out of 6.0—the lower the score, the better). Minority students who achieve such high abitur scores are less likely to pass up the opportunity to study ‘higher-level’ subjects, especially since minority students tend to have lower marks. The pressure to be “top notch in a system that is not geared for you” pushes minority students into fields that are considered prestigious (Lohse).

**United States**

In one episode of “The Mindy Project,” Mindy’s brother decides to drop out of Stanford to pursue rapping. Cut to half an hour of Mindy desperately attempting to change her brother’s mind, invoking everything from disapproving parents to bringing shame upon the entire family to dishonoring ancestors. While clearly a comedic exaggeration, this episode touches upon a darker side of minority students’ higher education trends. Under pressure from family and societal expectations, many minority students are pushed into studying high-paying, high-status fields that they have little actual interest in. Diverging from this norm often leads to disapproval—according to one Arab-American student I interviewed for another research project, his mother disapproved of him studying political science, and only recently warmed up to this idea after he assured her that he would be attending law school.

Examining the survey data, there appear to be subtle differences between white and minority students in the United States. Both sets of students appear to prefer STEM majors, but the reasons for this preference vary. In addition, the regression analysis I did highlighted a discretion between various subsets of minority students.

The top three majors for white students were engineering, computer science, and business. For minority students, the top majors were engineering, business, and biochemistry. White students reported the ‘most important factors’ in determining what they studied as expected future income, interest, and career. These were the same top factors for minority students, although this is where the subtle difference between minority and non-minority students comes into play. For nonwhite students, parental expectations was three times a greater factor than for white students.

Another method of analysis for the survey data that I used was the use of linear regression to examine the relationship between ethnic identity and STEM. This regression measured how the strength of an individuals’ connection to their ethnic heritage related to a likeliness to major in STEM. I used the regression result for white students as a baseline to measure the regression for nonwhite students against. I excluded ‘extremes’ in these regressions—students who had marked that they were 0% or 100% likely to major in STEM. For white students, the likeliness to major in STEM is directly related to their connection to their ethnic heritage, the equation is. The value for this regression was 0.07688, which indicates that the regression equation only marginally explains the relationship between being white and majoring in STEM. For nonwhite students, the likeliness to major in STEM is inversely related to ethnic heritage. The equation for nonwhite students is STEM = 109.50-0.766(Ethnic), with = 0.233. This value indicates that for nonwhite students, this regression equation explains almost one-fourth of the variation in the data, which is quite good for such a small sample size. In other terms, one fourth of nonwhite students’ likeliness to major in STEM can be explained by their connection to ethnic identity. The negative coefficient value in this equation illustrates that greater levels of ethnic identity correlate to a lower likeliness to major in STEM; this is significant because most of the extreme cases that were removed before this regression analysis came from Asian-American students. Thus, non-Asian-American minorities are less likely to major in STEM when compared to their Asian-American counterparts.

**Part II: German vs. American Students’ Perspectives on Higher Education & Work**

In general, it appears that minority students in both the United States and Germany prefer to major in fields that will lead to socially acceptable, well-paying careers. However, after interviewing German and American students at Humboldt University and Friedrich-Schiller University, it appears that this generalization is complicated by several factors. German and American students share certain attitudes towards higher education and work, but diverge in others. Again, this statement is complicated by the diversity of responses collected from both types of students.

The interviews, although resulting in responses that contradict not only each other, but also the survey data and interviews with Humboldt faculty, are nonetheless important additions to this research project, as they provide specific examples of student attitudes towards the purpose of higher education.

**Germany**

The students I interviewed at Humboldt and Friedrich-Schiller were, for the most part, unconcerned with potential future income. The purpose of higher education was, in their view, to explore one’s individual interests. However, this did not mean that higher education was free of academic bias or societal pressure. Jan, a history major at Humboldt, summarized the situation by stating that “we have a lot of the same fears [as American students].”

Interest is key for many German university students. Florina, a history major who had immigrated from Albania, responded that she did not pick her major for money. In our interview, she reflected:

“I was sitting here and eating and thinking why people have a position because of money but don’t have anything in their brain. Money I don’t have, so I can’t say that its not a problem, but I don’t care. I need money but my life is not all about money.”

