Between Arab and White: Syrians and the Naturalization Law *

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Abstract

How does legal inclusion affect immigrants' assimilation efforts? This paper examines the impact of the 1915 *Dow v. United States* case, which classified Arab immigrants from Greater Syria as white and thus eligible for naturalization under the Naturalization Act of 1870. Using historical US census waves, cohort-based difference-in-differences, within family and event study frameworks, I investigate how this ruling influenced the assimilation behavior of Arabs in the US. I find a significant decline in the distinctiveness of names—measured by the Foreign Name Index (FNI)—for US-born children of Arab fathers post-1915. This decline, amounting to a 1.72-point (2.64%) decrease compared to a group generally perceived as white, and to a 7.4-point (11.7%) decrease comparing siblings within Arab families, indicates a shift towards more Americanized names. The response varied depending on factors such as the father's occupation, length of stay in the US, and the size of the Arab diaspora in the state of birth. Beyond naming, I analyze intermarriage and residential integration—outcomes requiring interaction between immigrants and natives. The results show that intermarriage rates among Arab men increased by 1.48 percentage points post-1915 compared to men perceived as white, indicating greater social acceptance, while residential integration outcome is mixed. Additionally, I introduce a novel *Arabic Americanization Index* to capture element of Arabic phonology, and a unique dataset of historical Arab-American newspapers, providing new directions for analysis. Unlike the usual focus on increasingly restrictive immigration policies, this paper evaluates the effects of a policy that reduced the cost of assimilation, providing insights into how such policies can affect assimilation. These findings highlight the crucial role of legal institutions in defining racial categories and promoting social inclusion.

JEL Codes: J15, K37, N31, N32,

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1 Introduction

The categorization of individuals into in-groups and out-groups is a universal feature of human behavior (Allport et al., 1954; Blumer, 1958), shaped by context-specific factors such as immigration waves, group salience, perceived distance from the dominant group, and legal institutions. This paper emphasizes the role of legal institutions in shaping racial categories, emphasizing that race is a social construct rather than a fixed or natural category (Lopez, 2006). In an era when migration policies often create barriers to immigrant integration, I investigate how immigrants respond when legal changes reduce these barriers (Hainmueller et al., 2017). This question is particularly relevant as contemporary debates on immigration, integration, and naturalization policies continue to influence who is included in the in-group and who remains marginalized.

This paper asks: *How does legal inclusion affect immigrants' assimilation efforts?* To answer this question, I examine the case of Arab immigrants from Greater Syria during the Age of Mass Migration (1890-1913) and the impact of a significant legal event on their assimilation. Specifically, I focus on the Naturalization Act of 1870, which limited naturalization to white persons and persons of African descent, and the 1915 *Dow v. United States* case, which classified Arabs as white and therefore eligible for naturalization. This case essentially reduced the cost of assimilation for the Arabs. This raises the question: how would the newly legally accepted group respond? They could either conform to the dominant group's identity or maintain their cultural and ethnic distinctiveness, as there is no longer a need to signal intentions to assimilate (Bisin et al., 2016). Determining who qualified as "white" was contentious, particularly during the Age of Mass Migration, as people from diverse backgrounds arrived in the United States. For instance, in *Ozawa v. United States* (1923), the Supreme Court ruled that Japanese immigrants were not white. I explore how Arab immigrants navigated this legal change and its implications for their assimilation efforts. The unique historical context of Arab immigrants from Greater Syria provides valuable insights into assimilation and identity formation, which I will further elaborate on.

Before examining the effects on assimilation efforts, it is essential to provide some historical context. The Age of Mass Migration (1850-1913) was one of the largest migration episodes in human history, with the United States absorbing nearly 30 million European immigrants (Hatton and Williamson, 1998; Abramitzky et al., 2012). While the economic literature extensively covers European immigration, smaller groups like Arabs from Greater Syria are often overlooked (Abramitzky et al., 2012; Tabellini, 2020; Gagliarducci and Tabellini, 2022). During this period, over 400,000 Christian Arabs from Greater Syria (modern-day Syria, Lebanon, Jordan,

and Palestine) migrated to the U.S., driven by economic opportunities, conscription avoidance from the Ottoman army, and sectarian tensions (Jacobs, 2015). They primarily settled in urban centers such as New York and Boston, establishing communities known as "Little Syria" (Jacobs, 2015; Center, 2023). Arabs immigrants were diverse in their occupations, ranging from peddlers and shop owners to merchants dealing in "oriental" goods, restaurant owners, and brokers (Jacobs, 2015). The highest socio-economic class among the immigrants included a cosmopolitan elite—writers, newspaper owners, and professors—who played a significant role in establishing newspapers that maintained connections to their homeland and addressed issues of Arab identity and assimilation (Jacobs, 2015; Gualtieri, 2009). I have collected these newspapers and will explain later how I intend to use them in my analysis.

The Naturalization Act of 1790 restricted citizenship to "free white persons" and was later modified in 1870 to include persons of African descent, but it continued to exclude others (Nat, 1870). Determining who qualified as "white" was often complex, requiring legal battles. For Arabs, this culminated in the 1915 case of *Dow v. United States*, where George Dow, a Syrian immigrant, appealed previous court decisions that denied his naturalization application on the grounds that Syrians were not considered white under the law (Dow, 14 Sep 1915). Dow argued that Syrians were part of the Caucasian race, citing both scientific and popular beliefs at the time. The court ultimately ruled in his favor, concluding that Syrians were indeed "white" and thus eligible for naturalization. This ruling "ended the debate" on whether Syrians were white or not, extending citizenship to Arab Christians (Gualtieri, 2009). It also underscored the role of the courts in defining racial boundaries and demonstrated the fluid nature of racial classifications in the United States.

To study assimilation effort, I first study names chosen by parents for their children. Unlike other outcomes, naming choices are fully under parental control, making them a direct indicator of parents' preferences regarding cultural assimilation or distinctiveness (Lieberson, 2000; Cook et al., 2014; Fouka, 2019; Abramitzky et al., 2020). I use the Foreign Name Index (FNI) to measure the distinctiveness of names, adapting the measure used by Fryer Jr and Levitt (2004); Fouka (2019) and (Abramitzky et al., 2020). The FNI quantifies the ethnic content of names based on their prevalence within a specific group versus the general population. Using data from the 1930 US Census, I constructed the FNI using names from the pre-treatment period (1900-1914) to provide a stable benchmark for "foreignness" before the Dow ruling. This approach avoids any feedback loop or bias that might occur if post-treatment behavior influenced the measure itself.

My focus is on the naming of the US-born children from 1905-1930. Descriptively, I find a sharp drop in the FNI measure for US-born sons of Arab fathers among cohorts born after 1915, indicating a shift towards more Americanized and less distinctly Arab names. This suggests that the Dow ruling influenced naming choices, leading parents to favor names that signaled assimilation. Additionally, the distribution of the FNI post-1915 shows a higher density of observations at the lower end, meaning that names that were less frequent within the Arab community became more common for children born after the ruling. This highlights a distinct trend towards cultural assimilation in naming practices after *Dow v US* ended the debate and concluded that Arabs are to be classified as white.

To estimate the causal the impact of Dow v. US, I use a cohort-based difference-in-differences approach and the 1930 US census. The cohorts are constructed based on birth years, specifically focusing on children born between 1905 and 1930, allowing me to compare naming patterns before and after the ruling. The pre-treatment cohorts include children born between 1905 and 1914, while the post-treatment cohorts include those born from 1915 to 1930. I use different control groups to capture various aspects of assimilation behavior. The primary control group consisted of Poles, who began arriving in the United States around the same time as Arabs and were largely perceived as white. By comparing Arabs to Poles, I capture the differential impact of the Dow ruling on a group that was newly classified as white versus a group already established as white. I find that US-born children with an Arab father tended to adopt more Americanized and less foreign names after 1915 compared to US-born children with a Polish father. This amounts to a -1.72 point decrease in FNI, which corresponds to a 2.64% decrease in FNI relative to its mean of 64.34. This decrease in FNI might represent a shift from a name like Joseph (Americanized from Youssef, FNI = 67.58) to a potentially even more Americanized version of the name, Joe (FNI = 65.68).

In an event study framework, the interaction coefficients for (Birth Year x Arab) prior to 1915 show no significant trends, supporting the validity of the identification strategy. The results also indicate that the decline in FNI was short-lived, with a decrease in FNI amounting to 5 points on the FNI scale. This echoes a move from a name like Solomon (from Suleiman, FNI = 88.35) to Sam (FNI = 83.01). We then see an upward trend in estimated coefficients emerging among children born after 1920. I compare the Arabs to other minority groups that were not necessarily perceived as white. The average effect seems to be more pronounced in this exercise, but there are nuances and limitations to this analysis that I discuss later.

The results hold when I do the analysis within-family, comparing male siblings born before and after *Dow v US* across Arab and Polish families. In this analysis, I use the 1920 census to ensure that the oldest child in the sample would be no older than 15 years old (since my first cohort is 1905). This restriction allows me to compare siblings within the same household more accurately. If I used the 1930 census, the oldest children could be up to 25 years old, and if such older siblings were still living at home, it could indicate different family dynamics, possibly reflecting lower levels of assimilation. By using the 1920 census, I ensure that I am comparing siblings under more similar conditions, reducing the risk of such biases. I find that children born after the Dow ruling had FNI scores that were on average, (5.025 to 5.045) points lower than their siblings born before the ruling. The ruling led to a more Americanized shift among Arabs, relative to Poles, even after controlling for family-specific factors.

The results also hold when adding additional fixed effects. I further explore how these effects vary by different characteristics of the fathers, including class of work, years in the US, and the size of the Arab diaspora in the state of birth. This descriptive exercise, within Arabs, suggests that self-employed fathers and those who had lived longer in the US were more likely to give their children Americanized names after the Dow ruling, compared to wage-earning fathers and those with shorter residency. Additionally, fathers residing in states with a below-median share of the Arab diaspora were more inclined to Americanize their children's names. This trend may be driven by factors such as limited support from a smaller ethnic community, increased pressure to conform to the dominant culture, or a belief that Americanized names would improve their children's social and economic prospects.

