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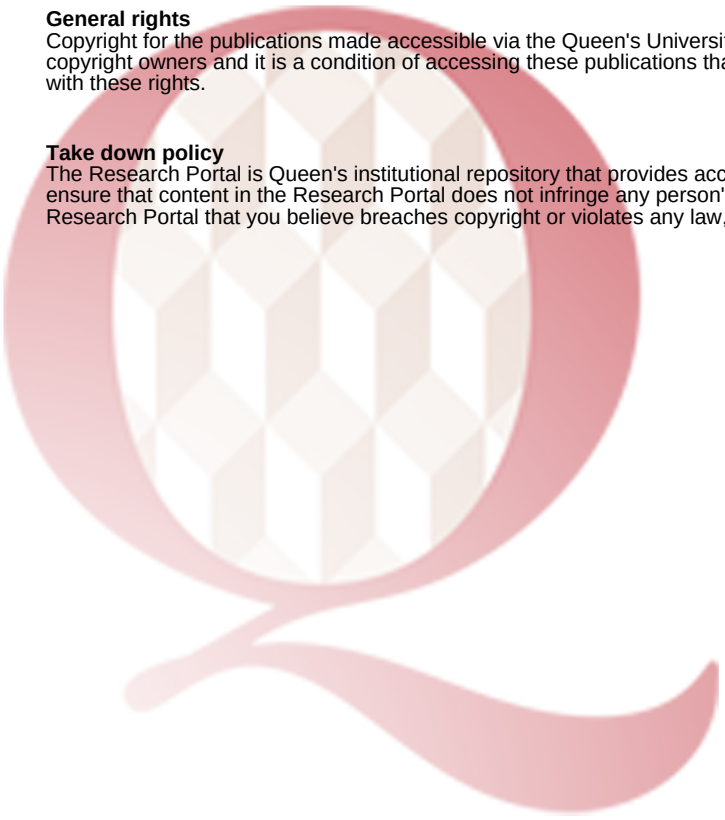

Escaping the Holocaust: human and health capital of refugees to the United States, 1940-42*

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Abstract

The large-scale persecution of Jews during World War II generated massive refugee movements. Using data from 20,441 predominantly Jewish passengers from 19 countries traveling from Lisbon to New York between 1940 and 1942, we analyze the last wave of refugees escaping the Holocaust and verify the validity of height as a proxy for human and health capital. We further show this episode of European migration displays well-known features of migrant self-selection: early migrants were taller than late migrants; a large migrant stock reduces migrant selectivity; and economic barriers to migration apply. Our findings show that Europe experienced substantial losses in human and health capital while the US benefitted from the immigration of European refugees.

Keywords: Migration, Refugees, World War II, Holocaust, Germany, New York

JEL codes: N32, N34, N42, N44, F22, J24, O15

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1 Introduction

The large-scale persecution of Jews during the Second World War generated massive refugee movements as Nazi Germany expanded in Europe. From the Nazi seizure of power in 1933, to the invasion of Poland in September of 1939, restrictions and threats on Jewish life and property in Germany became all too prevalent. The Nazi expansion in Europe in subsequent years further set in motion those who feared for their lives and could afford to flee. By the summer of 1942 when German troops reached Stalingrad, the Nazi territorial grip over Europe was nearly complete.

In this paper we analyze the last wave of Jewish migrants from Europe to the United States during the years 1940 to 1942. We construct a new data set based on information from the United States Records of the Immigration and Naturalization Service on all alien passengers departing Lisbon –the only European port with regular passenger traffic to the Americas at the time– and arriving at the Port of New York during this period. Alien passengers provided the Immigration Service with detailed personal, ethnic, anthropometric, and socioeconomic characteristics as well as their place of origin and last place of residence. This rich information allows us to assess the passengers' background and the health and human capital they carried.

We identify passengers from 19 European nations and find that (a) Jewish passengers were on average shorter than non-Jewish passengers, and (b) even so, Jewish passengers were still taller than the average heights of the populations in their countries of origin. This height selectivity is more pronounced for women, suggesting that European countries suffered a larger drain of human and health capital from female emigration. We further compare the average heights in our sample with those of the US population before and after the war and find that the US experienced substantial gains in human and health capital with this immigration flow, especially from females.

Our study makes several contributions regarding the unique nature of the dataset and, more generally the migration literature. First, we focus on wartime refugees and thus con-

tribute to a much under-researched, and often hard to document, area of international migration as relevant currently in Europe as it was in the early 1940s; to our knowledge this is the first study examining the transfer of human capital of a massive refugee movement. Second, our findings agree with previous research that suggests that academic life in Germany was most affected by Nazi discrimination against unwelcome population groups during the 1930s; Germany's loss rendered meaningful gains to US's science location during and after the war (Moser et al 2014, Waldinger forthcoming).

Third, selective immigration may serve as a foundation stone for social stratification in the US, and the resulting differences between ethnicities may persist a long time (Borjas 1999); research on the 'Age of Mass Migration' illustrates the importance of immigration for understanding the economic development as well as the ethnic and socioeconomic composition of the United States until today (Boustan 2007, Hatton 2010, Hatton and Williamson 1998); we contribute to this body of literature by investigating a more recent episode of US immigration. Fourth, our insights into the economics of European migration indicate that this episode shows features of well-known self-selection mechanisms: early migrants are taller than late migrants, a large migrant stock reduces the migrant selectivity, and several economic barriers to migration apply (Roy 1951, Borjas 1987, Stolz and Baten 2012, Abramitzky et al 2014). Positive selection has been strongly associated with economic migrants who move in search of better opportunities, which is evidence of a more responsive individual nature (Chiswick 1999, Feliciano 2005). We show that the last Jewish refugees to escape Nazi oppression, who did not qualify as economic migrants, were also positively selected.

The remainder of this article proceeds as follows: in section 2 discusses the historical background; section 3 describes the data; section 4 discusses methodological issues related to human stature as a proxy for individual health and human capital; section 5 presents the results; section 6 concludes.

2 Historical Background

This particular transfer of refugees was conditioned by both the escalation of Nazi activity in Europe and the US immigration policy, which we now describe.

2.1 Nazi Progress and Restrictions on Jewish Life

In the years leading up to World War II restrictions on Jewish life and property in Germany became evident with the rising of the Nazis to political prominence in the early 1930s. Founded in the 1920s, the German Nationalist Socialist party gathered only marginal shares of the German vote in that first decade. Struggling in the aftermath of World War I, Germany saw its crisis deepen as the Great Depression hit in 1929 after which Nazi propaganda found fertile ground.[1] By November of 1932 the Nazi party became the most voted in German elections and in January of 1933 Adolf Hitler was appointed German chancellor. The subsequent Reichstag Fire in February helped further consolidate the Nazis in power and in July their party was declared the only political party in Germany. In 1934, the office of the German president was abolished and its powers merged with those of the chancellor, making Adolf Hitler head of state and the supreme leader of the German armed forces.

Restrictions on civil liberties of Jews, did not take long to arrive.[2] Still in 1933, the first nationwide boycott on Jewish shops took place on April 1^{st}; later that same month, the law against overcrowding in public schools and universities drastically limited the number of Jewish students in these establishments; contemporaneously the law for the restoration of the professional civil service excluded all Jews and other political opponents from working in the civil sector; in October the editors law limited journalism activities to 'Aryans' only. Living conditions of German Jews deteriorated further in 1935 with the passing of the Nuremberg Race Laws, which defined Jews more broadly and effectively brought immediate segregation.

In 1936 the Nazis began their territorial expansion into the Rhineland in violation of the

[1] See Eichengreen and Temin (2000:204-5) for an argument in favor of the connection between the Great Depression and the Rise of Nazism.

[2] See Kaplan (2005) for a thorough discussion.

Treaty of Versailles and on March and September of 1938 they occupied Austria and the Sudetenland, a border region in Czechoslovakia, mostly populated by ethnic Germans; the rest of that country would be formally occupied in March of 1939. As Germany's borders expanded more Jews were subject to restrictive laws, which increased in severity. In August of 1938 the Law of alteration of family and personal names obliged Jews with non-obvious Jewish names to adopt the middle name of "Israel" or "Sara" for males and females, respectively. In October all Jewish passports were declared invalid unless stamped with the letter "J". On November 9th a nationwide pogrom known as Kristallnacht, or Night of Broken Glass, targeted synagogues and Jewish-owned businesses with non-negligible loss of life. In December of that same year the first ship reached Britain in a rescue mission transferring mostly unaccompanied Jewish children to the UK from Germany, Austria, Czechoslovakia, Poland and the Free City of Danzig.

So dreadful were conditions for Jews in Europe under the Nazi regime that on May 13 of 1939 the MS St. Louis set sail from Hamburg to Havana with more than 900 passengers on board, mostly Jews. Most had applied for visas to the United States and planned to stay in Cuba until entry in the US was allowed. After Cuba, the United States, and Canada denied entry to these passengers the vessel was forced back to Europe in June where the governments of Belgium, France, the Netherlands, and the United Kingdom accepted the said passengers.[3]

Simultaneously, Germany and Italy signed the Pact of Steel, which effectively allied the two countries prior to the official outbreak of World War II on September 1st 1939 with the invasion of Poland. The Nazi expansion continued relentlessly in 1940 with the invasion of Denmark and Norway in April, followed by that of France, Belgium, the Netherlands and Luxembourg in May; on June 14 the Nazis marched through Paris and in July U-boats attacked merchant ships in the Atlantic. In October they reached Romania and on December 29th German planes dropped incendiary bombs in London. In 1941 the Nazi territorial grip

[3]For more on the St. Louis episode see Markhof (2001).

saw its last expansion with the invasion of Yugoslavia and Greece in April, the Soviet Union in June, and the occupation of Kiev in September.

The situation of the European Jewry worsened further with the establishment of ghettos and concentration camps in Eastern Europe as well as the compulsory use of the Jewish badge after September of 1941. After almost a decade of increasing restrictions on Jewish life and property, those who were able and financially capable would seek to leave German occupied territories before it was too late. The fall of Paris in June 1940 marked a divide between the Nazi-free regions of Europe: on the one hand the United Kingdom was heavily involved in the war effort against Germany, on the other Ireland, Portugal, Spain, Sweden, and Switzerland remained neutral. For those en route to escape Europe towards the Western Hemisphere, only the Iberian Peninsula remained far enough from the war front to provide a natural port of exit.[4,5]

Portugal and Spain were never considerable countries of departure to the United States as their natural ties lied in South America. Yet, as the Nazis spread through continental Europe and began aerial attacks on British soil, regular transatlantic service shut down in traditional ports as Le Havre, Marseilles, or Liverpool.[6] Moreover, the Spanish civil war between 1936 and 1939 left the country with few resources to spare on transatlantic voyages. Lisbon therefore, became the major port of departure from Europe when all other ports discontinued passenger service to the Americas.[7] For this reason we focus on the passengers

[4]Routes to reach Lisbon varied. Most famous is probably that described in the initial credits of the 1942 movie Casablanca where refugees went from Paris to Marseille, crossed the Mediterranean to Oran in Algeria and from there travelled to Casablanca in French Morocco where they would wait for exit visas to Lisbon. Most documented perhaps are the routes from France across the Pyrenees into Spain –either through the Basque Country in the West (Bordeaux-Bayonne-Irun) or Catalonia in the East (Marseille-Perpignan-Portbou)– and onto Lisbon (Weber 2001).