Jan, the history major quoted earlier, was similarly unconcerned with making money after university. He believed that studying history was honorable because it interests him and is important for society. Manuel, who studies German, was similarly unconcerned with money, because of the “new lifestyle. It is more oriented in a good work-life balance. Its not the aim to earn lots of money.” What was more important to Manuel was time—he preferred time over money. Dominik, an American Studies and Cultural Studies major, went one step further and denounced making a career out of chasing money. Dominik switched started out studying law and decided to “‘fuck this bourgeois’ way of making a career.”

In general, in Germany, “students choose what they want to study based on interest, on what is easy,” which explains Germany’s deficit in MINT (Math, Informatics, Natural Science, Technology) (Sayer). This trend is illustrated by the number of students in each field during the summer term at Friedrich-Schiller. According to data from the university registrar, the majority of students are concentrated in the liberal arts and social sciences fields, as opposed to natural science, math, and informatics. During the summer term, 3,585 philosophy students were enrolled, as well as 3,681 social science majors. There were considerably less students in other fields: only 1,279 chemistry students, 1,876 biology students, 739 physics and astronomy students, and 693 math and informatics majors. The gender breakdown of these majors is also interesting. As expected, the majority of philosophy and social science students were female. Women did not fare well in other fields—only 207 and 174 female students were math and physics majors, respectively. The only STEM field where the majority of students were women was medicine (1,535 female students out of a total 2,289 students).

Students in Germany are not free from attitudinal bias against certain courses of study. Some students I interviewed had their choice of study criticized by peers and family. Sophie, an English major, felt that the “problem is that first question: What are you going to do with it?” Sophie had to deal with disappointment from her family and her boyfriend after switching to English from law, which is considered a more prestigious major. Konstanze, a dance science major, noted that some majors are considered superfluous by society and by students. These majors are nicknamed “orchidaenfacher,” the comparison being that these majors are like orchids—nice, but not necessary. In addition, the same stereotypes that are attached to certain fields in the United States are prevalent in Germany. Maria noted that students who have top marks are highly encouraged to study medicine, because medical students are considered to be more intelligent than other students.

**United States**

My interviews with the four American students at Humboldt University emphasized the importance of money in deciding what to study. These students were in Germany as part of an international program through CRU, an interdenominational Christian organization. Two of the students were from Ohio, one was from Illinois, and the last from California. Of the four students, three felt that money played some sort of factor in their college major decision. One of the students, from Ohio, decided to pursue a double major in art and psychology, because she thought that majoring in studio art alone would translate into difficulty finding work. Another student, also from Ohio, did not feel that money was a factor in her decision to become a doctor, but was concerned about paying off medical school debt—for this, she was relying on the high pay that doctors typically enjoy in the United States. For the third student, from Illinois, money was a significant factor in her decision to study nursing. The student who did not feel that money played some role in his college major selection decision wanted to become a counselor. His primary motivation was being very active in church and missionary groups.

These brief interviews demonstrated that the importance of money varies among students in the United States, just as it does among students in Germany. The perception of American students “studying computer science and business even though they hate it, for the money,” (Professor Isensee’s observation from his time teaching at Oregon State University) may be true in some cases, but in others it is simply a stereotype that masks students’ actual interest and passion for certain fields. However, given that the cost of a university education in the United States is quite high, it should not be a surprise that American college students think about the monetary value of their major.

**Part III: Economic Background & College Major**

Initially, I was only focused on the relationship between ethnic identity and choice of college major. However, many of the trends I observed in German higher education were the product of economic inequality. Going back through the US survey data, I found that economic background was also a significant factor in college major patterns. Economic background not only explains why some individuals are able to attend university and others are not, but also some of the attitudes of students who are at the university level towards the purpose of higher education.

**Germany**

Working class students are underrepresented in the German higher education system, despite it being essentially free. This underrepresentation can easily be attributed to the tracking system in secondary education; working-class students, like minority students, are disproportionally placed in hauptschules and realtschules (Lohse). For the few working-class students who are able to make it to the university level, finding a sense of place can be difficult. Herr Lohse, a lecturer at Humboldt, noted that there were hardly any working-class students at Humboldt. From a working-class background himself, Lohse told me that he wanted to quit university several times, because he felt that he did not belong.