While I study the ethnic component of names through the FNI, Americanization indices provide a better measure of conformity with American naming norms. I develop a novel measure of name Americanization specific to Arabic names, leveraging the unique Syrian Business Directory (1908-1909) to create an *Arabic Americanization Index*. This index captures important elements of Arabic phonology, providing a culturally nuanced metric for how Arab names were adapted to American norms. Unlike previous approaches that relied on how names in naturalization records change over the application process, which is limited by geography and sample size (Biavaschi et al., 2017; Fouka, 2019), this method uses a directory containing the Arabic and corresponding English names of Arab business owners in the US. The Syrian Business Directory (Mokarzel and Otash, 1908) is a voluntary register of Arab businesses in the US and offers a dictionary of Arabic

Christian names, which is crucial for understanding the naming practices of the predominantly Christian Arab immigrant community. It includes information on the name of the owners in Arabic and in English, with additional information on the type of business and where it is located. By mapping Arabic name, to their English transliterations and the corresponding English names in the directory, I can trace common "Americanization paths" and capture variations in phonetic changes, such as moving away from certain sounds in Arabic (e.g., the "kh" sound). By OCR-ing the directory, manual transliterations, and phonetic algorithms, I construct a composite index that not only measures spelling-based changes but also weighs the cultural significance of specific phonetic deviations. I present the methodology in this paper and ways to move forward with it.

Next, I examine outcomes that require strong coordination between immigrants and natives, such as intermarriage and residential integration—outcomes that are heavily influenced by natives' attitudes and behaviors. Using stacked cross-sectional data from the 1910, 1920, and 1930 census waves, I find that intermarriage rates among Arab men increased by approximately 1.48 percentage points post-1915 compared to Polish men, implying greater social acceptance following the ruling. Additionally, I analyze residential integration by examining whether Arab immigrant households had at least one native-born neighbor, leveraging the enumeration order in the census data to infer neighbors and doing the analysis at the household head level to avoid double counting. I find that Arab head of households were 0.8 percentage points less likely to have a native-born neighbor post-Dow compared to Polish household heads. I discuss the potential implications of these results and highlight potential limitations.

In this version of the paper, I present unique data sources that have been collected but are yet to be analyzed. I provide a snapshot of the data collected and highlight briefly the next steps of this paper. The first one is the collection of historical Arab-American newspapers that were created by the Arab diaspora in the US. The newspapers played a key role in shaping community identity and providing cultural and political commentary (Jacobs, 2015; Gualtieri, 2001). These newspapers, obtained through the Khayrallah Center for Lebanese Studies, have been digitized, and OCR-processed, capturing over 6,930 editions and 54,774 pages. They hold significant potential for understanding the dual identity of Arab Americans and the role of media in cultural assimilation. Additionally, the American Stories dataset, derived from the Library of Congress's Chronicling America collection, includes over 20 million scans of historical American newspapers from 1780 to 1960 (Dell et al., 2024). This dataset offers an opportunity to explore the discourse around Arab immigrants in mainstream American media, particularly before and after the Dow

v. US ruling. I show snapshots of the data, presenting anecdotally how Arabs discussed their identity and how they were perceived in American media.

This paper contributes to various strands of the literature. First, it contributes to the literature on the Age of Mass Migration, during which around 30 million Europeans migrated to the United States, between 1890 and 1913 (Abramitzky et al., 2012; Bandiera et al., 2013; Abramitzky et al., 2014; Abramitzky and Boustan, 2017; Fouka, 2019; Abramitzky et al., 2020; Tabellini, 2020). I contribute to this literature by studying Arabs who migrated from Greater Syria to the US during this period—a group not as large as the European migrants, yet still significant. By focusing on a Middle Eastern migrant group, I address a region that is strongly understudied in economics (Saleh, 2017). Furthermore, this group was predominantly Christian, contributing to the emerging literature on non-Muslim minorities from the MENA region, viewed from a migration perspective (Saleh, 2022).

It also speaks to the literature on immigrant assimilation, which has explored various factors influencing the inclusion or exclusion of minority out-groups by majority in-groups. This includes inter-group contact (Bazzi et al., 2019; Bursztyn et al., 2024; Schneider-Strawczynski, 2020), the arrival of other groups that are perceived as more or less distant (Fouka et al., 2022), ethnic enclaves (Edin et al., 2003), government policies (Lleras-Muney and Shertzer, 2015; Bandiera et al., 2019; Fouka, 2020; Govind, 2021), and discrimination (Fouka, 2019). This paper contributes to our understanding of immigrant assimilation by examining how the legal classification of Arabs as "white" shaped their assimilation effort. In addition, this project draws on self-categorization theory and identity formation in social psychology (Tajfel, 1981; Turner, 1982; Tajfel and Turner, 1979, 1986; Turner et al., 1994). The categorization of individuals into in-groups and out-groups, displays of in-group favoritism, and out-group prejudice, are all features humans engage in and display (Allport et al., 1954; Blumer, 1958; Barth, 1998). The classification of individuals into different groups is context-dependent, influenced by factors such as immigration waves, group salience, and perceived distance (Fouka et al., 2022). Furthermore, it contributes to the literature on cultural transmission (Bisin and Verdier, 2001, 2017; Rapoport et al., 2020; Giuliano and Nunn, 2021).

This paper also speaks to the literature on racial and ethnic politics in the historical US context, emphasizing the role of the law as both a tool of coercion and a mechanism for shaping identity, and exploring the interaction of political and cultural institutions (Roland, 2020; Lopez, 2006;

Jia and Persson, 2021). The majority of existing work focuses on Black-White relations (Bobo, 1983; Acharya et al., 2018). I extend this by looking at another minority group whose race was debated extensively. Furthermore, I emphasize the role of political institutions and the consequences on cultural transmission by studying a context where race is a social product shaped by legal institutions. The Dow v. US case and its impact exemplifies the interplay and the joint evolution of political institutions and cultural identity (Bisin and Verdier, 2017). This paper also speaks to the literature on the effects of naturalization (Hainmueller et al., 2015, 2017; Govind, 2021). Finally, it also aims to highlights the essential role of newspapers and the media, for the Arab diaspora and the American natives, at the time where newspapers were the main source of information and reflected local attitudes (Gentzkow and Shapiro, 2006, 2010; Mullainathan et al., 2008).

The rest of the paper is structured as follows. Section 2 presents the historical context. Section 3 presents the various data sources collected and used, the construction of main variables, and presentation of a novel Arabic Name Americanization Index. Section 4 presents the empirical framework. Section 5 presents preliminary results on naming patterns, intermarriage, and residential choices. Section 6 provides some descriptive evidence on heterogenous responses. Finally, 5 concludes and presents next steps.

2 Historical Background

2.1 Age of Mass Migration and Arab Migration

The Age of Mass Migration from Europe to the United States was one of the largest migration episodes in human history (Abramitzky et al., 2012). Between 1850 and 1913, the United States absorbed nearly 30 million European immigrants (Hatton and Williamson, 1998). This massive influx was driven by a number of factors. This includes a reduction in the cost of shipping caused by innovation in steam technology (Keeling, 1999), economic opportunities, political instability, and demographic pressures in Europe (Hatton and Williamson, 1998). In the first 30 years of this episode, most immigrants came from Northern and Western Europe, however, after 1890 the composition changed and included more immigrants from Southern and Eastern Europe (Gagliarducci and Tabellini, 2022). This time period was characterized by the lack of legal restrictions for European immigrants (Abramitzky and Boustan, 2017). As the previously cited literature shows, social scientists have studied extensively this time period, looking at labor market effects, and cultural assimilation.

The economics literature only looked at the large waves of European immigrants, neglecting other potentially important smaller groups (Abramitzky et al., 2012, 2014; Tabellini, 2020). During the same period, people from the Middle East, specifically from Greater Syria[1], which was part of the Ottoman Empire, began arriving at major ports of the United States. They migrated for three main reasons: to escape conscription into the Ottoman Army, the sectarian tensions (as they were predominantly Christian), and to follow the promise of economic opportunities in the US (Jacobs, 2015). In fact, more than 400,000 Arabs from 1880 to 1930 were overlooked. The Arabs settled across the United States but were most concentrated in urban centers like New York, Boston, and Detroit. In fact, in New York and Boston, there were "Little Syria" communities. In New York, Little Syria was centered around Washington Street in Lower Manhattan and became known for its bustling businesses, coffeehouses, and newspapers that catered to the Arabic-speaking population (Jacobs, 2015). In Boston, a similar enclave formed in the South End, where Arab immigrants established shops, churches, and community organizations (Center, 2023).

Arab immigrants from Greater Syria were nearly all Christian, coming from different sects, such as Maronite, and Orthodox. Additionally, they were very diverse in the workforce, from peddlers to shop and restaurant owners, butchers, and brokers, with the highest migrant socio-economic class being the cosmopolitan elite (Jacobs, 2015). The Arab cosmopolitan elite, was very active in the journalism industry, creating around 20 newspapers that circulated widely in the US. The newspapers also served as a major information source and a discussion platform for the *mahjar* (diaspora). Historical anecdotes say that the newspapers provided scope for discussion on the "Syrian race and identity" and provided news on their new and former homes, trade, and family networks throughout the Western Hemisphere (Gualtieri, 2009; Jacobs, 2015).