[5]Migration to British controlled Palestine was quite restricted during the time period. Some of the attempts to escape Europe from Eastern ports to Palestine proved disastrous. Such as we case of the MV Struma in February of 1942 and the MV Mefküre in August of 1944, both torpedoed in the Black Sea (Ofer 1990).

[6]See Section 7.1. in the Appendix for details on international travel in the early 1940s.

[7]If Lisbon was a major port of departure, New York was the major entry gate into the United States. Baltimore, Boston, and New Orleans also received Jewish migrants but not in high magnitude. Between 1940 and 1942, Baltimore received a total of 655 Jews (569 from departing Portugal), ports in Massachusetts 1,591 (none from Portugal), and New Orleans 270 (none from Portugal).

departing Lisbon and arriving New York between 1940 and 1942. In the summer of 1942, massive deportations from German controlled areas to concentration camps in the east sealed the fate of Jews who had not left Europe before (Breitman 1991). Among all passengers in our data, Jews were probably the last to escape certain death.

2.2 US immigration and refugee policy[8]

In the 1940s, immigration to the United States relied on the rules of the restrictive Immigration Act of 1924, approved with ample Congressional support. Migrant admissions were subject to country quotas of 2% of the corresponding foreign-born population in the 1890 census. These quotas favored the acceptance of migrants from Northwest Europe and Scandinavia, as these were the early Europeans migrating to the US in the nineteenth century.[9] The objective was to preserve the ethnic composition of the US as it was before the arrival of migrants from Southern and Eastern Europe. In the 1920s however, the composition of the migrant pool was rather different than that of the earlier US migrants. Scandinavians, Germans, and English were no longer leaving their native lands much and preferred to enjoy the home benefits of the developing welfare states. On the contrary, southern and eastern European countries such as Italy and Poland had oversubscribed quotas (Feingold 1995).

The Depression in the 1930s brought more animosity towards new migrants, seen as direct competitors of American workingmen. In September of 1930 President Hoover pursued a strategy that further reduced the number of immigrant admissions with the Department of State calling for a strict enforcement of the "likely to become a public charge" provision of the law. Non-independently wealthy individuals who needed to work to support their families were denied admission. The effects of this additional hurdle were immediate: migrant admissions fell to levels between 10 and 14% of the allowable, and already stringent, quotas in the 1930s (Hoover 1931). Only the 1820s registered lower entries (Borjas 1999:7).

[8] For a thorough review of immigration regimes throughout US history see Abramitzky and Boustan (2016).

[9] See Table 8 in the Appendix for exact quota numbers.

The Nazis' rise to power in 1933, led many Jews to try and seek refuge in the United States but in most years the corresponding quotas went unfilled (Greenberg 1996). The plight of refugees was just not part of the American political agenda, which was turned to the internal woes of the Depression. Elected in 1932, President Roosevelt had no wish to take the political risk of refugee rescue in an immigration averse Congress. The quota system provided no special provisions for refugees, who were treated as any other immigrants since there was no official refugee policy.

Roosevelt's re-election in November of 1936 brought slight changes on the immigration policy towards German Jews.[10] American consuls abroad started following directives to evaluate whether an applicant was *likely* to become a public charge instead of whether he could become so. Relatives or friends in the US were allowed to post bonds to reduce the risk these immigrants would become a public charge (Breitman 1996). After the Austrian Anschluss in March of 1938 Roosevelt suggested the merge of the Austrian and German quotas and allowed for the joint quota to be filled to capacity. It was also Roosevelt who called the international conference at Évian - France in July of 1938 to discuss the increasing numbers of Jewish refugees fleeing Germany and Austria. The conference failed to provide solutions to the crisis as Britain and the US refused to take in any substantial numbers of refugees.[11] In 1939, American reluctance to admit refugees was again visible in the MS St Louis episode, and in the frustrated efforts to pass a bill to admit 20,000 German Jewish children outside the quota.

Austrian and German quotas were again restricted by mid-1940 when security concerns emerged regarding the possible admission of spies, communists, or fascists infiltrated among

[10] Polish, Czech, and Hungarian quotas remained unchanged and so did the hopes of getting a safe in the US for the large Jewish populations these countries homed.

[11] The British Mandate of Palestine attended the conference as an observer. In February of 1939, the inflow of Jewish refugees into Palestine was limited to 75,000 in the 1940-1944 period, which was duly enforced. British authorities refused admissions of any individuals lacking entry permits. Such was the case of 1,900 Jewish refugees aboard the SS Patria in November of 1940. The steamer was deported to the Mauritius but Zionist organizations, aiming at disabling the ship to prevent its departure from the port of Haifa, planted a bomb whose effects were miscalculated and resulted in the sinking of the vessel killing 267 and injuring 172 (Chazan 2003).

the refugees. Rumors that German Nazis had helped the invasions of Norway and the Netherlands by previously entering those countries as lecturers, refugees, newspapermen, diplomatic attachés, or tourists, quickly spread in the US (Goodwin 1995). As a result the Department of State instructed consuls not to issue any visas to applicants who could become a danger for public safety. The fear of fifth column subversives conflicted directly with the objectives of the President's Advisory Committee for Political Refugees (PACPR) in place since 1938. Its goal was to assist intellectuals and others in danger in unoccupied France, France's colonies in North Africa, as well as Spain and Portugal, and bring these individuals to safety. The Committee elaborated lists of desirable refugees, which were handed over to the Department of State to that the corresponding visas would be expedited.

The divergent stances on the refugee problem came to light in September of 1940 when the SS Quanza docked in Norfolk Virginia to refuel before returning to Europe. The steamer had been chartered to travel from Lisbon to New York and then Veracruz Mexico in August, filled to capacity with 317 passengers (Goodwin 1995:174). Of these, 66 American citizens and 130 holders of American visas disembarked in New York. The remaining 121 passengers, nearly all Jews, were denied entry and followed course to Veracruz where only 35 passengers were allowed. The local authorities ordered the ship to return to Europe with the remaining 86 refugees on board. The passengers had no hope of being admitted in Portugal who would return them to their countries of origin. Upon arrival in Norfolk, a local Jewish maritime lawyer filed a lawsuit against the Portuguese National Line for breach of contract on behalf of four passengers on board. As a result, the Quanza was held in port for six days during which several Jewish organizations and leaders lobbied for the admittance of the refugees. Learning of the situation, Eleanor Roosevelt appealed to her husband who sent a member of the PACPR to evaluate the situation of the said refugees. All received visas, though the State Department vehemently opposed.[12]

The *Quanza* outcome was not representative of the fate of future refugees seeking safe

[12]The SS Quanza story has been subject of a novel and a theatre play by descendants of the steamer's passengers (Redel 2007, Morewitz and Lieberman 2012).

haven on American soil. In April 1941 all alien visa procedures were centralized in the State Department, which was also allowed to expand on the grounds of "national defense" (SDD 1941). The move effectively neutralized cooperation with the PACPR. In June 1941 the State Department instructed all consuls to reject visas to any applicants with children, parents, spouses, or siblings, residing in Nazi controlled areas of Europe, as those family ties would "make the entry of the applicant prejudicial to the public safety or inimical to the interests of the United States" (Morse 1968:300). The ruling immediately affected thousands of refugees already waiting in, or on their way to, Lisbon. Additionally, the FBI became involved in the visa issuing procedure, further increasing the bureaucratic procedure (Breitman and Kraut 1987).[13]

By the end of 1941 the US entered the war and the refugee crisis became less visible to the American public. Rumors of the Holocaust atrocities were often rejected as too macabre to be believed; even in Palestine allusions of mass murder of Jews were discarded until November 1942 with the arrival of dozens of refugees with eyewitness reports from Poland (Marrus 1996:157). Only in mid-1943, when notable defeats of the Axis powers in Europe and Pacific hinted that an Allied victory was possible, was there more willingness to confront death camps in Eastern Europe (Feingold 1995).

Roosevelt's executive order in January 1944 established the War Refugee Board to "rescue the victims of enemy oppression who are in imminent danger of death" (Roosevelt 1944). Only then was there an officially organized policy to facilitate the rescue of refugees, not only through the transportation of individuals to the US but also through the coordination of efforts of governments in neutral countries in Europe and international relief organizations. The end of the war brought the War Refugee Board to a close of its activities in September of 1945. Since legislation to expedite the admission of displaced persons proceeded slowly, President Truman issued an executive order in December of 1945 designating existing immi-

[13]For the detailed visa procedures see Morse (1968:301-3). Increased visa restrictions sealed the fate of many who sought to escape Nazi occupied or threatened territory too late. Such was the case of Otto Frank, residing in Amsterdam since 1933, who sought an American visa for him and his family in April of 1941 (Breitman, Stewart and Hochberg 2009:260-263).

gration quotas for displaced persons. The Displaced Persons Act of 1948, amended in 1950, allowed the admission of 400,000 European refugees into the US outside of the quota system and established precedent for future refugee crises.

3 The passenger data

The data come from the United States Records of the Immigration and Naturalization Service located at the National Archives, which contain manifests of all vessels entering the United States by port of arrival since the nineteenth century.[14] We focus on passenger vessels departing Lisbon and arriving New York between July 11 1940 and June 30 1942, the dates mark the beginning and the end of steamer traffic between the two cities.[15] These passengers capped a more or less continuous stream of Jewish migrants leaving Europe after the Nazi rise to power in Germany. Table 1 shows the approximate number of European Jews arriving the Port of New York between 1933 and 1945 by country of departure, which is not necessarily the country of origin, especially for later migrants.[16]

The early 1930s showed considerable magnitude of arrivals but the start of the Nazi territorial expansion in 1936 saw numbers jump to the tens of thousands and continuously rise until 1939. Up to then, Germany saw over 30,000 Jews leave her borders for New York since the Nazis' seizure of power, a number only surpassed by France. Italy had over 13,000 Jews leave to New York, mostly concentrated in 1939 and 1940, the years of the signing of the Pact of Steel and the Tripartite Pact, respectively. In 1940 the total number of arrivals nearly halved that of the previous year mostly due to notable declines of vessels coming from Germany and German occupied countries. In 1941 Jewish outflows from continental countries engulfed in war dropped to negligible or nil levels and were severely reduced even in the UK as the war effort picked up. Neutral Portugal, and more modestly Spain, saw big

[14] See Appendix for more information on the nature of the Passenger Manifests, our collection and transcription process, as well as details on the preparing instructions of the ship manifests.

[15] See Appendix for alternative ways to cross the Atlantic in the 1940s.

[16] Numbers are approximate because Ancestry.com captures all individuals declaring to be Jews upon entry in the United States, regardless if they were passengers or crew.

outflows of migrants only in 1940 and 1941 when passenger traffic to the Americas had shut down everywhere else. After 1941 Jewish arrivals in New York fell to a few hundred each year and with the end of the war earlier values were never restored.