Money is increasing in importance in Germany. Tuition may be free, but many students have to work to pay for living expenses. As a consequence, students are spending longer attaining their degrees, taking more than four years to complete a bachelor’s. For many students, working is “first-rank, studying second-rank” (Kipf). Self-reliance is popular among many German college students; relying on parents to cover their costs of living would be embarrassing. As a consequence, these students take it upon themselves to maintain their lifestyles.

Discussing the question of money with German college students resulted in conflicting answers, most likely the product of economic differences. When asked if he felt pressure to study something that will result in a well-paying career, Jan, a twenty-four year old history major, told me: “No. I think everyone who is studying here, you have this vision that you are financially stable. Personally, I don’t feel pressure to make a lot of money.” I interpreted Jan’s response as a response from a financially well-off student, especially his extension of feeling financially stable to the entire population of Humboldt University. Jan’s reasoning contrasted with that of Manuel, a twenty-four year old math and economics major. Manuel also voiced that he did not feel concerned with making a lot of money after graduation, because his parents “didn’t go to university. They just want me to be happy. They don’t care about the money.” However, most of Manuel’s friends from childhood are from more well-off families, making him feel that he “had to make up for something,” which is why he chose to study economics and math.

**United States**

As part of my survey, I asked students to identify their income bracket. After the matter of economic background surfaced in my conversations with German students and scholars, I reviewed the survey data and found a relationship between being high-income and studying STEM. Jan, one of the students I interviewed at Humboldt, hypothesized that what to study is potentially important to students who are not well-off since it can be a way that they become more well-off. However, among well-off students, there may be pressure from family to maintain a certain lifestyle. Whether high-income students are risk-averse when it comes to college major is still under debate in the academic realm, but my data leads me to conclude that they are.

Among the twenty-seven white students surveyed, seventeen listed a STEM field in their top three prospective majors. Of those seventeen students, twelve could be categorized as coming from high-income families (making $75,000 or more a year). A similar trend was visible for nonwhite students; of the eighteen nonwhite students, eleven were potential STEM majors, and seven of those potential STEM majors came from high-income families. According to this data, students who major in STEM are more likely to come from high-income families. One interpretation of this trend is that students form high-income families want to replicate their parents’ lifestyle. Another equally plausible explanation for the data is that high-income students have access to more opportunities and resources than lower-income students, increasing their ability to be successful in STEM fields, which require high achievement in math and science. The high proportion of students from a high-income background studying STEM indicates that there is a relationship between the two factors, but the degree of interrelatedness between the two is beyond the scope of the collected data.

**Part IV: Societal differences between Germany and the United States with Regards to Higher Education & Work**

Money is an important factor in both Germany and the United States, affecting students’ likeliness of success and their choice of study. However, from conversations with students and faculty at Humboldt and Friedrich-Schiller, it appears that money is a more important factor for students in the United States. This can be attributed to societal and economic differences between the two nations. The state plays a greater role in daily life in Germany, resulting in a more muted form of free-market capitalism. In Germany, a strong national sense of collectivism translates to free higher education—“education,” according to American Studies Professor Reinhard Isensee, “is a basic human right, and you don’t charge for that. But this is something that our society has decided that others have not yet.”

In Germany, the average cost of a university education is $32,000 total, paid for by the state (Carapezza). University students in Germany usually only have to pay for their books and registration fees, which amount to around £300/semester (Lohse). In the United States, many universities charge well over $32,000 per year—the average student debt for the class of 2015 is over $35,000 (Berman).

The vast disparity in college costs is largely due to institutional differences. In the United States, a university education is more than a degree—it is a “college experience.” Universities in the United States cater to the student population with recreational centers, dormitories, Greek life, athletic facilities, and a vast array of support staff for every possible need. Students and faculty at Humboldt and Friedrich-Schiller were amazed by the amount of services offered to students at a typical American university, noting that a German university is strictly a place to attend class and study—everything else happens off-campus. In addition, professors in Germany are paid less than their American counterparts. Exorbitant salaries for tenured professors is unheard of, as well as the “cult of professorship,” which refers to the celebrity-like status renowned professors at prestigious schools are granted (Isensee).