2.2 Naturalization Act of 1870 and *Dow v US*

The Naturalization Act of 1790 established that only "free white persons" could become naturalized citizens of the United States, explicitly restricting access to citizenship based on race. This racial prerequisite endured for over a century and a half, and although the law was modified in 1870 to extend naturalization to include "aliens of African nativity and to persons of African descent", it continued to exclude other racial groups until 1952 (Nat, 1870) [2]. As such, being classified as "white" was a prerequisite for acquiring citizenship for many groups. However, de-

[1] Nowadays Syria, Lebanon, Jordan, and Palestine
[2] Figure A.1 shows the timeline of naturalization and immigration laws in the US.

termining who qualified as "white" was not straightforward, particularly during the Age of Mass Migration. As people from diverse backgrounds arrived in the U.S., many found themselves navigating courtrooms to argue their racial identity in order to gain the privileges of citizenship.

The racial prerequisite cases illustrate how race is not a natural or fixed category, but a social product shaped by legal institutions (Lopez, 2006). By deciding who could or could not be naturalized, judges and legislators actively participated in defining racial boundaries. In doing so, the law not only shaped the concept of whiteness but also reinforced the broader racial hierarchy that defined American society (Lopez, 2006).

For the Arabs, specifically those from Greater Syria, the process of their naturalization hinged on whether or not they are white (Gualtieri, 2009). *Dow v. United States* is a US Court of Appeals, Fourth Circuit, case where George Dow, a Syrian immigrant appealed two lower court decisions that denied his application for naturalization as a US citizen (Dow, 14 Sep 1915). The courts were divided on whether Syrians could be considered "white" under the law or not. Dow argued that Syrians, as part of the historical Caucasian race, should be eligible for naturalization. This case finally led to the naturalization of Dow based on the premise that residents originating from Syria were considered racially "white" and therefore eligible to become naturalized US citizens.

> "*the generally received opinion...that inhabitants of a portion of Asia, including Syria,[are] to be classed as white persons.*"
>
> – Circuit Judge Charles Albert Woods (September 15, 1915)

As such, it ended the debate on whether Syrians are white or not, and confirmed their eligibility to naturalize (Gualtieri, 2009). In other words, it resulted in an extension of the privilege of being an American citizen to Arab Christians, which formed 95% of the immigrants from the Arab world. This however didn't apply to North Africans or non-Levantine Arabs. In 1942, *In re Ahmed Hassan* a judge noted that a Yemeni immigrant was dark skinned and found him ineligible for naturalization because "the Arabian peninsula was far from Europe and part of the Mohammedan world" (has, 1942). Only in 1943, *Ex-Parte Mohriez*, that all Arabs and North Africans were deemed white by the federal government (moh, 1944).

The following quote highlights the duality of identity, especially for the Arab diaspora, from the famous Palestinian poet, Mahmoud Darwish. In the next steps outlined later, I hope to capture the nuances of this from the newspaper text.

لا الشرق شرق تماماً

ولا الغرب غرب تماماً

فإن الهوية مفتوحة للتعدد

Translation:

"Where East is not strictly East

And West is not strictly West

Where identity is open onto plurality"

– Mahmoud Darwish [3]

3 Data

This section describes the data sources used in this paper, including key variables and their construction, and the digitized data that will be used in the subsequent analysis.

3.1 Historical US Census

For the analysis of social assimilation outcomes, I utilize multiple waves of the historical full-count US Census (Ruggles et al., 2024). To examine naming choices of second-generation immigrants—those born in the US to foreign-born fathers—I use the full-count 1930 US Census. This dataset includes variables such as name, birth year, gender, place of birth, parental place of birth, mother tongue, occupation, ability to speak English, marital status, year of immigration, literacy, and county and state of residence. To analyze intermarriage and residential location choices, I utilize stacked cross-sectional data from the 1910, 1920, and 1930 Census waves [4]

By 1930 (measuring from 1900), there were approximately 312,514 individuals of Arab ancestry, although other estimates suggest around 400,000.[5] Figure A.2 presents the evolution of the

[3] Mahmoud Darwish (1941-2008) was a Palestinian poet and author who was regarded as Palestine's national poet. He is known for his profound reflections on exile, identity, and cultural belonging. The quote above is from a letter to Edward Said.

[4] I cannot use the 1900 census as the *mother tongue* variable is not available in this wave and hence I cannot *properly* identify my main control group (Poles) due to limitations I describe in 4.2

[5] The discrepancy arises because many Arabs were coded as being born in Turkey in the Census, given that Greater Syria

total Arab population by state over time, with New York and Massachusetts having the highest counts. Arabs were primarily concentrated on the East Coast, as shown in Figures A.3 and A.4. The following paragraphs describe the construction of each social assimilation outcome.

Identifying Main Groups Across the various specifications on naming patterns, I use different control groups. In section 4.2 I explain the logic and limitations of each choice. Put briefly, for naming patterns the sample includes US-born males to a foreign-born father, comparing those born before and after Dow across children with an Arab father, and a father of another nationality (or a group of nationalities), depending on the specification. Generally, I identify the nationality of fathers through birthplace, however for Poles, which are the preferred control group, I condition on mother tongue since Poland was not an independent state at that time but instead was divided between the Russian, German, and Austro-Hungarian empires. Therefore, using the birthplace variable would be misleading.

Children's Names I examine the naming choices of Arab parents for their native-born children as my first measure of assimilation effort. Names serve as significant markers of culture and varying types of identity (Lieberson, 2000; Cook et al., 2014). Naming choices and decisions are fully under the control of the parents, unlike other outcomes that would depend on natives' attitudes and behaviors (Fouka, 2019; Gagliarducci and Tabellini, 2022). Furthermore, names capture parents' desire to vertically transmit culture to subsequent generations as a means of maintaining cultural or ethnic distinctiveness (Abramitzky et al., 2020). Choosing an American name for a child can be costly for those who are closely connected to their cultural heritage (Fouka, 2019). On the other hand, selecting an ethnically identifiable name may impose an economic cost due to potential discrimination in the labor market (Biavaschi et al., 2017; Algan et al., 2022).

I construct the *Foreign Name Index*, a measure of name distinctiveness and thus measuring the "ethnic" content in names. This measure was first used by Fryer Jr and Levitt (2004) and more recently by many social scientists (Fouka, 2019; Abramitzky et al., 2020). It is gender and ethnicity specific. The measure is usually constructed as follows:

$$\text{FNI}_{\text{Name},n,c} = \frac{P_r(\text{Name} \mid I_{n,c})}{P_r(\text{Name} \mid I_{n,c}) + P_r(\text{Name} \mid I_{N \setminus n,c})} \times 100$$

where n represents nationality, c represents birth cohort, and I is an indicator for individuals

was part of the Ottoman Empire. To validate my sample, I used data from the *Khayrallah Center for Lebanese Studies* on Arab identification in the US Census, and I conditioned on the mother tongue being Arabic to accurately identify the first generation.

of a given nationality and birth cohort. The $I_{N\setminus n,c}$ is an indicator for individuals of other nationalities, excluding nationality n. The FNI measures the frequency of a name within a specific ethnic group relative to its frequency in the entire population. It is usually calculated for each birth year using data on names from previous birth years and cohorts.

Because the 1915 ruling may have influenced what is perceived as foreign, I construct this measure using only the pre-treatment period, 1900-1914. This approach provides a stable benchmark for "foreigness" before the treatment, avoiding any feedback loop or bias in which post-ruling behavior influences the measure itself. Therefore, I examine how the distribution of naming choices evolves over time relative to a consistent reference point. My measure is constructed as follows, not per cohort but using all data from the pre-Dow period (1900-1914):

$$\text{FNI}_{\text{Name},n} = \frac{P_r(\text{Name}|I_{n,\text{pre-period}})}{P_r(\text{Name}|I_{n,\text{pre-period}}) + P_r(\text{Name}|I_{N\setminus n,\text{pre-period}})} \times 100$$

A higher FNI value indicates a more distinctively foreign name. For instance, if we calculate the FNI for Arabs, a value of 100 implies that a name is unique to Arabs and never found among non-Arabs, while a value of 0 means that the name is never used by individuals of Arab origin. All necessary information, such as first names, birth year, nationality, and birthplace, is derived from the full-count 1930 US Census.

In terms of the frequency of names, the top four names remain unchanged between the pre-and post-groups: George, Joseph, John, and Edward. These are common Christian Arab names, some of which have clearly been Americanized (e.g., Joseph, originally Youssef), as I will discuss further in Section 3.4. Additionally, certain names have shifted in their relative frequency; for instance, Albert ($FNI = 67.10$) has replaced Fred ($FNI = 70.04$), possibly as an Americanized version of the name Fareed. Similar patterns are observed in terms of the relative ranking and frequency of names, which underscores the importance of examining name Americanization that I will discuss in more detail.

Intermarriage I also study the impact of *Dow v US* on intermarriage, an outcome in contrast with naming choices, is not fully under the control of individuals but also depends on the other group, the white natives, willingness to interact. As such, intermarriage is an outcome that is considered to be the ultimate stage of social assimilation (Gordon, 1964).