Table 1: Jews arriving New York from Europe, by country of departure

	Europe	GER	ITA	POL	BEL+NL	FRA	U.K.	SPA	POR
1933	3,877	911	80	876	109	1,022	823	0	1
1934	6,561	2,145	116	950	278	1,805	1,155	2	0
1935	6,523	1,666	123	894	279	1,951	1,408	104	46
1936	12,285	4,140	234	714	1,037	3,716	2,382	2	3
1937	19,206	5,963	425	1,008	2,043	6,128	3,496	0	1
1938	39,251	9,971	821	2,034	8,183	11,874	6,270	0	4
1939	43,775	5,940	4,494	1,338	10,535	10,418	9,774	1	57
1940	22,636	0	6,828	0	2,519	1,214	9,251	58	2,132
1941	12,022	0	3	0	0	2	211	2,460	9,322
1942	643	0	0	0	1	0	183	18	426
1943	602	0	0	0	0	2	572	0	1
1944	449	0	33	0	0	26	386	1	3
1945	454	0	41	0	89	136	146	5	2
Total	168,284	30,736	13,198	7,814	25,073	38,294	36,057	2,651	11,998
%	1	.1826	.0784	.0464	.1490	.2276	.2143	.0156	.0713

The timing of Jewish migration varied by departing country: from Germany, France, and Poland most Jews left until 1939; in Belgium and the Netherlands, the UK, and Italy, departures concentrated mostly between 1938 and 1940; and in Portugal and Spain it peaked in 1940 and 1941. We focus on the passenger vessels departing Lisbon to New York in this time period, which completed a total of 100 trips from the beginning to the end of Nazi rule. We gather data on 97 of these passenger manifests, which cover roughly seven per cent of all Jewish arrivals in New York.[17]

Ship manifests separate United States citizens and alien passengers who were asked much more detailed questions.[18] In our data we included the information contained in alien manifests corresponding to a total of 20,441 passengers of which 11,687 were Jews. Given the context surrounding the travel of war refugees, it is not implausible to assume that passengers

[17]The non-included manifests were either illegible, the vessel carried no passengers, or the vessel carried only passengers in transit to the Caribbean that did not disembark in New York.

[18]US citizens accompanying alien family members are listed on alien manifests, but they provided no more information than that listed on the citizen manifests; as such we have 978 citizens in our data. See Data Appendix for the different sets of questions asked to US citizens and alien passengers.

would try to omit their Jewish origin so we could be observing an underestimated number of Jews in our lists. In the manifests however, we often find passengers who declared their race to be Austrian or Dutch only to have it crossed in pencil by the immigration inspector who substituted it for "Hebrew"; undercounting is therefore a minor concern. Table 2 shows the gender and age distribution of all alien passengers by ethnicity.

Table 2: Gender and Age distribution of all alien passengers by ethnicity

	Jews		Non-Jews		Total
Males	5,669	48.5%	4,331	49.5%	10,000
Females	6,018	51.5%	4,423	50.5%	10,441
Younger than 15	1,685	14.4%	1,572	17.9%	3,257
15 to 65	9,121	78.1%	6,913	79.0%	16,034
Older than 65	881	7.5%	269	3.1%	1,150
All	11,687		8,754		20,441

In contrast with episodes of economic migration where males are overrepresented, here both genders were rather balanced with a slight advantage for females. This balance may be explained by the unusual nature of these passengers: often they travelled with their families, including husband, wife and children, and at times even with their extended families (parents, in-laws, uncles, siblings and their families). The war circumstances also favor a higher prevalence of women in the lists. The lower part of Table 2 shows a different age pattern of Jews and non-Jews. Jews traveled in larger numbers in all age brackets, but those older than 65 outnumbered the non-Jews of the same age group by the factor three, yet another very unusual characteristic of these passengers.

Beyond gender, age and ethnicity, we also observe alien passenger occupation, which we classify into skill levels according to Armstrong's (1972) taxonomy. We assign values from 5 to 1 to the wide variety of individual occupation statements in order to distinguish the following group order: professional, semi-professional, skilled, semi-skilled, and unskilled.[19] In addition, we also observe which languages each individual passenger was able to speak,

[19] See section 7.3 in the Appendix for more detail on the grouping of specific occupations into each category as well as the most common occupations by gender and ethnicity.

which provides further indication of individual skill level. We summarize this information in Table 3.

Table 3: Occupational and language skills of all alien passengers by ethnicity (in %)

	Jews			Non-Jews			Total
	All	M	F	All	M	F	
Unskilled	31.56	11.86	60.47	30.82	11.67	59.10	31.25
Semi-skilled	7.10	7.54	6.46	8.09	8.31	7.76	7.52
Skilled	30.83	45.93	8.66	18.90	26.75	7.31	25.81
Semi-professional	24.06	25.75	21.59	30.56	35.39	23.44	26.80
Professional	6.45	8.92	2.82	11.63	17.89	2.40	8.63
N	**8,404**	**4,999**	**3,405**	**6,096**	**3,634**	**2,462**	**14,502**
Average skill	*2.67*	*3.12*	*2.00*	*2.84*	*3.40*	*2.02*	*2.74*
1 language	58.64	56.26	60.87	73.99	73.87	74.12	64.95
2 languages	30.05	31.75	28.46	21.01	20.73	21.28	26.33
3 languages	9.59	9.86	9.33	4.07	4.37	3.79	7.32
4 languages	1.43	1.75	1.13	0.77	0.90	0.64	1.16
5 languages	0.20	0.29	0.12	0.14	0.10	0.17	0.18
6 languages	0.09	0.09	0.09	0.01	0.03	0.00	0.06
N	**11,346**	**5,496**	**5,850**	**7,929**	**3,888**	**4,041**	**19,275**
Average no. languages	*1.55*	*1.58*	*1.51*	*1.32*	*1.33*	*1.31*	*1.45*

In the occupational distribution, unskilled passengers outnumbered any other category. This pattern is driven by females who overwhelmingly followed the traditional family role of homemakers in the early 1940s. The vast majority of female passengers declared to be housewives or have "no" occupation regardless of ethnicity: average skill categories of female Jews and non-Jews are not statistically different. Overall, Jews ranked slightly lower on the armstrong scale than non-Jews (2.67 vs 2.84, statistically different from each other). This result can be understood when taking into consideration the different travel motivations of non-Jewish passengers, who included diplomats in transit to their home countries via New York, students, leisure travellers, business travellers, economic migrants looking for better living conditions, or passengers accompanying a Jewish spouse. With the exception of the last two categories, all others belonged to the limited segment of society that was able to engage in international travel in the early 1940s, which likely denotes higher income and

probably higher skill levels.

On average, Jews spoke more languages than non-Jews (1.55 vs 1.32).[20] Bilingual countries such as Belgium, Luxembourg or Switzerland could potentially explain this difference if they sent a larger fraction of Jewish than non-Jewish passengers. Descriptive statistics on passenger origin in Table 4, suggest that only a minority of Swiss passengers were Jewish. Among Belgian and Luxembourgian passengers, Jews were indeed the majority but only by a small margin that cannot explain the differences in the number of languages spoken.[21] Male-female differences within ethnicity are much less pronounced in terms of language abilities than occupations, indicating that language skills were little affected by traditional gender roles and are therefore very reliable proxies for individual skill.

Table 4: Alien passengers by origin and ethnicity (in %)

	Nationality		Country of last residence	
	Jews	Non-Jews	Jews	Non-Jews
Germany	45.50	5.57	20.91	3.99
Poland	14.67	5.38	0.50	1.20
France	7.21	19.12	39.34	35.20
Belgium	4.97	4.75	8.53	5.89
Austria	4.25	0.73	2.88	0.35
Czechoslovakia	4.20	2.32	0.39	0.18
Russia	3.65	1.31	0.01	0.08
Switzerland	2.73	4.85	7.23	8.41
Hungary	2.70	1.46	2.00	1.12
Netherlands	2.36	4.65	0.98	2.48
Romania	1.40	0.53	0.44	0.27
Luxembourg	1.39	0.49	1.81	0.37
Italy	0.73	1.52	1.92	5.57
Latvia	0.69	0.15	0.10	0.03
Lithuania	0.55	0.51	0.09	0.18
UK	0.39	7.70	0.23	2.92
Portugal	0.34	4.22	6.52	9.25
Spain	0.24	2.08	0.61	2.27
Greece	0.16	1.64	0.12	1.42
Denmark	0.03	0.97	0.01	1.06
Other	1.84	30.05	5.38	17.76

Approximately 2,200 passengers in our lists declared to have no nationality, to be state-

[20] The difference is statistically significant and is likely not a Yiddish or Hebrew effect. Only 80 (53) individuals declared to speak Yiddish (Hebrew), in addition to any other languages.

[21] These three nationalities represented only 9.5% of all passengers, with 9.1% Jews and 10% non-Jews.

less, apatride, or holders of Nansen passports.[22]We assign a nationality based on country of birth and obtain the geography of alien passengers by place of origin. Due to the unusual political scenario of the time, many Austrian nationals appear in the manifests as German citizens, born in "Vienna - Germany." While this was formally correct after the annexation of Austria by the German Empire in 1938, we ensured all individuals who originate from Austria are identified as Austrian.

Table 4 shows a strikingly different pattern of origin between Jews and non-Jews. The vast majority of Jewish passengers (45.50 per cent) were German nationals, distantly followed by Poles (14.67 per cent), and French (7.21 per cent). Among non-Jewish passengers, French nationals were the most represented (19.12 per cent), while other nationalities were quite dispersed. The country of last residence shows a more similar pattern: France was the most represented country with nearly two-fifths of all alien passengers, Jews and non-Jews alike; whereas Germany was the last residence for a fifth of the Jews in the sample, followed by Belgium with 8.53 per cent, Switzerland with 7.23 per cent, and Portugal with 6.52 per cent. The last two countries remained neutral throughout the war, yet the shares of Jews claiming last residence indicate different reasons: Jews in Switzerland might have felt unsafe with neighboring countries engulfed in war and preemptively left Europe, as many did before the outbreak of the war (see Table 1); in Portugal, there was virtually no resident Jewish community so Jews claiming last residence in that country must have been in Portugal for at least a year while waiting for their US immigration papers. Having these papers did not imply immediate exit, as it was still necessary to purchase a passage on one of the various ships departing to the Americas that were often overbooked. There are reports of refugees waiting months in Portugal for a transatlantic passage as their US immigration papers were about to expire (Lochery 2011, Weber 2011).

Discrepancies between a passenger nationality and country of last residence provide an insight into the pre-1940 migration. More than 45 per cent of all individuals in our dataset ar-

[22]Nansen passports were international travel documents issued by the League of Nations to stateless refugees who could not obtain such documents from national authorities.

riving at New York stated a German-Jewish background, equalling 90 per cent of all German nationals in this dataset, whereas less than 25 per cent of all individuals reported that Germany was their country of last residence. Similar discrepancies occurred in Austria, Poland, and Czechoslovakia. Conversely, France, Portugal, Belgium, Switzerland, Netherlands, and Italy seem to be receiving countries. We do not observe the reasons behind individual choice of country of residence, but the pattern shown in Table 4 suggests that many passengers of Jewish background had already moved out of Nazi Germany before 1940.

These passengers capped a more or less continuous stream of Jewish migrants leaving Europe after the Nazi rise to power in Germany. Table 1 shows the approximate number of European Jews arriving the Port of New York between 1933 and 1945 by country of departure, which is not necessarily the country of origin, especially for later migrants.