The fact that German students do not need to invest nearly as much money as American students into their university education grants German students greater freedom in their choice of major, in theory. The reality is more complicated, since ethnicity and economic background may push students into more financially-rewarding fields. However, the state-subsidized higher education system in Germany translates to less of a preoccupation with post-university financial rewards, as evidenced by German students’ attitudes towards school that are much more relaxed than their American counterparts. According to a teacher at Leibnitz Gymnasium, students “think about their A-Levels, and when they finish A-Levels they think about their future,” a step-by-step planning process that differs from the pressure placed upon American students to think about their future years before even applying for a university. In general, students in Germany do not look at education as “what will this get me?” (Lohse). Gap years are also extremely commonplace in Germany—students take a year (or several) off from school in order to travel and reflect upon their interests before they step foot in a university. In the United States, gap years have yet to become as accepted as they are in Germany, as they are viewed as “distractions” or simply a “waste of time.”

Economically, relatively equal pay in Germany may also explain German students’ more exploratory outlook regarding higher education. Salaries in Germany are typically lower than in the United States—for instance, physicians make an average of $230,000 in the United States, and $155,000 in Germany (Conover). One of the few cases where salaries are higher in Germany is in the teaching field, where German teachers enjoy a $10,000-$20,000 advantage over their American counterparts (OECD). The progressive income tax in Germany means that those in higher income brackets contribute more in taxes, evening out wages. There is less of an opportunity to earn an exorbitantly high salary in Germany compared to the United States, which may dampen students’ desires to major in something that will net a high income.

Another, related reason that may explain this attitudinal outlook is the fact that Germany’s economy relies heavily on small businesses. One teacher at Heinrich-von-Stephan Schule noted that Germany is “not an IT nation”—the focus on STEM is not as high as it is in the United States (Germany is currently experiencing its own deficit in MINT, the German equivalent of STEM). Professor Isensee mirrored that sentiment, noting that “It is not Siemens that is the backbone of our economy. It is the small businesses.” As a result, students’ aspirations are less likely to be tied into scaling the corporate ladder, but to develop middle-class small businesses further.

The German system of free university education, combined with its more egalitarian economic structure, may explain the “new” lifestyle that many students covet. The “new” lifestyle perhaps best emphasizes societal differences between the United States and Germany with regards to the purpose of higher education. The “new” lifestyle favors flexibility and free time over a high salary. In the eyes of German students, Americans are in a chase to acquire ‘stuff’, are overly materialistic, and trapped in the allusion that they are living the “American Dream.” The American Dream does not appear to hold a powerful sway over individuals living in Germany—the European Dream of shorter workdays and more time to reflect is becoming stronger. In the words of Professor Isensee—“Americans live to work. Europeans work to live.”

**Conclusion**

Is free better? That is essentially what my research project simplifies down to—is the system of free higher education in Germany ‘better’ in the sense that it gives students greater freedom to study what they are passionate about? Is it ‘better’ in the sense that minority students have equal opportunities to pursue their goals? Is it ‘better’ in the sense that it propagates equality?

The answer was not as clear-cut as I had hoped. The system of free higher education in Germany benefits those who were able to make it into a gesamtchule or gymnasium. Since the tracking system is biased against working-class and minority individuals, this means that ‘free’ is not the great equalizer that it is idealized to be.

However, ‘free’ does open up the options available to students. A university education is not viewed as an investment to the extent that it is in the United States, but rather as a chance to learn something and to broaden horizons. The matter of money—how much a college major will net in the future—is less of an issue in Germany, although it factors in more heavily for disadvantaged students.

There are striking similarities between trends in higher education between Germany and the United States. In both nations, minority and lower-income individuals are underserved by the primary and secondary school system, and must overcome significantly more odds to attain a higher education. In both nations, there is pressure on minority students to study subjects that are considered societally acceptable and attached to a high salary. Academic snobbery—students looking down on other students for majoring in fields considered less prestigious—is prevalent on campuses on both sides of the Atlantic.

The question of “is free better” no longer seems relevant in retrospect. The value and purpose of higher education is a societal and cultural construct. The trends I observed between the United States and Germany are the product of decades of processes that have culminated into these specific attitudes and outlooks on higher education. The choice of whether to attend a university or not, what to major in and why, and what to do post-graduation depend on policies regarding tuition, societal values and expectations, culture, gender, socioeconomic background, and the availability of other options. These decisions are complex economic decisions, with many inputs weighing in and many considerations to be made.