The sample consists of first-generation male immigrants, born abroad, at least 15 years old,

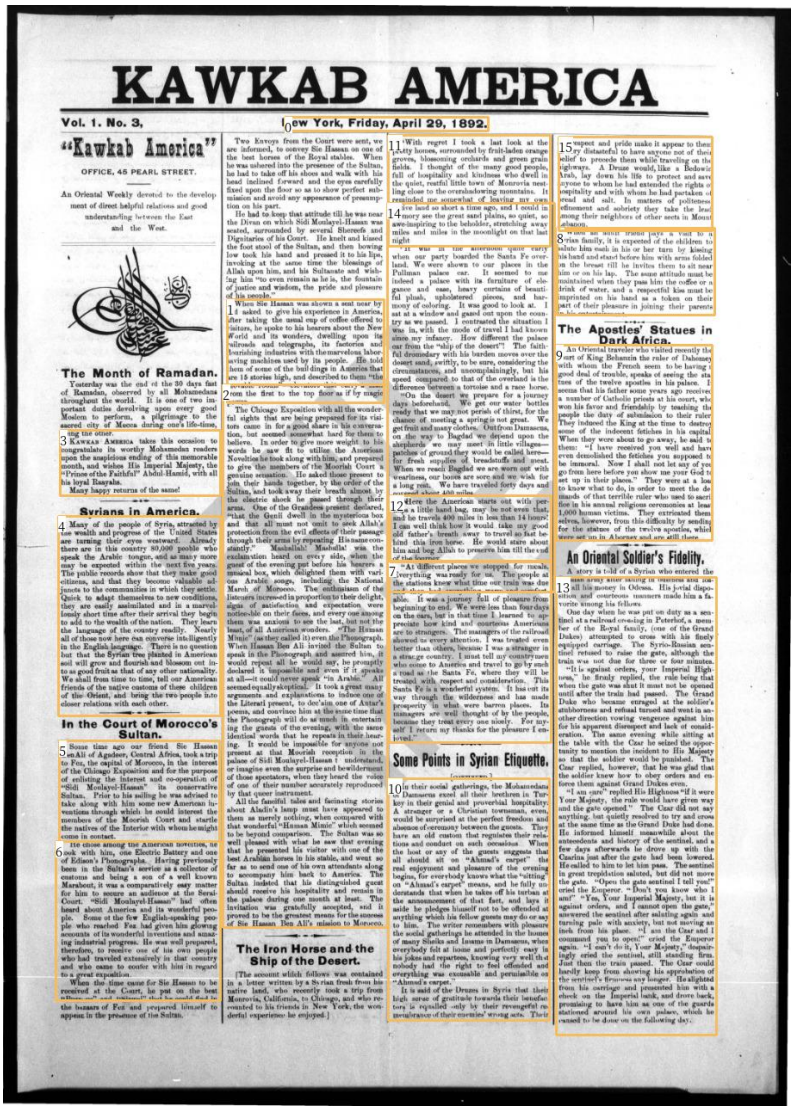
and married in each census wave. I, therefore, stack repeated cross-sectional individual datasets for 1910, 1920, and 1930. Intermarriage is defined as an immigrant man marrying a white American with both parents born in the US. As such, we condition on nativity and race. The sample contains only married men. At the moment, I only compare first-generation migrants from Poland and Greater Syria. I explain the choice behind the different control groups in the Empirical Framework section.

Residential Choices Another outcome that would reflect both immigrants' desire to assimilate and natives' willingness to accept a foreign-born individual is an Arab immigrant having at least one native neighbor of native parentage. In the US census, enumeration occurred door-to-door up until 1960. Therefore, using the information on the enumeration district, state, and the line of the record from the manuscript, we can infer neighbors through leads and lags. Therefore, the outcome variable is equal to one if an immigrant has at least one native neighbor of native parentage. The variable exists for households that have at least one observed neighbor. This analysis is done at the household head level to avoid double counting. Similar to intermarriage, I stack census records for this analysis.

3.2 Historical Arab American Newspapers

This section provides an overview of historical Arab-American Newspapers and potential ways of using this unique data. The first Arab family to arrive in the United States was the *Arbeely* family in 1878. Two of Youssef Arbeely's sons established the first Arabic-language newspaper in America, *Kawkab America* (Star of America), with its first issue published on April 15, 1892 (Khater, 2016). This newspaper was bilingual, publishing in both English and Arabic, with the front page usually in English. Figure 1 shows one of the earliest issues, specifically the third, dated April 29, 1892. From the front page, we see articles discussing Syrians in America and points on Syrian etiquette. Although anecdotal, this highlights the duality of identity and how Syrians/Arabs navigated life in the United States.

Other notable newspapers included *Al-Hoda* (The Guidance) and *Miraat ul-Gharb* (Mirror of the West). *Al-Hoda*, established in 1898 by Naoum Mokarzel, was among the most prominent Arabic-language newspapers. *Miraat ul-Gharb* was founded in 1899 by Najeeb Diab. According to scholars, particularly Jacobs (2015), these newspapers extensively discussed the community's cultural and political identity. They provided news, cultural commentary, and advice, thereby



KAWKAB AMERICA

Vol. 1. No. 3, New York, Friday, April 29, 1892.

"Kawkab America"

OFFICE, 45 PEARL STREET.

An Oriental Weekly devoted to the development of direct helpful relations and good understanding between the East and the West.

The Month of Ramadan.

Yesterday was the end of the 30 days fast of Ramadan, observed by all Mohamedans throughout the world. It is one of two important duties devolving upon every good Moslem to perform, a pilgrimage to the sacred city of Mecca during one's life-time, being the other.

3 KAWKAB AMERICA takes this occasion to congratulate its worthy Mohamedan readers upon the auspicious ending of this memorable month, and wishes His Imperial Majesty, the "Prince of the Faithful" Abdul-Hamid, with all his loyal Rayahs.

Many happy returns of the same!

Syrians in America.

4 Many of the people of Syria, attracted by the wealth and progress of the United States are turning their eyes westward. Already there are in this country 80,000 people who speak the Arabic tongue, and as many more may be expected within the next few years. The public records show that they make good citizens, and that they become valuable adjuncts to the communities in which they settle. Quick to adapt themselves to new conditions, they are easily assimilated and in a marvellously short time after their arrival they begin to add to the wealth of the nation. They learn the language of the country readily. Nearly all of these now have can converse intelligently in the English language. There is no question but that the Syrian too planted in American soil will grow and flourish and blossom out into as good fruit as that of any other nationality. We shall from time to time, tell our American friends of the native customs of these children of the Orient, and bring the two people into closer relations with each other.

In the Court of Morocco's Sultan.

5 Some time ago our friend Sie Hassan Ben Ali of Agadeer, Central Africa, took a trip to Fes, the capital of Morocco, in the interest of the Chicago Exposition and for the purpose of enlisting the interest and co-operation of "Sidi Moulayel-Hassan" its conservative Sultan. Prior to his sailing he was advised to take along with him some new American inventions through which he could interest the members of the Moorish Court and startle the natives of the Interior with whom he might come in contact.

He chose among the American novelties, to look with him, one Electric Battery and one of Edison's Phonographs. Having previously been in the Sultan's service as a collector of customs and being a son of a well known Marabout, it was a comparatively easy matter for him to secure an audience at the Serai-Court. "Sidi Moulayel-Hassan" had often heard about America and its wonderful people. Some of the few English-speaking people who reached Fez had given him glowing accounts of its wonderful inventions and amazing industrial progress. He was well prepared, therefore, to receive one of his own people who had traveled extensively in that country and who came to confer with him in regard to a great exposition.

When the time came for Sie Hassan to be received at the Court, he put on the best [illegible] that he could find in the bazaars of Fez and prepared himself to appear in the presence of the Sultan.

Two Kavoys from the Court were sent, we are informed, to convey Sie Hassan on one of the best horses of the Royal stables. When he was ushered into the presence of the Sultan, he had to take off his shoes and walk with his head inclined forward and the eyes carefully fixed upon the floor so as to show perfect submission and avoid any appearance of presumption on his part.

He had to keep that attitude till he was near the Divan on which Sidi Moulayel-Hassan was seated, surrounded by several Shereefs and Dignitaries of his Court. He knelt and kissed the foot stool of the Sultan, and then bowing low took his hand and pressed it to his lips, invoking at the same time the blessings of Allah upon him, and his Sultanate and wishing him "to even remain as he is, the fountain of justice and wisdom, the pride and pleasure of his people."

When Sie Hassan was shown a seat near by he asked to give his experience in America, after taking the usual cup of coffee offered to visitors, he spoke to his hearers about the New World and its wonders, dwelling upon its railroads and telegraphs, its factories and flourishing industries with the marvelous labor-saving machines used by its people. He told them of some of the tall things in America that are 15 stories high, and described to them "the [illegible] elevator [illegible] carry [illegible] from the first to the top floor as if by magic power."

2 The Chicago Exposition with all the wonderful sights that are being prepared for its visitors came in for a good share in his conversation, but seemed somewhat hard for them to fathom. In order to give more weight to his words he saw fit to utilize the American Novelties he took along with him, and prepared to give the members of the Moorish Court a genuine sensation. He asked those present to join their hands together, by the order of the Sultan, and took away their breath almost by the electric shock he passed through their arms. One of the Grandees present declared, "that the Genii dwell in the mysterious box and that all must not omit to seek Allah's protection from the evil effects of their passage through their arms by repeating His name constantly." "Mashallah! Mashalla!" was the exclamation heard on every side, when the guest of the evening put before his hearers a sealed box, which delighted them with various Arabic songs, including the National March of Morocco. The enthusiasm of the listeners increased in proportion to their delight, signs of satisfaction and expectation were noticeable on their faces, and every one among them was anxious to see the last, but not the least, of all American wonders. "The Hassan Music" as they called it) even the Phonograph. When Hassan Ben Ali invited the Sultan to speak in the Phonograph and assured him, if he would repeat all he would say, he promptly declared it impossible and even if it speaks at all,—it could never speak "in Arabic." All seemed equally skeptical. It took a great many arguments and explanations to induce one of the Literati present, to declaim one of Antar's poems, and convince him at the same time that the Phonograph will do as much to entertain the guests of the evening, with the same identical words that he repeats in their hearing. It would be impossible for anyone not present at that Moorish reception in the palace of Sidi Moulayel-Hasan I understand, or imagine even the surprise and bewilderment of those spectators, when they heard the voice of one of their number accurately reproduced by that queer instrument.

All the fanciful tales and fascinating stories about Aladin's lamp must have appeared to them as merely nothing, when compared with that wonderful "Hassan Music" which seemed to be beyond comparison. The Sultan was so well pleased with what he saw that evening that he presented his visitor with one of the best Arabian horses in his stable, and went so far as to send one of his own attendants along to accompany him back to America. The Sultan insisted that his distinguished guest should receive his hospitality and remain in the palace during one month at least. The invitation was gratefully accepted, and it proved to be the greatest means for the success of Sie Hassan Ben Ali's mission to Morocco.

The Iron Horse and the Ship of the Desert.