Figure 1: Kernel density of visa issuing dates

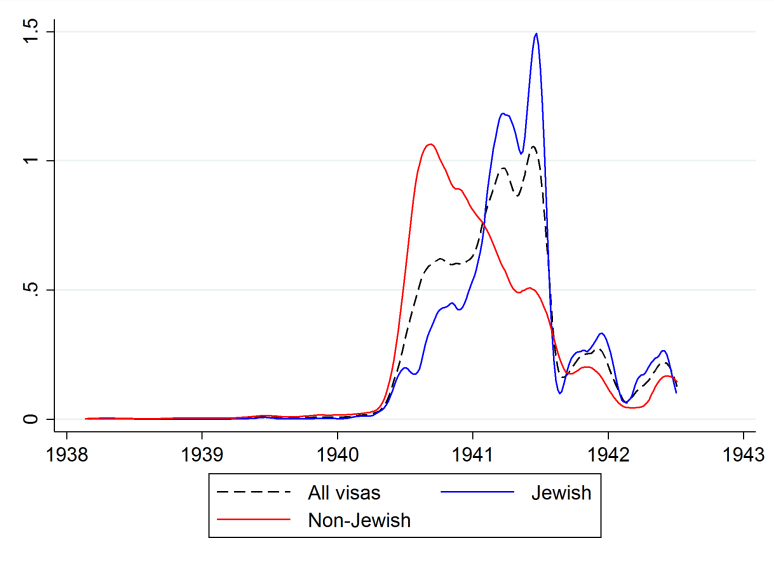


Figure 1 reports kernel densities for the visa issuing dates in various US embassies in Europe for Jews and non-Jews. Consistent with the arrival dates of our passengers, all visa issue dates range between late 1939 and mid 1942 with greater frequency in late 1940 and early 1941. Visas issued to Jews peaked in early 1941 driving the pattern of the All visas dashed line, as opposed to non-Jewish visas which peaked in late 1940. The smooth decline of non-Jewish visas contrasts with the abrupt drop in Jewish visas. The latter was driven

by disruptions at the Berlin Embassy during the summer of 1941 (as Allied air raids over that city intensified), which subsequently shut down after the attack on Pearl Harbor.[23]

Though our passengers came from various European countries, not all had the United States as their final destination. Table 5 divides alien passengers according to ethnicity and length of stay in the US. Passengers holding US immigration papers with an assigned quota number declared a permanent length of stay. Passengers with temporary visas (for example students or visitors) declared the time period (months or years) between arrival and the expiration date of the visa. Those en route to other countries declared to be in transit and stated the number of days or weeks until their departure. United States citizens accompanying alien family members, and included in the alien manifests, are excluded from Table 5.

Table 5: Alien passengers by ethnicity and length of stay in the US

	Jews			Non-Jews			Total
	All	M	F	All	M	F	
Permanent	9,920	4,697	5,223	4,147	1,786	2,361	14,067
Temporary	1,060	588	472	1,846	1,016	830	2,906
Transit	380	217	163	1,116	608	508	1,496
N	**11,360**	**5,502**	**5,858**	**7,109**	**3,410**	**3,699**	**18,469**

Among aliens declaring a permanent stay there were more females than males, a pattern not replicated in temporary or transit passengers. The vast majority of passengers in our dataset arrived in the US to stay permanently, a tendency that was much stronger among Jews, who were seldom in transit when compared to non-Jewish passengers.

Finally, alien passengers also reported their height. This information allows for a comparative study with regards to the population in the sending and receiving countries so to evaluate the transfer of health capital of Jewish and non-Jewish passengers. In the next section we elaborate on the topic of human stature as a proxy for individual health, discuss the methodological assumptions of our study, and review the relevant anthropometric literature.

[23] See Figure 6 in the Appendix for the kernel densities of visa issues by country.

4 Human stature as a proxy for individual health

Early life conditions are vital determinants for an individual's adult stature, which enables the use of the stature of a birth cohort – the final average height of individuals born in a given year – as a proxy for living conditions around this cohort's time of birth.[24] Conditions influencing human stature include, among others, monetary income, disease environment, pollution, nutritional intake, quality of housing, and physical workload (Steckel 1995). Thus, the average height of a cohort can be considered the output of a combination of living standards as measured by these effects. Adult stature therefore is a standardised and comprehensive metric offering a tool to compare levels of health and human capital across countries, especially useful when we cannot observe income. Such is the case of our study, since official and actual income levels for the countries under observation may differ in this historical setting due to: differences in official monetary income levels, price levels, black markets, public goods provision, and different sizes of unproductive sectors such as subsistence farming.

The literature suggests that increases in height are associated with more rapid growth of GDP per capita, life expectancy, and nutritional intake (Baten and Blum 2014, Weil 2007). Health and nutrition in early childhood are key factors in the association of height, cognitive and non-cognitive skills, and educational standards. For example, Schick and Steckel (2010) find that taller children have higher average cognitive and non-cognitive test scores, and that each aptitude accounts for a substantial and roughly equal portion of the wage premium taller individuals enjoy. Similarly, Case and Paxson (2008) find that height is associated with better mental and physical health and cognitive function in late life. Guven and Lee (2013) emphasise that the association between height and cognitive outcomes remains significant after controlling for education, suggesting that height affects cognitive functioning beyond higher educational attainment. Likewise, controlling for high quality nutrition and health

[24] Individual stature is also influenced by genetics. Average heights however, net out genetic effects since these are uniformly distributed across the population. See Komlos (1992) for a detailed discussion.

may explain a large proportion of height differences between countries (Bozzoli, Deaton and Quintana-Domeque 2009, De Beer 2012, Baten and Blum 2014). Taller height has been associated with a wage premium, which may be explained in large part by higher average educational attainment and sorting into higher-status occupations and industries (Persico, Postlewaite and Silverman 2004; Paxson, Case and Islam 2009).

Moreover, a vast strand of the growth literature suggests that health and human capital are driving forces in endogenous growth processes and, therefore, importing health and human capital via immigration may have a beneficial impact on economic development. Conversely, exporting health and human capital may have long lasting detrimental consequences for the sending country if emigrants carry disproportionately high levels of health of human capital compared with the population they leave behind (Arrow 2012; Galor 2011, Mankiw, Romer and Weil 1992, Hatton 2010).

Average height serves as a valuable indicator for health and human capital in a series of historical settings. For example, during the 1920s Mexican migrants to the US were positively selected on height compared to the average Mexican population as measured in military or passport records (Kosak and Ward 2014). Likewise, individuals from Europe, the Middle East, and Latin America migrating to Argentina in the early twentieth century were taller than those left behind in the countries of origin (Twrdek 2012). Italians migrating to the US between 1907 and 1925 also tended to be taller than the population in the provinces of origin (Spitzer and Zimran 2014).

Studies on Jewish heights in historical Europe have mostly found that Jews were shorter than non-Jews in different locations, but the relationship with living standards is ambiguous in some settings. In the German Principality of Salm in the early nineteenth century, average Jewish males were approximately 155 cm tall, or 10 cm shorter than non-Jewish Germans (Aschoff and Hiermayer 2009, Wurm 1982). In Poland, Jewish conscripts born between 1845 and 1892 were 2.5 cm shorter than Christians at the beginning of the period, and the difference exceeded 4 cm in the 1890s (Kopczynski 2011). Similarly, the average height of

Jewish males in Vienna during the second half of the nineteenth century increasingly fell behind in comparison to non-Jews (Komlos 1992). At the turn of the century in Hungary, although the average income of Jews was higher than that of non-Jews, the distribution of income among Jews was far more unequal than among Christians. Still, on average Jewish high school students were 1 cm shorter than Gentiles (Bolgar 2013). Conversely, Jews in late nineteenth century Gibraltar enjoyed considerably better health status than Catholics as measured by life expectancy at birth (Sawchuk et al. 2013); which suggests a Jewish height advantage.

In this light and in the context of our study, anthropometric indicators are well suited to assess not only the human capital of migrants but also the selection these migrants underwent. In section 5 we compare the average height of migrants with the receiving and sending population in order to identify any health gains or losses through selective migration.[25] We use Baten and Blum's (2012) height dataset with information on average height, organized by birth decades, for 156 countries spanning the nineteenth and twentieth centuries as a benchmark.[26] The goal is to assess the levels of brain gain or brain drain the United States experienced through the admission of European refugees before and during the Second World War.

5 United States bound passengers

In the remainder of the paper we restrict our analysis to passengers with final destination in the United States. The objective is to evaluate how this wave of permanent migrants affected not only sending countries but also the US. In Section 5.1. we employ OLS regressions to document the link between the height of adult passengers and human capital.[27] In Sections

[25] We adjust the height of individuals above the age of 50 by correcting for the effect of shrinking. Fernihough and McGovern (EHB in press) estimate that the elderly male and female English population experience an annual decline in physical stature of approximately 0.09 per cent and 0.13 per cent, respectively. We use these estimates to adjust heights of elderly individuals.

[26] Baten and Blum (2012 and 2014) tested their data (https://www.clio-infra.eu/) for remaining biases to ensure representativeness and offer a thorough discussion of the data compilation and coverage.

[27] We consider only adult passengers in our analysis so we exclude all children under the age of 16.

5.2. and 5.3. we compare the average height of our passengers with that of source countries, and also the average height in the United States to evaluate whether the US experienced brain drain or brain gain during the period under observation.

5.1 Passenger height and human capital

The OLS regressions in Table 6a assess correlates of individual height for approximately 5,500 adult males. Our dependent variable is individual height and the explanatory variables are ethnicity, educational background (proxied by occupational level and language skills), year of migration (visa issuing date yields similar results), class of travel, and the identity of the passage's funder.

Generally, Jewish males were approximately 1.8 cm shorter than non-Jews (column 1); the coefficient decreases slightly with additional controls but remains significant. The interactions between Jewish background and nationality identify country-specific differences between Jews and non-Jews. These coefficients are mostly negative, but only statistically significant for Austrian Jews, Dutch Jews, and Polish Jews who were on average 6.9, 5.5, and 3.5 cm shorter than Jewish males in general.

Occupational controls (column 2) illustrate the link between an individual's height and the corresponding skill level. Individuals with a professional or semi-professional occupation were substantially taller than individuals with skilled professions; skilled occupations in turn were associated with taller heights compared with unskilled or semi-skilled occupations. The rationale behind this finding is related to the typical features of an upper class background: well-off families tend to have taller and educationally successful descendants than their lower class peers. These effects are smaller once we add controls for language skills and passage sponsor, but height gaps between these occupational groups are robust to these changes (columns 3 and 5).