Reforming systems of higher education to increase their accessibility requires reviewing the long path that college graduates must take in order to earn a university degree, starting with the very beginnings of primary education. Reform requires an understanding of the various factors that affect students’ decision making. Most importantly, reform requires an examination of the purpose of higher education. Is the purpose of higher education to get a job? Or to explore what is out there? *Purpose* is key—electing higher education is a deliberate decision that should be entered into with a clear sense of purpose. “You are not your major”—this saying is true, but individuals are *why* they choose to study something, because why they study something speaks to their character.

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**Cultural Sensitivity**

Going into this research project, I was heavily biased against the system of higher education in the United States. I believed that “free is better”—the German system of higher education, almost completely state-subsidized, must allow students greater freedom in their choice of student. Furthermore, this system must also grant minority students the same opportunity as those from the majority. I was surprised to find, over the course of this project, that the lack of cost did not make the university “the great equalizer,” in the words of Professor Isensee. Many of the same ethnic and economic biases present in higher education in the United States are also present in the German system of higher education.

This project personally intrigued me, because as an ethnic minority, I feel that there is pressure to demonstrate that I am a valid and productive member of society through what I study and ultimately “become.” This interpretation of a university degree is extremely rigid in that life becomes a list of ‘achievements’ to be “checked off”—getting into a prestigious university, majoring in something considered prestigious, graduating, getting a job at a prestigious company, working until retirement. With the cost of a university education skyrocketing, this mode of thinking is extending to other segments of society.

Immigrants’ ability to be successful in education systems merits global focus as globalization, and therefore immigration, becomes a greater presence in more nations. Even developing nations are experiencing an influx of immigrants as corporations outsource, sending educated workers across the globe. Related to this issue is the changing nature of a college education. Attitudes towards college are revealing a preoccupation with practicality; for many students, college is a linear path to a specific career, instead of being an open-ended period of exploration. Changing societal attitudes towards what students should be doing in college are highly significant—societal attitudes influence and affect policy decisions, including those of allocating funding to higher education. Liberal arts departments are already suffering from funding cuts as money is channeled into STEM fields, a trend that may exacerbate in the future.

The greatest difficulty was finding minority students to interview. This is partly due to their underrepresentation in German higher education, but also conflicting definitions of minority status. Of the students I interviewed, three could be considered minorities—two students whose parents were from Turkey, and a student who had immigrated from Albania. Several students had one parent who had immigrated to Germany, including one woman whose father was Russian. This particular student had also immigrated from Russia, but told me flat-out that she did not consider herself an immigrant. It is possible that the students that I personally identified as minorities did not feel that they were minorities—because I did not explicitly ask them if they felt like minorities (because I wanted to maintain cultural sensitivity), I cannot know for certain whether my categorization is correct. For my analysis regarding minority student trends, I rely on input from white German professors and lecturers.

Dealing with ambiguity and contradictory responses was an unexpected struggle. I realized over the course of this project, that I am much more used to concrete answers than I initially thought. It was difficult for me to accept that this project would not end in a neat, complete final answer—my initial question branched out into more and more questions the longer I worked on the project.

Over the course of this project, I realized that there are many assumptions that I make with regards to identity. One instance where I realized this was when talking to the student who was born in Russia but did not identity as an immigrant. My definition of ‘immigrant’—someone who does not live in the country in which they were born—unarguably makes this student an immigrant, but I was not in a position to tell this person who I thought they were. Our definitions of certain terms have been narrowed over time—academic writing in particular encourages authors to limit the scope of key words so that precision can be created. But by narrowing definitions, and allowing them to become commonplace, accepted terms, we risk invalidating the opinions of individuals who do not believe in those definitions. This particular students’ definition of immigrant may be completely different than mine—perhaps she feels so at home in Germany that she does not feel that she ‘immigrated’ there. For her, place of birth may be irrelevant, but for me, it is the most important factor in my definition of ‘immigrant,’ which I would argue is also a societally accepted definition.

The power of language as an identity factor manifested itself in my daily interactions with many of the people I met. My ability to speak Arabic made me feel less like a foreigner in Berlin. Many of the owners of the Turkish restaurants I frequented spoke Arabic or recognized that my necklace had a word written on it in Arabic, and they treated me like I was one of them. Many of them opened up to me, telling me why they immigrated to Germany, what they liked or disliked about living here. I identified with their immigrant backgrounds, as my parents are immigrants as well. Language allowed this identification to become possible; without my Arabic language skills, I would not have been in a position to communicate with them at a deeper level.