[The account which follows was contained in a letter written by a Syrian fresh from his native land, who recently took a trip from Monrovia, California, to Chicago, and who recounted to his friends in New York, the wonderful experience he enjoyed.]

11 With regret I took a last look at the fruity horses, surrounded by fruit-laden orange groves, blossoming orchards and green grain fields. I thought of the many good people, full of hospitality and kindness who dwell in the quiet, restful little town of Monrovia nestling close to the overshadowing mountains. It reminded me somewhat of leaving my own native land so short a time ago, and I could in memory see the great natel plains, so quiet, so awe-inspiring to the beholder, stretching away miles and miles in the moonlight on that last night

14 It was at the afternoon quiet early when our party boarded the Santa Fe overland. We were shown to our places in the Pullman palace car. It seemed to me indeed a palace with its furniture of elegance and easy, luxury curtains of beautiful plush, upholstered pieces, and harmony of coloring. It was good to look at. I sat at a window and gazed out upon the country as we passed. I contrasted the situation I was in, with the mode of travel I had known since my infancy. How different the palace car from the "ship of the desert"! The faithful dromedary with his burden moves over the desert sand, swiftly, to be sure, considering the circumstances, and uncomplainingly, but his speed compared to that of the overland is the difference between a tortoise and a race horse.

"On the desert we prepare for a journey days beforehand. We get our water bottles ready that we may not perish of thirst, for the chance of meeting a spring is not great. We get fruit and many clothes. Between Damascus, on the way to Bagdad we depend upon the shepherds we may meet in little villages—patches of ground they would be called here—for fresh supplies of breadstuffs and meat. When we reach Bagdad we are worn out with weariness, our boots are sore and we wish for a long rest. We have traveled forty days and covered about 400 miles.

12 Here the American starts out with perhaps a little hand bag, may be not even that, and he travels 400 miles in less than 14 hours! I can well think how it would take my good old father's breath away to travel so fast behind this iron horse. He would stare about him and beg Allah to preserve him till the end of the journey.

7 "At different places we stopped for meals, everything was ready for us. The people at the stations know what time our train was due and [illegible] able. It was a journey full of pleasure from beginning to end. We were less than four days on the cars, but in that time I learned to appreciate how kind and courteous Americans are to strangers. The managers of the railroad showed to every attention. I was treated even better than others, because I was a stranger in a strange country. I must tell my countrymen who come to America and travel to go by such a road as the Santa Fe, where they will be treated with respect and consideration. This Santa Fe is a wonderful system. It has cut its way through the wilderness and has made prosperity in what were barren places. Its managers are well thought of by the people, because they treat every one nicely. For myself I return my thanks for the pleasure I enjoyed."

Some Points in Syrian Etiquette.

10 In their social gatherings, the Mohamedans of Damascus excel all their brethren in Turkey in their genial and proverbial hospitality. A stranger or a Christian townsman, even, would be surprised at the perfect freedom and absence of ceremony between the guests. They have an old custom that regulates their relations and conduct on such occasions. When the host or any of the guests suggests that all should sit on "Ahmad's carpet" the real enjoyment and pleasure of the evening begins, for everybody knows what the "letting" on "Ahmad's carpet" means, and he fully understands that when he takes off his turban at the announcement of that fact, and lays it aside he pledges himself not to be offended at anything which his fellow guests may do or say to him. The writer remembers with pleasure the social gatherings he attended in the house of many Sheiks and Ismms in Damascus, when everybody felt at home and perfectly easy in his jokes and repartees, knowing very well that nobody had the right to feel offended and everything was excusable and permissible on "Ahmad's carpet."

It is said of the Druzes in Syria that their high sense of gratitude towards their benefactors is equalled only by their revengeful remembrance of their enemies' wrong acts. Their [illegible] respect and pride make it appear to them very distasteful to have anyone not of their belief to precede them while traveling on the highways. A Druze would, like a Bedouin Arab, lay down his life to protect and save anyone to whom he had extended the rights of hospitality and with whom he had partaken of bread and salt. In matters of politeness refinement and sobriety they take the lead among their neighbors of other sects in Mount Lebanon.

[illegible] to [illegible] a visit to a Syrian family, it is expected of the children to salute him each in his or her turn by kissing his hand and stand before him with arms folded on the breast till he invites them to sit near him or on his lap. The same attitude must be maintained when they pass him the coffee or a drink of water, and a respectful kiss must be imprinted on his hand as a token on their part of their pleasure in joining their parents [illegible]

The Apostles' Statues in Dark Africa.

9 An Oriental traveler who visited recently the court of King Behanzin the ruler of Dahomey with whom the French seem to be having a good deal of trouble, speaks of seeing the statues of the twelve apostles in his palace. It seems that his father some years ago received a number of Catholic priests at his court, who won his favor and friendship by teaching the people the duty of submission to their ruler. They induced the King at the time to destroy some of the indecent fetiches in his capital. When they were about to go away, he said to them: "I have received you well and have even demolished the fetiches you supposed to be immoral. Now I shall not let any of you go from here before you show me your God to set up in their places." They were at a loss to know what to do, in order to meet the demands of that terrible ruler who used to sacrifice in his annual religious ceremonies at least 1,000 human victims. They entrusted themselves, however, from this difficulty by sending for the statues of the twelve apostles, which were set up in Abomey and are still there.

An Oriental Soldier's Fidelity.

A story is told of a Syrian who entered the [illegible] army after having in various ways lost all his money in Odessa. His jovial disposition and courteous manners made him a favorite among his fellows.

13 One day when he was put on duty as a sentinel at a railroad crossing in Peterhof, a member of the Royal family, (one of the Grand Dukes) attempted to cross with his finely equipped carriage. The Syrio-Russian sentinel refused to raise the gate, although the train was not due for three or four minutes.

"It is against orders, your Imperial Highness," he finally replied, the rule being that when the gate was shut it must not be opened until after the train had passed. The Grand Duke who became enraged at the soldier's stubbornness and refusal turned and went in another direction vowing vengence against him for his apparent disrespect and lack of consideration. The same evening while sitting at the table with the Czar he seized the opportunity to mention the incident to His Majesty so that the soldier would be punished. The Czar replied, however, that he was glad that the soldier knew how to obey orders and enforce them against Grand Dukes even.

"I am sure" replied His Highness "if it were Your Majesty, the rule would have given way and the gate opened." The Czar did not say anything, but quietly resolved to try and cross at the same time as the Grand Duke had done. He informed himself somewhile about the antecedents and history of the sentinel, and a few days afterwards he drove up with the Czarina just after the gate had been lowered. He called to him to let him pass. The sentinel in great trepidation saluted, but did not move the gate. "Open the gate sentinel I tell you!" cried the Emperor "Don't you know who I am!" "Yes, Your Imperial Majesty, but it is against orders, and I cannot open the gate," answered the sentinel after saluting again and turning pale with anxiety, but not moving an inch from his place. "I am the Czar and I command you to open!" cried the Emperor again. "I can't do it, Your Majesty," despairingly cried the sentinel, still standing firm. Just then the train passed. The Czar could hardly keep from showing his appreciation of the sentinel's firmness any longer. He alighted from his carriage and presented him with a check on the Imperial bank, and drove back, promising to have him as one of the guards stationed around his own palace, which he caused to be done on the following day.

Figure 1: Front page of Kawkab America from April 29, 1892

Note: The front page features news from home and the United States, describes Syrians in America (annotation number 4), and discusses "some points in Syrian Etiquette" (annotation number 10).

helping maintain a sense of unity among the Arab American population.

Using the versions of the newspapers provided by the *Khayrallah Center for Lebanese Studies* (KCLDS), I scraped 16 newspapers comprising 6,930 editions and 54,774 pages, from which a large subset I OCR-ed, and text was extracted using Shen et al. (2021) to identify headlines, articles, and other structural elements.[6] Although I have not yet conducted text analysis on the newspapers, this is part of my planned future work, as outlined in the next steps section. Figure A.6 presents the year range for the collected newspapers, which does not necessarily reflect their entire operational periods. As shown, the collected data does not cover all newspapers uniformly across the years, which may have implications for selection and the topics covered. To address this limitation, I plan to collect additional data. Furthermore, the figure displays the newspapers along with their known religious or sectarian affiliations, highlighting the role of sectarianism. According to historical records, sectarian divisions within the community tended to fade after settling in their new "home." This phenomenon is one that I intend to investigate further as part of my broader research agenda. Specifically, I plan to explore how immigrants from the same region—who often migrated due to these divisions (Jacobs, 2015)—navigated these differences and potentially converged into a more inclusive identity upon reaching their new destination.

3.3 Historical American Newspapers

To examine different mechanisms, I use historical American newspaper data *American Stories* from Dell et al. (2024). This dataset includes 438 million structured article texts from around 20 million newspaper scans from the Library of Congress's Chronicling America collection. The dataset spans from 1780 to 1960. I use data at the article level, with article ID, newspaper name, edition (including the date), page, headline, byline, and the article text. This data has not been analyzed yet.

Put briefly, I aim to study the discourse of American newspapers on Arabs before and after the *Dow v. United States* ruling. Specifically, I plan to use Latent Dirichlet Allocation (LDA) for topic modeling to study how certain themes evolved over time. I will track trends in topics pre- and post-Dow, exploring shifts in discourse around Arabs, particularly in relation to key events. Additionally, I intend to conduct sentiment analysis by measuring the overall sentiment (polarity) of articles mentioning Arabs and detecting specific emotions to understand which emotions were frequently associated with Arabs in different contexts. Figures A.7 and A.8 present

[6] While I scraped the full collection of newspaper PDFs, KCLDS has made a subset of these newspapers available through a keyword-search-enabled website; however, the website is currently in beta and may not be entirely accurate.

random snapshots from articles discussing the Arab/Syrian community in New York City. The first article has an intrigued tone, while the second uses offensive language, such as referring to Arabs as a "plague of men".