We use the information on language skills to construct a binary variable on whether the individual has knowledge of the English language and a metric variable for the number of

Table 6a: Correlates of individual height (males)

		(1)	(2)	(3)	(4)	(5)
Jewish background	Jewish	-1.63***	-1.46**	-1.46**	-1.38**	-1.28**
		(-2.58)	(-2.30)	(-2.31)	(-2.19)	(-2.03)
	Jewish_German	-1.44	-1.18	-0.86	-0.46	-0.43
		(-1.45)	(-1.19)	(-0.87)	(-0.46)	(-0.43)
	Jewish_Austria	-7.12***	-6.89***	-6.92***	-6.56***	-6.47***
		(-3.17)	(-3.11)	(-3.09)	(-2.86)	(-2.82)
	Jewish_NL	-5.86***	-5.64***	-5.37***	-5.61***	-5.47***
		(-4.28)	(-4.12)	(-3.96)	(-4.12)	(-4.02)
	Jewish_Poland	-3.70***	-3.57***	-3.33***	-3.32***	-3.20***
		(-3.45)	(-3.35)	(-3.12)	(-3.11)	(-3.00)
	Jewish_France	-0.96	-1.10	-0.99	-0.68	-0.71
		(-1.09)	(-1.26)	(-1.14)	(-0.78)	(-0.82)
	Jewish_Belgium	-0.43	-0.32	-0.34	-0.36	-0.36
		(-0.36)	(-0.27)	(-0.29)	(-0.30)	(-0.30)
	Jewish_CZ	-1.09	-1.08	-1.04	-0.94	-0.92
		(-0.83)	(-0.84)	(-0.81)	(-0.73)	(-0.72)
	Jewish_Hungary	-1.82	-1.83	-1.67	-1.63	-1.50
		(-1.34)	(-1.38)	(-1.26)	(-1.23)	(-1.13)
	Jewish_Switz	-1.62	-1.58	-1.24	-1.21	-1.30
		(-1.42)	(-1.39)	(-1.09)	(-1.07)	(-1.14)
	Jewish_Russia	-1.14	-1.26	-0.81	-0.84	-0.82
		(-0.78)	(-0.88)	(-0.56)	(-0.58)	(-0.57)
Occupation	Unskilled		-1.27***	-0.89*	-0.71	-0.66
			(-2.64)	(-1.85)	(-1.47)	(-1.35)
	Semi-skilled		-2.60***	-2.08***	-1.96***	-1.83***
			(-5.72)	(-4.54)	(-4.29)	(-4.00)
	Skilled		-1.40***	-1.15***	-1.07***	-1.00***
			(-4.57)	(-3.77)	(-3.50)	(-3.26)
	Semi-professional		-0.08	-0.05	-0.07	0.04
			(-0.24)	(-0.14)	(-0.20)	(0.12)
	Professional		reference	reference	reference	reference
Language skills	Number of languages			-0.04	0.15	0.22
				(-0.30)	(0.98)	(1.39)
	English			1.73***	1.58***	1.38***
				(7.68)	(6.95)	(5.82)
	Does not speak English			reference	reference	reference

Table 6a: Correlates of individual height (males) Cont'd

Last resid.	Homeland				reference	reference
	Abroad				0.79***	0.57**
					(2.98)	(2.12)
Year of departure	1940				reference	reference
	1941				-0.69***	-0.65***
					(-2.81)	(-2.54)
	1942				-2.31***	-1.99***
					(-4.41)	(-3.77)
Class of travel	1st					reference
	2nd					-0.65*
						(-1.67)
	3rd					-0.66***
						(-2.68)
	4th					-0.59
						(-1.28)
Ticket paid by	Self					reference
	Family member					-0.90***
						(-3.35)
	Other					0.01
						(0.03)
	Country fixed-effects	YES	YES	YES	YES	YES
	Minor age dummies	YES	YES	YES	YES	YES
	Constant	172.02***	172.89***	171.92***	171.91***	172.29***
		(125.15)	(126.95)	(124.74)	(124.34)	(125.66)
	Observations	5,461	5,461	5,461	5,461	5,461
	R-squared	0.09	0.10	0.11	0.12	0.12

Note: Robust t-values in brackets. */**/*** refers to statistical significance at the 10%, 5% and 1% levels.

languages an individual speaks. Males were not substantially different regarding the number of languages spoken, but individuals speaking English were up to 1.7 cm taller than non-English speakers.[28]

[28] In theory, citizens of multilingual countries, such as Luxembourg and Belgium, might have a natural advantage in learning multiple languages. All specifications in Table 6a include country-fixed effects, which should take care of this potential problem. The remaining effect of language skills can therefore be considered to reflect superior human capital of an individual.

We construct another binary variable to identify whether an individual's last country of residence differed from an individual's country of birth, which indicates the individual was already a migrant before leaving Europe.[29] We find these prior migrants were taller when compared to individuals with last residence in their country of birth (+0.8 cm to +0.6 cm for males and females, respectively). Moreover, we use three binary variables to control for the year of departure from Europe: 1940, 1941, and 1942. Using 1940 as a benchmark, we find that migration in 1941 and 1942 is associated with a height disadvantage in the order of 0.7 cm and 2.3 cm, respectively, further suggesting early leavers, defined as an individuals who lived outside their country of birth, carried higher levels of human and health capital.

We roughly proxy for passenger purchasing power with two additional variables: class of travel and information regarding the sponsor of the journey. We are able to distinguish between first and second class cabins, third class and 'steerage' – a low cost variant that involved staying in cargo spaces for the duration of the journey. We find that males travelling second or third class were shorter compared with first class passengers. Males who reported to have self-financed their trip were 0.9 cm taller than those who relied on a donor.[30]

Results for females show in Table 6b. Jewish females were generally shorter than non-Jewish females (column 1), and interaction variables suggest that female Jews of Polish nationality were up to 3 cm shorter when compared to Jewish females in general. Conversely, the interaction variable for Hungarian-Jewish females is positive and larger than the negative coefficient for female Jews, suggesting that female Hungarian passengers in our sample Jews were in fact taller than their non-Jewish peers (column 1). This effect, however, is not robust to the inclusion of occupational background, suggesting that female Hungarian Jews in our data were taller mainly due to superior socioeconomic background (column 2).

[29] As all individuals in our sample, prior migrants also left Europe via Lisbon: 24 per cent in 1940, 67 per cent in 1941, and 9 per cent in 1942. These figures deviate slightly from the departure patterns of individuals who last resided in their country of birth: 33 per cent, 60 per cent, and 7 per cent, respectively. It is worth noting that we cannot identify the reason for prior migration, nor do we know the exact date of that event so we cannot directly compare these prior migrants and the remaining sample.

[30] Many passenger journeys were sponsored by family members or International Associations dedicated to help refugees, such as the Joint Distribution Committee.

Table 6b: Correlates of individual height (females)

		(1)	(2)	(3)	(4)	(5)
Jewish background	Jewish	-3.28***	-3.29***	-3.37***	-3.28***	-3.28***
		(-5.56)	(-5.56)	(-5.67)	(-5.50)	(-5.51)
	Jewish_German	0.91	0.91	1.42*	1.51*	1.58*
		(1.11)	(1.11)	(1.72)	(1.82)	(1.90)
	Jewish_Austria	-1.56	-1.62	-1.67	-1.37	-1.31
		(-1.00)	(-1.04)	(-1.09)	(-0.88)	(-0.83)
	Jewish_NL	0.37	0.30	0.64	0.55	0.53
		(0.28)	(0.22)	(0.47)	(0.40)	(0.39)
	Jewish_Poland	-2.63**	-2.56**	-2.46**	-2.46**	-2.41*
		(-2.09)	(-2.01)	(-1.96)	(-1.97)	(-1.93)
	Jewish_France	0.97	0.90	0.78	0.92	0.89
		(1.16)	(1.08)	(0.93)	(1.10)	(1.07)
	Jewish_Belgium	1.56	1.50	1.58	1.60	1.70
		(1.37)	(1.32)	(1.41)	(1.42)	(1.51)
	Jewish_CZ	1.10	1.03	1.17	1.17	1.19
		(0.73)	(0.68)	(0.77)	(0.77)	(0.79)
	Jewish_Hungary	1.42	1.50	1.82	1.88	2.05
		(0.89)	(0.95)	(1.13)	(1.20)	(1.31)
	Jewish_Switz	2.76**	2.69**	2.70**	2.84**	2.70**
		(2.32)	(2.26)	(2.25)	(2.34)	(2.26)
	Jewish_Russia	-0.35	-0.35	-0.03	0.07	0.31
		(-0.25)	(-0.25)	(-0.02)	(0.05)	(0.22)
Occupation	Unskilled		-1.11*	-0.91	-0.80	-0.90
			(-1.82)	(-1.52)	(-1.34)	(-1.53)
	Semi-skilled		-1.28*	-1.06	-0.99	-0.82
			(-1.84)	(-1.54)	(-1.45)	(-1.22)
	Skilled		-1.44**	-1.25*	-1.11*	-0.97
			(-2.10)	(-1.83)	(-1.65)	(-1.46)
	Semi-professional		-1.07	-1.10	-1.07	-1.04
			(-1.52)	(-1.57)	(-1.54)	(-1.53)
	Professional		reference	reference	reference	reference
Language skills	Number of languages			0.23	0.39**	0.54***
				(1.42)	(2.25)	(3.01)
	English			1.36***	1.18***	1.00***
				(5.89)	(5.06)	(4.22)
	Does not speak English			reference	reference	reference

Table 6b: Correlates of individual height (females) Cont'd

Last resid.	Homeland				reference	reference
	Abroad				0.63**	0.56*
					(2.18)	(1.91)
Year of departure	1940				reference	reference
	1941				-0.51*	-0.48
					(-1.74)	(-1.60)
	1942				-1.90***	-1.69***
					(-3.79)	(-3.32)
Class of travel	1st					reference
	2nd					-1.34***
						(-2.68)
	3rd					-0.69**
						(-2.55)
	4th					-0.97
						(-1.40)
Ticket paid by	Self					reference
	Family member					-0.36
						(-1.47)
	Other					-1.06***
						(-3.20)
	Country fixed-effects	YES	YES	YES	YES	YES
	Minor age dummies	YES	YES	YES	YES	YES
	Constant	163.18***	164.37***	163.69***	163.68***	164.27***
		(136.99)	(122.22)	(122.42)	(121.55)	(122.86)
	Observations	3,738	3,738	3,738	3,738	3,738
	R-squared	0.08	0.08	0.09	0.10	0.10

Note: Robust t-values in brackets. */**/*** refers to statistical significance at the 10%, 5% and 1% levels.

Coefficients reflecting height differences due to occupational background are similar compared with those obtained for males, but statistical significance is somewhat lower. The results suggest a hierarchy in terms of height: professionals and semi-professionals were taller than lower-skilled individuals, but height differences between skilled, semi-skilled and unskilled females were surprisingly small. We can only speculate about this result, but it

seems plausible that the many of the homemakers may not have had a low-skilled background. The traditional female role of the 1940s may generate somewhat upward biased coefficients for non-professional occupational classes. As such, female language skills become a valuable addition to the proxies of human capital. Each additional language corresponds to a height advantage of 0.4 cm to 0.5 cm; English-speaking females are estimated to be one to 1.3 cm taller than females without this ability (columns 3 to 5). As with men, women leaving Europe in 1941 and 1942 were approximately 0.5 cm and 1.9 cm shorter than those departing in 1940. Women claiming last residence outside of their country of birth were 0.6 cm taller than otherwise (column 4); this coefficient gets smaller when we add controls for the class of travel and identity of the passage's sponsor (column 5).

Finally, female heights also correlate with the class of travel: first class travelers were on average 0.7 cm and 1.3 cm taller than females travelling second and third class. Similarly, women whose journey was paid by someone outside of her family circle are found to be approximately 1.1 cm shorter. In contrast to the results for males, we do not find a difference associated with a family member's involvement in the financing of the passage. This result makes sense in the traditional family model of the 1940s when women were often financial dependents of mostly fathers or husbands: having a sponsor within the family was the norm rather than a sign for limited financial resources.

5.2 Comparison with source populations

We compute the average height of 19 passenger groups by nationality and compare these values with heights in the corresponding source countries so to assess the degree of selection.[31] Our results show that an overwhelming number of passenger groups are positively selected in terms of their average height, suggesting that these passengers were predominantly drawn from well-off social strata and that these passengers' home countries experienced a drain of health and human capital in this transfer (Table 7a).

[31] We compute average heights for all nationalities that have at least 30 adult individuals. This is a common threshold used in anthropometrics to limit random influences on the analysis.