3.4 Syrian Business Directory (1908-1909), Naming Indices and Algorithms

The following paragraphs describe the idea and methodology behind using this data source to create an *Americanization Index* that is specific to Arabic names and takes into account important elements of Arabic phonology. I demonstrate the concept and methodology, and briefly outline how I will use this measure for my future analysis.

While I study the ethnic component of names through the FNI, Americanization indices provide a better measure of conformity with American naming norms. The literature commonly uses naturalization records to capture the evolution of applicants' characteristics, including reported names over time (Biavaschi et al., 2017; Fouka, 2019). However, the available naturalization records are limited to certain districts and states, and given the relatively small size of the Arab diaspora, this approach may not be ideal. Moreover, anecdotal evidence suggests that Arabs Americanized their names early on. A popular example is the Americanization of "Youssef" to "Joseph", and in some cases, more significant changes, such as "Ilyas" becoming "Louis". Therefore, I construct a measure of name Americanization that captures important elements of Arabic phonology using a unique directory of Arab businesses in the United States. I briefly present the information present in this document.

I obtained the Syrian Business Directory (Mokarzel and Otash, 1908) from the *Khayrallah Center for Lebanese Studies* and extracted information using OCR [7]. This directory is a voluntary register of Lebanese/Syrian-American business owners, containing data on 2,936 businesses. The information includes the first and last names of business owners in Arabic, their place of origin in the Middle East (sometimes at the village level), the type of business, the address of the business in the United States (including city and state), and the corresponding first and last names in English. Figure A.9 shows a snapshot from a page for New York City in the directory. Map A.10 shows the geographical distribution of Arab-owned businesses in the United States for the years 1908-1909.

[7] This document is available online however the OCR for the Arabic text is strongly flawed and hence why I do it as this is essential for the construction of this index.

To evaluate how Americanized a name is, it is essential to trace it back to its Arabic origin. Since the Arabs in this context were predominantly Christian, a dictionary of common Arab Christian names is required. The business directory provides a valuable resource, as it includes both the Arabic names of business owners and their corresponding English names. Additionally, Mokarzel and Otash (1908) describes Arabs as "born businessmen, traders, and merchants" in the introduction, suggesting that these individuals were likely among the most assimilated members of the community. Their active participation in business and commerce may have motivated them to adopt more Americanized names, which helps us identify the *most common Americanization paths* for these names[8]. For instance, Figure A.9 shows that "David" serves as the Americanized version of the Arabic name "Dawood" (transliterated to English). This approach allows us to observe deviations from Arabic phonetics. For example, the name "Kalil" in the figure illustrates this point. The original Arabic name is "Khalil", which includes the distinctive Arabic "kh" sound—a sound common in Arabic that is often transliterated as "kh" in English. This method provides a nuanced measure of Americanization, noting names that preserve or alter these characteristic sounds.

Name Americanization Paths and consequently the Americanization index is done as follows:

1. OCR the business directory and extract text
2. Retrieve and clean the Arabic names from the directory
3. Manually transliterate the Arabic names into English, following the guidelines outlined in Appendix A. Table A.2 provides examples of transliterations
4. Match back to the corresponding English names in the directory. As such, we have a dictionary of Arabic names, their transliterations to English, and the reported corresponding English name. Figure 2 shows the top 10 transliterations and English names. Descriptively we see that the name "Youssef" will most likely be Americanized to "Joseph". Figure A.11 shows the Arabic name, the transliterations, and the most common English names associated with the names in the directory. Hence, it gives a snapshot of the most common *Name Americanization paths*
5. Calculate standard measures of name changes:
    - This includes normalized (by maximum character count between the two names) Levenshtein distance between transliterated names and the corresponding English names.

[8] In fact, in section 6, I show that business owners tend to have a more assimilated profile, potentially due to repeated interactions with natives (Fouka, 2019)

Levenshtein distance measures how different two strings are by counting the minimum number of changes or edits required to make them identical.

- I also compute phonetic distance based using NYSIIS phonetic codes, which would capture how similar or different two names are in terms of their pronunciation. I construct a composite index of both.
- Using phonetic distance alone would not fully capture the nuances of culturally significant sounds and their deviations. Phonetic algorithms like NYSIIS or Soundex are designed to account for pronunciation similarities, but they do not always weigh certain culturally significant sounds more heavily or account for specific deviations that are important in Arabic names.

6. As such, I construct a measure of *Name Americanization* that takes into account knowledge of Arabic
   - I start by defining significant sounds and weights such as: "kh" = 2, "gh" = 2, "h" = 1.5, "dh" = 2,"th" = 1.5, and thus the cost of deviating from these sounds is larger
   - Measure edit distance with weighted costs
   - New composite index averaging the weighted distance and the phonetic index taking into account spelling-based similarity (with weighted penalties for key sounds)

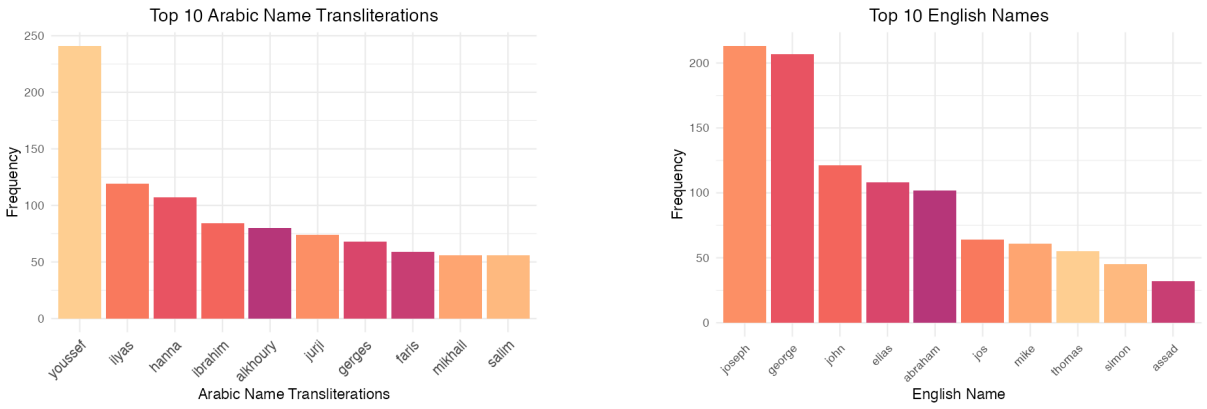


Figure 2: Top names in the *Syrian Business Directory*

Note: The figure on the left, show the top 10 Arabic name transliteration, such as youssef,Ibrahim...etc, and their frequency in the directory. The figure on the right shows the top 10 English names (that correspond to Arabic names) in the directory.

This name Americanization measure is specifically designed for Arabs whose *probable* Arabic name appears in our dictionary, making it possible to examine patterns of name changes within the Arab community. By merging this measure back to the first names of Arabs recorded in the census, we can identify the extent of name Americanization and trace different paths for the

same English name. For instance, the English name "Louis" could correspond to the Arabic name "Ilyas" or might simply be an original "Louis." These different matches reflect varying degrees of deviation from the original Arabic name—where "Elias" represents the least deviation from "Ilyas" and "Louis" represents the most. To further analyze these name changes, matches and scores are constructed based on the minimum, median, and maximum distances between transliterated Arabic names and their potential English versions.

Thus, this approach is well-suited to capture conformity with American naming patterns and helps us understand the granular nuances in Arab name Americanization. For example, we see that "Joseph" was a common Arab name pre- and post-Dow, with an FNI value of 67, incorporating the shift from "Youssef" to "Joseph" provides a richer analysis of assimilation. Furthermore, this measure allows for several descriptive analyses. One is to assess how Arabs changed the reporting of their names in the census over time, examining the degree of Americanization among first-generation immigrants. Another involves analyzing whether children born before 1915 reported more Americanized names in later census waves, providing insight into naming trends in response to socio-legal shifts like *Dow v US*. A within-family analysis where we compare the names of siblings born before and after 1915 could be informative. Furthermore, heterogeneity by parental occupation and the size of the Arab diaspora in the state/county could offering interesting insights.

4 Empirical Framework

4.1 Naming Patterns

The main empirical framework is a cohort-based difference-in-differences approach, which allows us to estimate the effect of the *Dow v. United States* ruling on naming patterns among Arabs. The analysis compares changes in naming patterns for US-born men to Arab fathers before and after the *Dow* ruling to those of various control groups, which could include Poles or other minority groups perceived differently in terms of whiteness. The birth cohorts used are 1905-1930. I use data from the 1930 census. The DiD model can be specified as follows:

$$FNI_{in} = \alpha + \beta_1 \text{Arab}_i + \beta_2 \text{PostDow}_t + \beta_3 (\text{Arab}_i \times \text{PostDow}_i) + \gamma_n + \delta_t + \phi_s + \epsilon_{it} \quad (1)$$

where FNI_{in} is the Foreign Name Index for individual i from nationality n, constructed in the

pre-period and reflects how ethnically distinct a name is, as explained earlier. The variable Arab_i is an indicator equal to 1 if the US-born child has an Arab father, and 0 otherwise (having a father from a certain ethnicity, depending on the control group chosen for each specification). The PostDow_t indicator equals 1 if individual i was born on or after 1915 (1915-1930), and 0 otherwise (1905-1914). The coefficient of interest is β_3, of the interaction term ($\text{Arab}_i \times \text{PostDow}_t$), which captures the differential effect of the *Dow* ruling on second-generation Arabs relative to the control group. Birth year fixed effects (δ_t) control for time (birth year)-specific effects that could affect naming practices across all groups. State of birth fixed effects (ϕ_s) account for local factors, such as regional differences in assimilation pressure or policies. In group 2 of the control groups[9], I also include nationality fixed effects (γ_n) to capture unobserved characteristics specific to each group, Finally, ϵ_{int} is the error term that captures unobserved individual-level factors. Heteroskedasticity robust standard errors are used across all specifications.