Table 7a: Heights and selectivity of European passengers (males), 1940-42

Nationality	Males (home country) (a)	Male migrants (b)	N (m)	Diff (m) (b) - (a)	Male migrants (Jews only) (c)	N (m, Jews)	Diff (m) (c) - (a)
Italy	166.0	172.4	74	6.4	172.8	33	6.8
United Kingdom	169.7	175.5	159	5.9			
Spain	164.8	170.5	57	5.7			
France	167.3	172.9	626	5.6	171.1	257	3.8
Portugal	164.3	169.1	129	4.8			
Denmark	170.8	175.4	30	4.6			
Czechoslovakia	168.1	172.5	248	4.4	171.7	181	3.6
Switzerland	170.8	175.0	253	4.2	173.1	111	2.2
Russia	168.4	172.0	279	3.6	171.2	226	2.8
Belgium	167.9	171.2	282	3.3	170.2	175	2.3
Romania	168.3	171.0	71	2.7	169.3	58	1.0
Greece	168.7	171.1	50	2.4			
Hungary	169.1	171.4	177	2.3	170.2	129	1.1
Austria	169.2	170.9	199	1.8	169.8	177	0.7
Poland	167.6	169.0	755	1.4	168.2	657	0.6
Netherlands	171.6	172.9	228	1.3	169,2	98	-2.4
Luxembourg	170.0	170.0	66	0.0	168.2	59	-1.8
Germany	170.4	170.1	2,070	-0.3	169.9	1,946	-0.5
Latvia	171.6	170.4	40	-1.2	169.8	36	-1.7

The degree of this drainage for male passengers varies between two extremes: German and Latvian males were 0.2 cm and 1.2 cm shorter than contemporary German and Latvian males in general, suggesting a slightly downward selected sample. On the other extreme, we find that male passengers from Italy (+6.3 cm), Spain (+5.6 cm) and France (+5.5 cm) were highly positively selected. In between we find slightly lower levels of positive selection in the following order: Britain, Denmark, Portugal, Switzerland, Czechoslovakia, Russia, Belgium, Romania, Greece, Hungary, Austria. The heights of Polish and Dutch males still reflect some positive selection (+1.3 cm and +1.1 cm, respectively), and Luxembourgian male passengers were equally tall when compared with Luxembourgian males in general.

On the right hand side section of Table 6a we assess the degree of selection of Jewish males by comparing their average height with that of their respective countries of origin. Despite the results in Tables 5a and 5b that suggest Jewish passengers were somewhat shorter than their non-Jewish counterparts, we find that this episode of Jewish emigration also constituted a drainage of human and health capital for most countries of origin in Europe. Only the

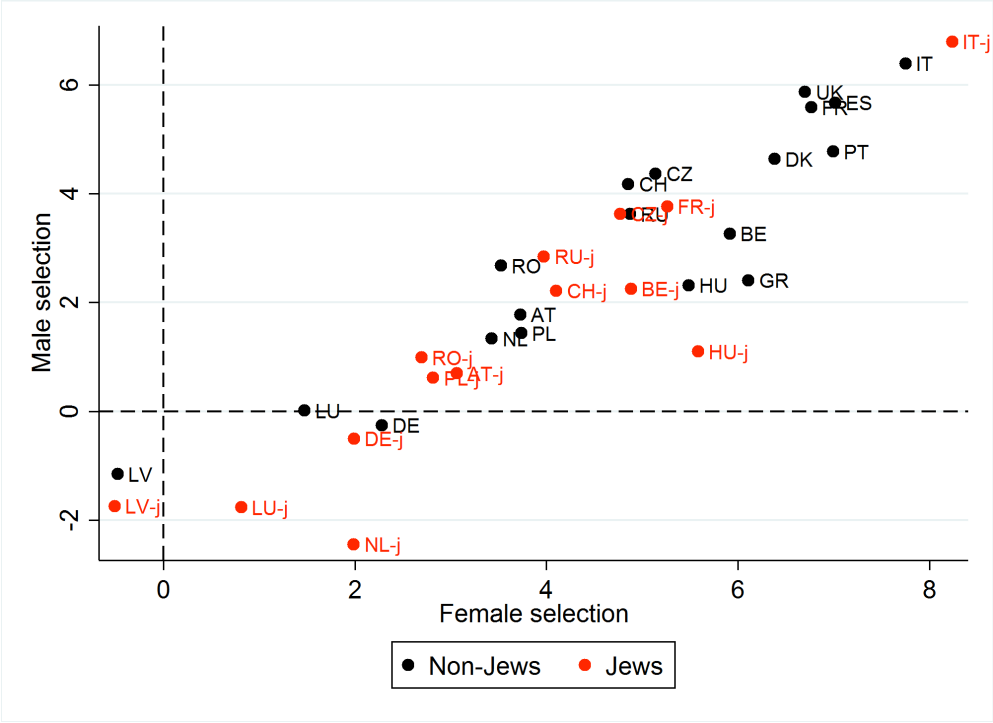
Dutch (-2.7 cm), Luxembourgian (-1.8 cm), Latvian (-1.7 cm) and German (-0.5 cm) Jewish passengers show negative selection. Results for females (Table 7b) are similar, but the degree of selection is generally higher.

Table 7b: Heights and selectivity of European passengers (females), 1940-42

Nationality	Females (home country) (d)	Female migrants (e)	N (f)	Diff (f) (e) - (d)	Female migrants (Jews only) (f)	N (f, Jews)	Diff (f) (f) - (d)
Italy	155.2	163.0	88	7.7	163.5	33	8.2
Spain	154.2	161.2	47	7.0			
Portugal	153.7	160.7	116	7.0			
France	156.5	163.3	944	6.8	161.7	293	5.3
United Kingdom	158.6	165.3	237	6.7			
Denmark	159.7	166.1	41	6.4			
Greece	157.7	163.9	67	6.1			
Belgium	157.0	163.0	355	5.9	161.9	195	4.9
Hungary	158.1	163.6	165	5.5	163.7	119	5.6
Czechoslovakia	157.2	162.3	261	5.1	162.0	188	4.8
Switzerland	159.7	164.6	267	4.9	163.8	125	4.1
Russia	157.5	162.3	233	4.9	161.4	179	4.0
Austria	158.2	161.9	280	3.7	161.2	246	3.1
Poland	156.7	160.5	726	3.7	159.5	617	2.8
Romania	157.4	160.9	80	3.5	160.1	58	2.7
Netherlands	160.4	163.8	216	3.4	162.4	97	2.0
Germany	159.3	161.6	2,677	2.3	161.3	2,409	2.0
Luxembourg	158.9	160.4	76	1.5	159.7	62	0.8
Latvia	160.4	159.9	36	-0.5	159.9	30	-0.5

Figure 1 shows a somewhat linear relationship between the degree of male and female height selectivity by plotting the pairs of differences in Tables 7a and 7b by country of origin. The degree of female height selectivity is higher: only Latvian females are shorter than the corresponding source population. All other groups (Jewish or not) are more than two centimeters taller compared with their source populations, suggesting that European countries suffered even larger drain of human and health capital from female emigration.

Figure 2: Male versus female height selectivity by country of origin and ethnicity



Note:AT:Austria, BE:Belgium, CH:Switzerland, CZ:Czechoslovakia, DE:Germany, DK:Denmark, ES:Spain, FR:France, GR:Greece, HU:Hungary, IT:Italy, LU:Luxembourg, LV:Latvia, NL:Netherlands, PL:Poland, PT:Portugal, RO:Romania, RU:Russia, UK:United Kingdom.

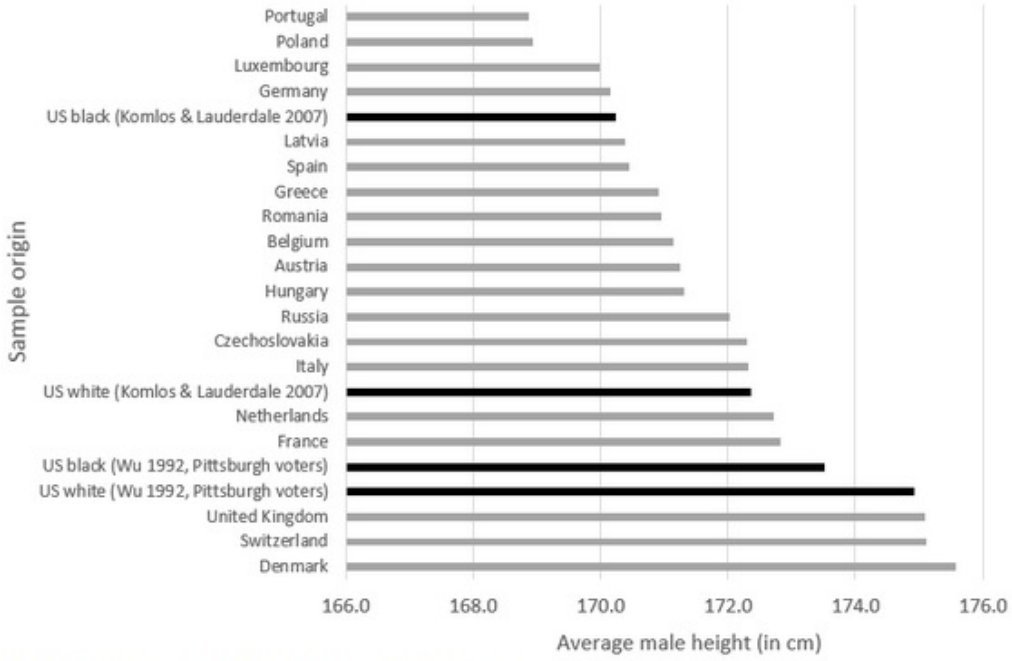
5.3 Passenger heights vs US heights: brain gain or brain drain?

We now compare the average heights of passengers with the average heights of the corresponding US population, for which we use two samples. The first is a representative sample of US-born non-Hispanic males and females after World War II from surveys of the National Center for Health Statistics (NCHS) (Komlos and Lauderdale 2007). The second comprises of non-Hispanic voters from Pittsburgh and Allegheny County between 1890 and 1945 (Wu 1992). This last sample is far from being representative of the general US population, but the very fact that voters represent an upward biased population sample provides us with a benchmark of a well-off population segment.

We compare our passengers with the non-Hispanic US born population in Figures 2 and

3 to assess the gains or losses in human and health capital of the US due to the immigration of Europeans. In both US samples blacks tend to be shorter than caucasians. Also, as expected, voters in the voters' sample were substantially taller than the population at large in the NCHS samples. Using male caucasians from the latter sample as a benchmark, we find that passengers from 14 out of 19 nations were shorter compared to the US average: only Dutch, French, UK, Swiss and Danish passengers increased the average height in the US. Passengers from the UK, Switzerland and Denmark were even taller than the height of the US voter sample.

Figure 3: Height of passengers vs. US heights (males)

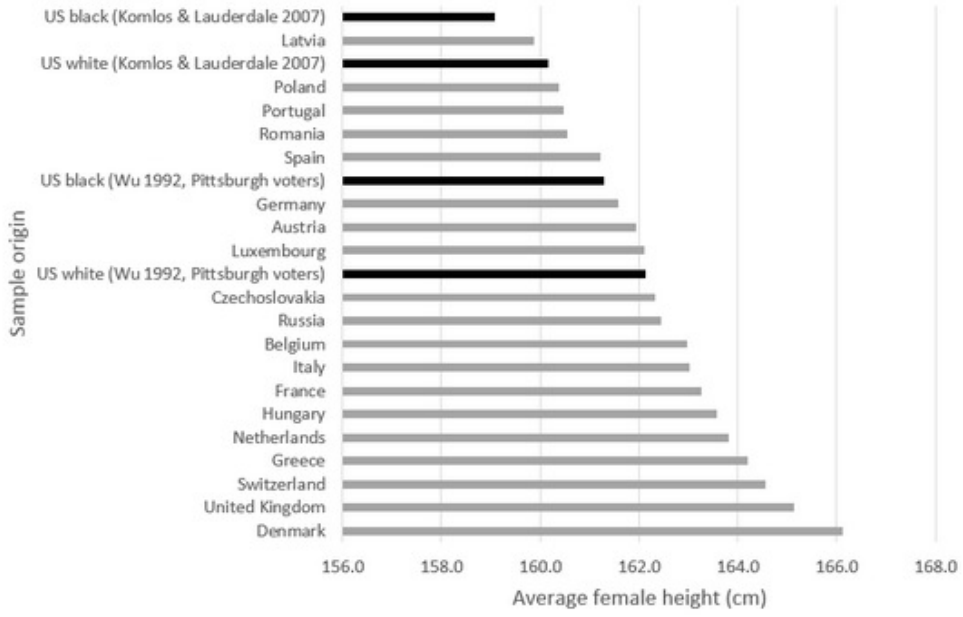


Note: US samples are in black; passenger samples are in grey.

Among females, only Latvians were shorter than the caucasian females in the US. When we use US born voters as a benchmark we find that Polish, Portuguese, Romanian and Spanish passengers are shorter than the black US population. German, Austrians and Luxembourgians on the other hand are taller than US blacks but shorter than US caucasians. The majority of female passengers, however, are even taller compared with the sample of well-off voters, suggesting that the US experienced large gains in human and health capital

through the immigration of females.

Figure 4: Height of passengers vs. US heights (females)



Note: US samples are in black; passengers samples are in grey.

6 Conclusion

We assess the human and health capital of 20,441 European individuals travelling to the US between 1940 and 1942. 11,687 of these passengers were Jews escaping Nazi persecution in various countries and constitute the last wave of Jewish migrants to escape the Holocaust. We use data based on manifests, containing detailed information on all alien passengers arriving the Port of New York and departing from Lisbon, the only European port with regular passenger traffic to the Americas in the early 1940s.

In light of the literature that considers adult height as a measure of cumulative net-nutrition since birth, we use the average height of adult passengers as a proxy for their human and health capital. We divide the passengers into 19 groups according to their nationality and compare their average height with that of the population in corresponding source countries as well as with the average height in the US. The objective is to evaluate

the brain drain or gain of this migration movement.

We find that most European passengers were substantially taller when compared with the population in their source countries, which suggests positive selection ranging between +6.3 cm for Italian males (+6.6 cm for Italian Jewish males) and +1.3 cm for Polish males (+0.6 cm for Polish Jewish males). Jewish migrants were taller than the average height of the population in most sending countries, but shorter when compared with non-Jewish passengers in our data.

German nationals are the most represented in our data and evidence a low degree of selection; male Germans are negatively selected (-0.2 cm for all passengers; -0.5 cm for Jews), while female Germans are positively selected, but to a lesser degree in international comparison. This finding is unsurprising since many Germans, possibly carrying higher levels of human capital, had left Europe already before 1940 due to the increased restrictions on Jewish life ever since the Nazis' seizure of power in 1933. Similarly, Jewish emigration due to Pogroms in the early 20th century in the western parts of the Russian Empire may explain the low degree of selection among individuals from modern-day Latvia and Poland (Spitzer 2015). Conversely, there is no reason to assume that Jews living outside Nazi controlled territory should have left Europe in very large numbers before the outbreak of war in 1939, even though some could have taken that preemptive step. We believe, therefore, that the differences in selection with respect to German, Polish and Latvian migrant selection are the result of two different waves of migration since many Jewish-Germans, Jewish-Polish and Jewish-Latvians had left before other European Jews. Our empirical evidence provides reason to believe that these prior migrants carried higher skills compared with those who followed in the early 1940s.

We further compare our passengers with the caucasian population in the US. We find that male passengers from 14 out of 19 nations were shorter compared to the US height average: only Dutch, French, UK, Swiss and Danish passengers were taller than the average height in the US. For female passengers, we find that only Latvians were shorter than the

population in the US, indicating that the US experienced a substantial gain of human and health capital from the inflow of these female passengers.

We also confirm well-known features of self-selection mechanisms. First, early migrants were taller than late migrants, suggesting that on average more well-off individuals decided to migrate at an earlier time. Second, the German case suggests that a large migrant stock, i.e. early refugees that had left Germany after the Nazi's seizure of power in 1933, but also German-Americans in general, may have provided for less privileged followers via the transfer of remittances and information about the destination country, thereby reducing the perceived risk of migration. Third, we observe the presence of economic barriers to migration: passengers travelling first class were taller compared to those travelling less comfortably; also, male passengers whose ticket was paid by a family member, and females whose ticket was paid by an individual outside the closest family circle were substantially shorter when compared to those who could afford paying for the passage themselves. These findings suggest that despite the urgent need to escape Europe of most of these individuals, they still responded to economic incentives and opportunity costs.

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7 Appendix

7.1 International travel in the 1940s

In the early 1940s commercial aviation was in its early stages. In 1937 Pan American Airways and Britain's Imperial Airways carried out survey flights across the Atlantic and in the summer of 1939 Pan Am officially inaugurated initially mail and then passenger service

twice a week, along two routes. The northern route linked Port Washington in New York to Southampton in England, stopping in New Brunswick, Newfoundland, and Ireland. The southern route connected New York and Marseilles with stops in Bermuda, the Azores, and Lisbon. The trip to Lisbon lasted approximately 27 hours and was priced at $375 one-way or $675 return.[32] Each Boeing 314 clipper –or flying boat, as it landed on water– carried a maximum of 36 (nighttime) passengers and 11 crew members including two cabin stewards.

The outbreak of the war in September of 1939 brought service to Southampton and Marseilles to a halt so Foynes in Ireland and Lisbon became the terminals for the northern and southern routes, respectively. In October the northern route was suspended for the winter and it was never resumed; service across the Atlantic was therefore consolidated on the New York-Lisbon line (Trippe 1941:60). When the US joined the war in December of 1941, military passengers and cargo took priority over commercial purposes. Clippers carried military personnel and equipment on the Atlantic and Pacific routes under the orders of the US Army Transport Command though the planes were still flown by Pan Am crews.

The end of the war retired the clipper, which had become technologically obsolete with the development of new planes that could go long distance and land on runways (inherited from wartime building programs), which made flying much safer. Of the twelve boeing clippers ever built, three were lost in accidents one of which with considerable loss of life on a landing in Lisbon in February of 1943. Among the dead and the seriously injured were the prominent American author and war correspondent Benjamin Robertson and American singer and actress Jane Froman, respectively. Also killed on a plane shot down by the Luftwaffe, was the English film star Leslie Howard when flying from Lisbon to Bristol in June of 1943. The high profile of these passengers suggests that flying in the 1940s was the form of travel of the upper elites. Commercial air travel became more generalized in the late 1950s with the development of jet technology that allowed for a considerable reduction in travel times, effectively replacing passenger ships in long-distance transportation.

[32] In 2015 prices, these fares would correspond to $6,429.39 and $11,572.90 according to the CPI inflation calculator of the Bureau of Labor Statistics.

The dominant type of international travel in the early 1940s were therefore ocean liners, which is the reason we focus on the passengers thus carried. Steamers connected Lisbon and New York in 9 days and carried the bulk of the transatlantic passengers. There were several shipping lines from multiple nationalities crossing the Atlantic since the nineteenth century. In the US, the most prominent were perhaps the American Export Lines and the United States Lines, both based in New York and founded in 1919 and 1921, respectively. The former, provided cargo and passenger service to Mediterranean ports (from Gibraltar to Haifa), while the latter directed cargo, passenger, and mail operations to ports further north from Le Havre in France, to the Free City of Danzig, today Gdansk in the Baltic. In Portugal, the National and the Colonial Navigation Companies operated in the Atlantic since 1918 and 1922, respectively, concentrated mostly in routes connecting Lisbon to Africa and Brazil.

World War II affected Atlantic crossings as Europe saw most of its ports close to shipping traffic. In July of 1940, the American Export Lines began direct weekly service from Lisbon to New York on four sister ships, known as the Four Aces –SS Excalibur, SS Excambion, SS Exeter, and SS Exochorda– formerly used in 43-day luxury cruises in the Mediterranean. In addition to their own vessels, the company chartered the larger USS Siboney from the struggling Cuba Mail Line for service in the Lisbon-New York line. After the US joined the war, these ships went into service under the US Army for the transport of troops.[33] The SS Excambion was the last American passenger ship on the Lisbon-New York route, arriving the US on December 23^{rd} 1941.

Portuguese ships completed only two voyages to New York in 1940, the first was perhaps the most well known due to the refugee impasse aboard the SS Quanza. After the purchase of the SS Serpa Pinto in 1940 and subsequent modifications to the vessel, the company participated actively in the Lisbon-New York route from January 1941 until June of 1942. Of the 100 passenger vessel crossings from Lisbon to New York during that period of time, 66

[33] Of the four Export Lines sister ships, all but the SS Exochorda were lost in the war by enemy action.

were done by American ships, 28 by Portuguese ships, and six by vessels of other nationalities: four Greek and one Japanese all in 1940, and one Swedish ship carrying the last diplomats out of Europe in May of 1942.

Ocean liners on this route differed substantially from each other. The Four Aces were originally luxury ships and thus had smaller capacity when compared to the larger passenger ships of the Portuguese companies. While the SS Excalibur and its sister ships had a capacity of 125 first class passengers, the SS Serpa Pinto could carry a total of 704 passengers: 113 first class, 86 second class, 130 third class, and 375 steerage. According to the Transmigration Bureau, a nonprofit agency that assisted refugees in transit since 1940, the approximate cost of the steamship passage from Lisbon was $350 but each passenger's cost of travel from Europe to the US varied with place of origin, sojourn in Lisbon, and other taxes and fees (Ancestry.com).

Passenger ships out of Lisbon were often overbooked and oversold. An alternative form of crossing the Atlantic would be in cargo vessels. Many of these vessels were operated by the same shipping companies, but they could only carry very few passengers each time. We consulted a few manifests of cargo vessels when they carried passengers and they could contain between 5 and 13 passengers each.

7.2 Manuscript data collection and transcription

Created by the United States Customs Service and the Immigration and Naturalization Service, the collection of the *New York Passenger Arrival Records – 1820-1957* is physically located at the National Archives in Washington DC and is contained in 9,567 microfilm rolls. The vessel manifests corresponding to arrivals between 1940 and 1942 are in 243 rolls, each containing one to three volumes of ship manifests. Each volume is prefaced by a cover page that lists the volume number; year, month, and date of arrival in New York; name of the vessel and port of origin; total crew, number of crew sheets and total sheets.