4.2 Application to Different Control Groups

Estimation cam be generalizable across different control groups. Identifying a perfect control group for studying the assimilation of Arabs post-Dow v. US is inherently challenging due to the complexities of race and the fluid legal and political landscape. As such, I conduct this analysis on various control groups, and the result mostly holds across specifications.

My preferred specification is comparing the Arabs to a group that was *mostly* perceived as white or a group whose racial identity was more firmly established as white, and arrived at the same time to the US (late 1890s). I thus compare the Arabs to the Poles. Although this group offers a clear contrast from other groups, there are certain limitations. Firstly, at the start of WWI, Poland did not exist as an independent state but instead was divided between the Russian, German, and Austro-Hungarian empires. As such, identifying poles using the birthplace variable from the census would be problematic. Therefore, instead of identifying them based on birthplace, I identify them instead on Polish mother tongue. Another limitation is that this group would include Jewish Poles, that were not necessarily perceived as white. Therefore, in specification 1, β_3 captures the differential effect of the *Dow* ruling on Arabs compared to Poles.

Comparing the Arabs to other minority groups that were "excluded from whiteness" or were not generally perceived as white would offer valuable insights. However, *Dow v US* could have set a precedent for lower courts and there could be spillovers from this case. *Ozawa v US* in 1923,

[9]This includes Asians and other minority groups, approximately a total of 9 nationalities.

which classified Japanese as non-white, and the efforts leading up to it, could have made them follow the trajectories of the Arabs to make their case. I propose ways forward to study the specific case of the Japanese in the next steps section. I compare the Arabs to the Asian group (Control group 1). This includes Japanese, Chinese, and Filipinos. I then also compare them to another group consisting of the Asian group and other minorities such as the Mexicans, Puerto Ricans, Cubans, Iranians, Indians, and Greeks (Control group 2). For control group 2, I also use nationality fixed effects (γ_n) to help control for group-specific differences and β_3 still captures the differential impact of the *Dow* ruling specifically on Arabs relative to all other groups. Control group 3 includes only the Greeks, as they are comparable on *some* dimensions, being Christian and perceived as "oriental". Defining these groups is based on the birthplace variable in the US 1930 census.

Event Study For FNI analysis and using information on birth year, I implement an event study to add transparency to the difference-in-differences design showing birth-cohort effects, and testing the validity of the identification strategy. The specification is as follows:

$$FNI_{in} = \alpha + \sum_{t \neq 1914} \beta_t(\text{Arab}_i \times \text{Birth Year}_t) + \delta_t + \phi_s + \epsilon_{int} \tag{2}$$

where FNI_{in} is the Foreign Name Index for individual i from nationality n, Arab_n is an indicator equal to 1 if individual i is of Arab descent, and Birth Year_t is an indicator for each birth year t. The coefficients β_t represent the effect of the *Dow* ruling on Arabs compared to the control group for each birth cohort. The reference year is 1914. This specification provides a flexible, cohort-specific view of the effect, allowing us to examine whether the parallel trends assumption holds by validating the absence of differential pre-trends between Arabs and the control group. By observing the evolution of the estimated coefficients across birth cohorts, we can mitigate any concerns about pre-existing differences between the groups and identify how the *Dow* ruling impacted naming patterns after 1915.

Difference-in-Differences: More Fixed Effects I extend the baseline DiD analysis by including additional fixed effects that strengthen the robustness of the results [10]. These include county of residence in 1930 fixed effects, state of residence in 1930 fixed effects, and an interaction term between county in 1930 and birth year (each used in separate regressions). Including county-

[10] Results hold as shown in Table B.4

of-residence fixed effects for 1930 means that we are comparing Arabs and Poles within the same county, which controls for any time-invariant characteristics specific to each county. Including state of residence fixed effects for 1930, we compare individuals across birth cohorts who live in the same state, which controls for state-level policies, economic conditions, or other state-specific characteristics that could impact naming practices. Finally, including county-by-birth-year fixed effects means we are comparing individuals within the same county for a given birth cohort, which controls for local, time-varying factors that could influence naming choices (such as county-level economic shocks or social changes) and help mitigate concerns of bias arising from simultaneous local changes over time.

4.3 Within-family Fixed Effects

To further validate the main analysis, I conduct a within-family analysis, which compares male siblings born before and after the *Dow* ruling within the same family, across both Arabs and Poles. This exercise follows the same logic as the previous DiD analysis but includes additional fixed effects for the household and mother, comparing siblings within the same household or family. The sample consists of US-born males with an Arab or Polish father who live in the same household as their father and at least one male sibling, focusing specifically on birth cohorts from 1905 to 1920. I use the 1920 census for this analysis to mitigate concerns about cohabitation of older siblings, which could arise if the 1930 census were used; children born earlier (e.g., in 1905) may or may not be living in the parental household by 1930, introducing selection bias and potentially comparing families of different assimilation profiles.

More importantly, I do the analysis within-Arabs, such that male Arab siblings within the same family born before and after 1915. This exercise abstracts from the limitations inherent to the choice of a control group in such a setting. Using the 1920 census, and 1905-1920 cohorts, I compare Arab male siblings born post-1915 to their siblings born pre-1915, within the same family (household or mother). By incorporating household-fixed effects and mother-fixed effects, I control for family-specific unobserved factors, such as parental attitudes towards assimilation, socioeconomic background, or cultural norms. This allows us to directly examine how the *Dow* ruling affected naming practices within the same family, thereby offering internal validity to the main results.

4.4 Heterogeneity

To deepen our understanding of the impact of the *Dow* ruling on naming patterns among Arabs, I extend the analysis by exploring how these effects vary across different characteristics of the fathers, such as class of work, years spent in the U.S., and the size of the Arab diaspora in the state of birth. This analysis is only done within Arabs so the results are descriptive. More details about this analysis are provided in section 6.

4.5 Intermarriage and Residential Integration

To explore the potential impacts of the Dow v US ruling on assimilation outcomes beyond naming practices, I conduct a descriptive analysis of intermarriage and residential integration for Arab immigrants compared to Polish immigrants. This analysis provides insights into both the assimilation effort of immigrants and the response of the native population to newly classified groups.

Intermarriage I study the evolution of intermarriage rates before and after the Dow ruling, focusing on first-generation Arab and Polish male immigrants. Intermarriage is considered an advanced stage of social assimilation, indicating not only the willingness of immigrants to integrate into broader society but also the acceptance by the native population (Gordon, 1964). For this analysis, I use data from the 1910, 1920, and 1930 census waves [11]. The sample consists of first-generation, married male immigrants, born abroad, and at least 15 years old from each census wave. I stack repeated cross-sectional datasets, treating the census waves from 1920 and 1930 as post-treatment. Intermarriage is defined as an immigrant man marrying a white native-born woman with native parentage. Thus, the outcome is conditioned on both nativity and race, and the sample includes only married men. I multiply the outcome variable by 100 so as to interpret the results in percentage points. This descriptive approach allows us to compare assimilation efforts between Arab and Polish immigrants over time, with Arabs classified as white following the Dow ruling. Thus, I'm comparing intermarriage rates across Arabs and Poles, estimating how it changes in the post-Dow period (1920 and 1930) relative to the pre-Dow period (1910). Since this exercise uses stacked cross-sectional data and only includes one pre-treatment period, it is not possible to definitively test the parallel trends assumption. As such, the analysis cannot be strictly interpreted as causal, and the results are better understood as descriptive evidence of

[11] Recall that the 1900 census doesn't include the *mother tongue* variable and hence I cannot properly identify Poles. The analysis could be extended to use the 1900 census and test robustness on the inclusion of different birthplaces that denote Poland

evolving intermarriage trends rather than causal effects of the Dow ruling.

Residential Integration In addition to intermarriage, I also study the residential integration of Arab and Polish immigrants. Residential integration is measured by whether an immigrant household has at least one neighbor who is a native-born individual with native parentage. I multiply the outcome variable by 100 so as to interpret the results in percentage points. This outcome reflects both the immigrant's desire to assimilate and the willingness of native-born residents to accept foreign-born neighbors. Using enumeration data from the census, I define the outcome variable as equal to one if an immigrant household has at least one native-born neighbor. The analysis is conducted at the household head level to avoid double counting, and census records from 1910, 1920, and 1930 are stacked. Again, due to the use of repeated cross-sectional data and the limitations in testing the parallel trends assumption, this analysis is not causal. The results provide descriptive evidence of the dynamics of residential integration following the Dow ruling.

5 Preliminary Results

5.1 Children's Names

The main result is illustrated in figures 3 and 4. Figure 3 shows the evolution of the mean Arab Name Index, FNI measured specifically for the Arabs, by birth year. As we can see, there is a sharp drop in the FNI measure post-1915, implying a shift towards Arabs naming their (male) children more American, and less foreign names.

Figure 4 shows the pre- and post-Dow distributions of FNI for US-born male children with Arab fathers. Since FNI was computed in the pre-period, the result from this figure is more intuitive. The stable benchmark for "foreigness" before the treatment allows us to measure changes in the distribution of naming choices relative to a consistent reference. The post-1915, or post-Dow distribution, has a higher density of observations towards the lower end of FNI. This indicates that from the initial distribution of FNI, names that were less frequent within the Arab community-and therefore had a lower FNI-became more common among birth cohorts that were born post-1915. The Kolmogorov–Smirnov test confirms that the two distributions are significantly different, as indicated by the reported p-value.