A typical volume of 800 to 900 pages registered 2-3 days of arrival information but some

busy days extended through two volumes. On a typical week-day the Port of New York saw 10 to 20 vessel arrivals with ports of origin around the world but also from ports in the US. Between January 1st 1940 and December 31st 1942 there were a total of 13,574 vessel arrivals: 2,152 passenger ships, 7,212 cargo ships, 2,017 planes that could carry passengers or just mail, and 120 vessels with uncertain purpose (missing number of sheets). Of the 472 vessels coming from Portugal there were 100 passenger ships departing from Lisbon, 46 cargo only ships, 99 predominantly cargo ships that carried very few passengers, and 226 planes.[34]

We extracted over 3,000 picture files corresponding to the 100 passenger manifests of all passenger ships originating in Portugal. In our data however, we included only 97 manifests because the remaining three were either illegible, the vessel carried no passengers, or the vessel carried only passengers in transit to the Caribbean that did not disembark in New York. For each ocean liner, the complete passenger manifest is divided in three different parts, not necessarily in this order: the list of US citizens, the list of alien passengers, and the list of aliens/citizens employed in the vessel as members of crew. Some of the manifests may also include a list of aliens held for special inquiry. After the data extraction of the entire manifests onto picture files, we hired transcriptionist services to input the information corresponding to the passengers on the alien lists into spreadsheet format.

The header on each manifest sheet states the name of the vessel, the date of departure from Lisbon or any other intermediary port of call, the date of arrival in New York, and the class of travel of the passengers in the manifest sheet. Manifests were filled by officials of the shipping company. Upon arrival in New York, the vessel's commanding officer handed the manifest lists to the local immigration inspector who would verify, and eventually correct, the information on lists as passengers cleared customs. Each manifest sheet contains information up to 30 passengers, each on a separate line started with a number from 1 to 30. The questions

[34]The lists contain vessels departing from Portuguese ports other than Lisbon such as Leixões and Oporto in the mainland, and Funchal, Faial, Horta and Ponta Delgada in the Islands. Vessels departing from these other ports overwhelmingly carried cargo. At times ships departed from Lisbon and stopped at intermediate ports such as Casablanca, Bermuda, or Havana, to drop off and pick up passengers before getting to New York. Manifests contain all alien passengers arriving in New York by their port of origin.

asked of each passenger figure in numbered columns, which we now transcribe.

United States Citizens

1. No. on List

2. NAME IN FULL, Family name, Given name

3. Age, yrs/mos

4. Sex

5. Married or single

6. If native of United States Insular possession or if native of the United States, give date and place of birth (city or town and state)

7. If naturalized, give name and location of court which issued naturalization papers and date of papers

8. Address in the United States

Alien Passengers

1. No. on List

2. HEAD-TAX STATUS (this column for use of Government officials only)

3. NAME IN FULL, Family name, Given name

4. Age, yrs/mos

5. Sex

6. Married or single

7. Calling or occupation

8. Able to read and write in what language (or if exemption claimed, on what ground)

9. Nationality (Country of which citizen or subject)

10. Race or people

11. Place of birth: county, city or town, State, Province or District

12. Immigration visa, passport visa, or reentry permit number (prefix number with QIV, NQIV, PV, or RP and give section of act involved)

13. Issued: place and date

14. Data concerning verification of landings, etc. (this column for use of Government officials only)

15. Last permanent residence (county, city or town, State, Province or District)

16. No. on List (alien manifests extend on two separate pages and the numbers listed on the second page are in place of the passengers name)

17. The name and complete address of nearest relative or friend in country whence alien came, if none there, then in country of which a citizen or subject

18. Final destination, state, city or town (Intended future permanent residence): Foreign country via (port of departure), in U.S.A. its territories or possessions (State, city or town)

19. Whether having a ticket to such final destination

20. By whom was passage paid (Whether alien paid his own passage, whether paid by relative, whether paid by any other person or by any corporation, society, municipality, or government)

21. Whether in possession of $50 and if less, how much?

22. Whether ever before in the United States; and if so, when and where?

23. Whether going to join a relative or friend; state name and complete address, and if relative, exact relationship

24. Purpose of coming to United States: whether alien intends to return to country whence he came after engaging temporarily in laboring pursuits in the United States, Length of time alien intends to remain in the United States, Whether alien intends to become a citizen of the United States

25. Ever in prison or almshouse or institution for care and treatment of the insane or supported by charity, if so, which?

26. Whether a polygamist

27. Whether an anarchist

28. Whether a person who believes in or advocates the overthrow by force or violence of

the Government of the United States or all forms of law, etc. (see footnote for full test of the question)

29. Whether coming by reason of any offer, solicitation, promise or agreement expressed or implied to labor in the United States

30. Whether excluded and deported within one year

31. Whether arrested and deported at any time

32. Condition of health, mental and physical

33. Deformed or crippled. Nature, length of time and cause

34. Height: feet/inches

35. Complexion

36. Color of hair and eyes

37. Marks of identification

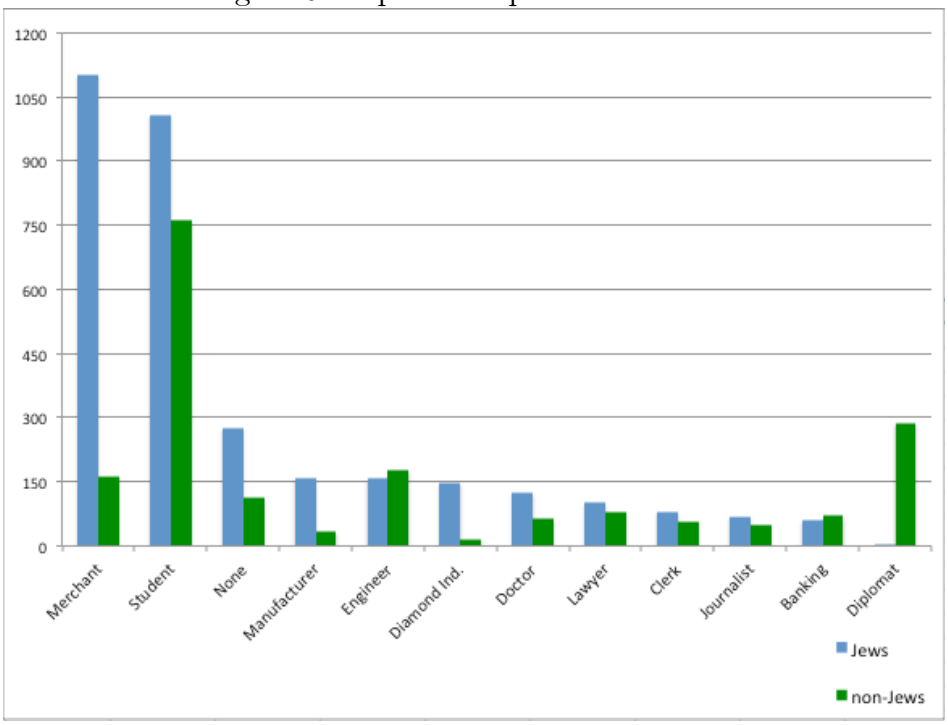
7.3 Occupations and the Armstrong index

The Armstrong index (1972) considers five occupational classes that allow distinguishing occupations according to their level of sophistication. In our data, unskilled occupations refer to statement such as 'without occupation', 'none' or unskilled occupations such as 'laborer'. In contrast, semi-skilled individuals would state occupations that reflect a low level of training or tasks requiring more professional experience than an 'unskilled' individual; examples of semi-skilled occupations include fishermen, hairdressers, chauffeurs or hotel employees. An occupation clearly has to signal solid training and skills, such as as merchants, nurses, and skilled industrial workers in order to be considered a 'skilled' profession. Semi-professional occupations include engineers, teachers, economists, chemists, and other white collar occupations indicating higher education. Professionals constitute the upper end of the occupational scale, including occupations such as diplomats, physicians, and university professors.

Figures 5 and 6 provide the top twelve occupations for men and women in our data by

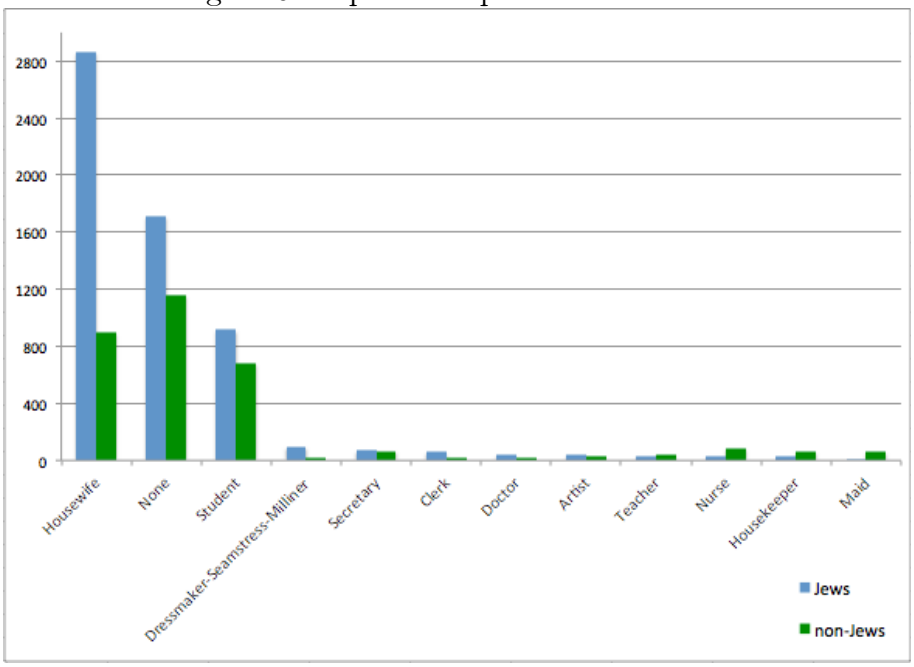
ethnicity. Jewish males were mostly merchants and students in contrast with non-Jewish males who were mostly students and diplomats. The relatively low number of male passengers that were retired or declared 'no' occupation contrasts directly with that of female passengers.

Figure 5. Top-12 occupations for males



In line with societal patterns of the 1940s, female passengers in our sample were mostly housewives or declared to have 'no' occupation. As such in the Armstrong index these women are classified as unskilled, which does not mean however that they carried low levels of human capital because they could have been educated. In that sense the number of languages spoken is a better proxy for female human capital as shown in Table 6b.

Figure 6. Top-12 occupations for females



7.4 Immigration Quotas

Table 7: United States immigration quotas by country of origin

Northwest Europe and Scandinavia		Eastern and Southern Europe		Other Countries	
Country	Quota	Country	Quota	Country	Quota
Germany	51,227	Poland	5,982	Africa (other than Egypt)	1,100
UK	34,007	Italy	3,845	Armenia	124
Ireland	28,567	Czechoslovakia	3,073	Australia	121
Sweden	9,561	Russia	2,248	Palestine	100
Norway	6,453	Yugoslavia	671	Syria	100
France	3,954	Romania	603	Turkey	100
Denmark	2,789	Portugal	503	Egypt	100
Switzerland	2,081	Hungary	473	New Zealand & Pacific Isls.	100
Netherlands	1,648	Lithuania	344	All others	1,900
Austria	785	Latvia	142		
Belgium	512	Spain	131		
Finland	471	Estonia	124		
Free city of Danzig	228	Albania	100		
Iceland	100	Bulgaria	100		
Luxembourg	100	Greece	100		
Total (number)	142,483		18,439		3,745
Total (%)	86.5		11.2		2.3
Total Annual immigration quota: 164,667					

Source: *Statistical Abstract of the United States.* Washington D.C. Government Printing Office, 1929, p. 100.

Figure 7: Kernel densities of visas issuing dates by country