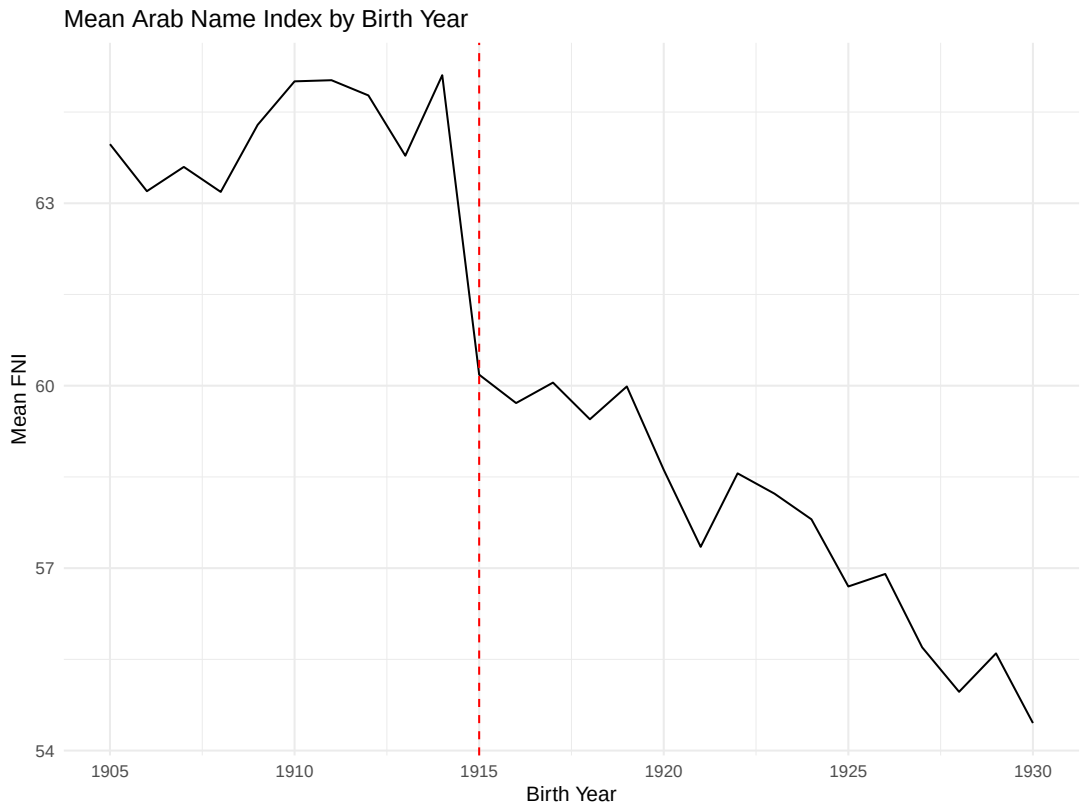


Figure 3: Evolution of Foreign Name Index for Second-Generation Arabs over birth cohorts

Note: This figure could also be called the Arab Name Index. It shows a sharp drop post-1915 in the FNI measure, highlighting a shift towards more American and less foreign names for second-generation, US-born (male) children to Arab fathers.

5.1.1 Poles as a control group

I compare Arabs to Poles based on the premise that Poles began arriving in the United States around the same time as Arabs and were generally perceived as white. Therefore, comparing the assimilation efforts of Arabs to an already established white group could provide valuable insights into how Arabs' assimilation patterns differed. Table 1 presents the results of a cohort-based difference-in-differences (DiD) estimation as specified in Section 1.

Post-Dow is an indicator equals 1 if the US-born child was born in 1915 or later, and the "Arab" indicator equals 1 if the US-born child has an Arab father. Column (1) thus is a comparison between cohorts born before and after 1915 across Arabs and Poles. Column (2) controls for a linear trend in naming patterns, defined as $t = \text{birthyr} - \text{minimum year} + 1$. Column (3) includes birth year fixed effects and column (4) includes birth year fixed effects and state of birth fixed effects.

Across all specifications, the interaction coefficient (Post-Dow x Arab) is negative and statisti-

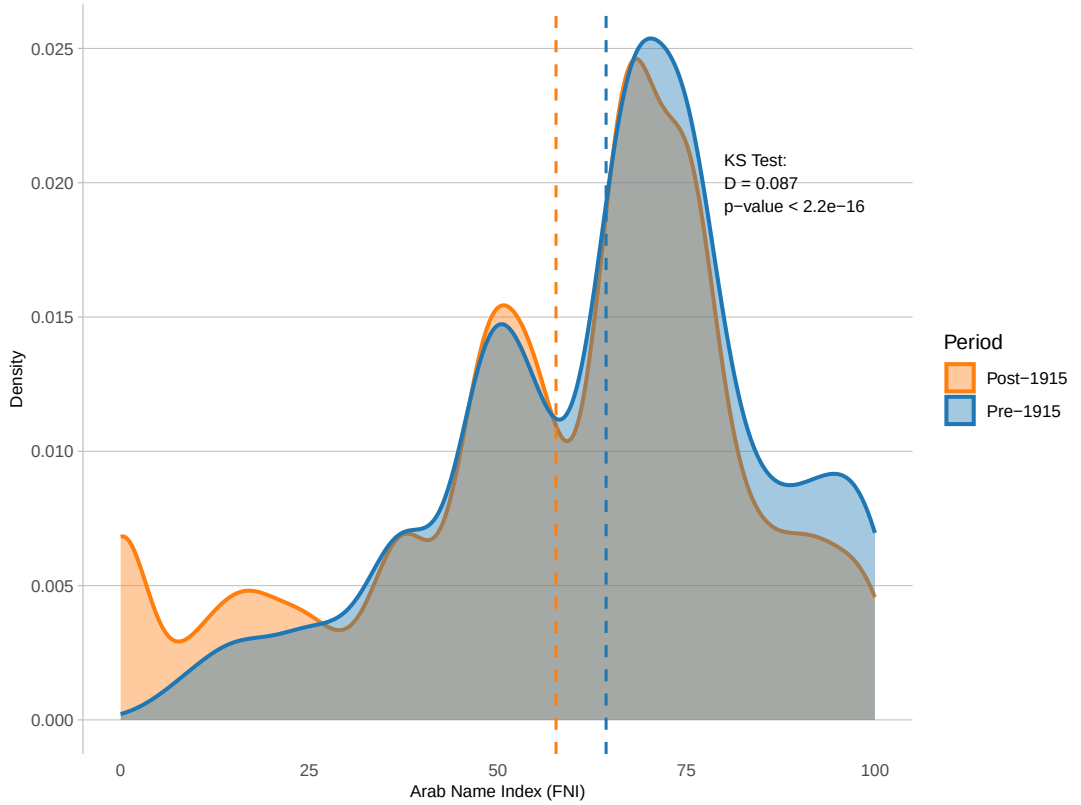


Figure 4: Pre- and post-Dow (1915) distribution of FNI

Note: This is computed for the US-born children with Arab fathers. The post-Dow FNI distribution shows a higher density for names that had a lower FNI in the pre-period, indicating a shift towards less foreign or less Arab names. The Kolmogorov–Smirnov test clearly shows that the distributions are significantly different from each other.

Table 1: Dow and Naming Patterns

FNI *(Mean: 64.34)*				
	(1)	(2)	(3)	(4)
Arab	-2.024***	-2.219***	-2.012***	-0.415***
	(0.199)	(0.200)	(0.199)	(0.208)
Post-Dow	-3.851***	3.363***		
	(0.067)	(0.104)		
Post-Dow x Arab	-2.785***	-1.457***	-1.415***	-1.721***
	(0.240)	(0.242)	(0.241)	(0.242)
Observations	625,254	625,254	625,254	625,254
Linear time trend	No	Yes	No	No
FE: Birth Year	No	No	Yes	Yes
FE: State of Birth	No	No	No	Yes

Note: The dataset includes men born in the US (1905-1930) to a foreign-born (Arab or Pole) father. Polish fathers are identified from their mother tongue being Polish. Heteroscedasticity-robust standard errors are reported. *** p<0.01, ** p<0.05, * p<0.1.

cally significant, indicating that US-born Arabs tended to adopt more Americanized and less foreign names after 1915, compared to Poles. This amounts to a −1.72 point decrease in FNI,

which corresponds to a 2.64% decrease in FNI relative to its mean of 64.34. This suggests that following the Dow v. United States ruling, Arab parents were more likely to give their children names that conformed to American norms. The magnitude of the interaction effect indicates a meaningful change in naming behavior. To illustrate, a -1.72 decrease in FNI might represent a shift from a name like Joseph (Americanized from Youssef) (FNI = 67.58) to a potentially even more Americanized version of the name, Joe (FNI = 65.86). Across all specifications, heteroscedasticity-robust standard errors are reported.

To further explore the timing and dynamics of name changes among Arabs relative to Poles, I estimate an event study model by interacting the birth year variable with the Arab dummy, as specified in 2. The event study framework allows us to assess the presence of pre-trends and validate the parallel trends assumption, critical to the identification strategy. The coefficients prior to 1915 do not show any significant deviations or trends. This provides reassurance that the DiD design is valid and that the post-treatment effects can be interpreted causally.

Figure 5 plots the estimated coefficients of these interactions, providing a visualization of how naming patterns evolved over time for Arabs compared to Poles. Post-1915, the coefficients for the interaction between birth year and the Arab dummy become significantly negative, indicating that, compared to Poles, the naming practices of Arabs shifted towards less foreign-sounding or Arab names (more American) in the years following the Dow v. United States ruling. This shift aligns with the results of table 1, showing a substantial decline in FNI for Arabs. The decline in FNI seems to be short-lived, with a decrease in FNI amounting to around 5 points on the FNI scale, an economically and statistically significant result. From the FNI scale, a 5 point decrease is similar to a move from a name like *Solomon* (potentially derived from Suleiman, $FNI = 88.35$ to *Sam* ($FNI = 83.01$). Furthermore, we see a gradual increase in FNI for cohorts born post-1920 until reaching pre-Dow levels.

5.1.2 Within family

This section conducts two distinct within-family analyses to investigate naming patterns: one focusing solely on Arab families and the other comparing Arab families to Polish families. Both approaches provide insights into how the 1915 Dow v. United States ruling impacted naming practices within families, enhancing the internal validity of the main findings and abstracting from limitations inherent to the choice of control groups.

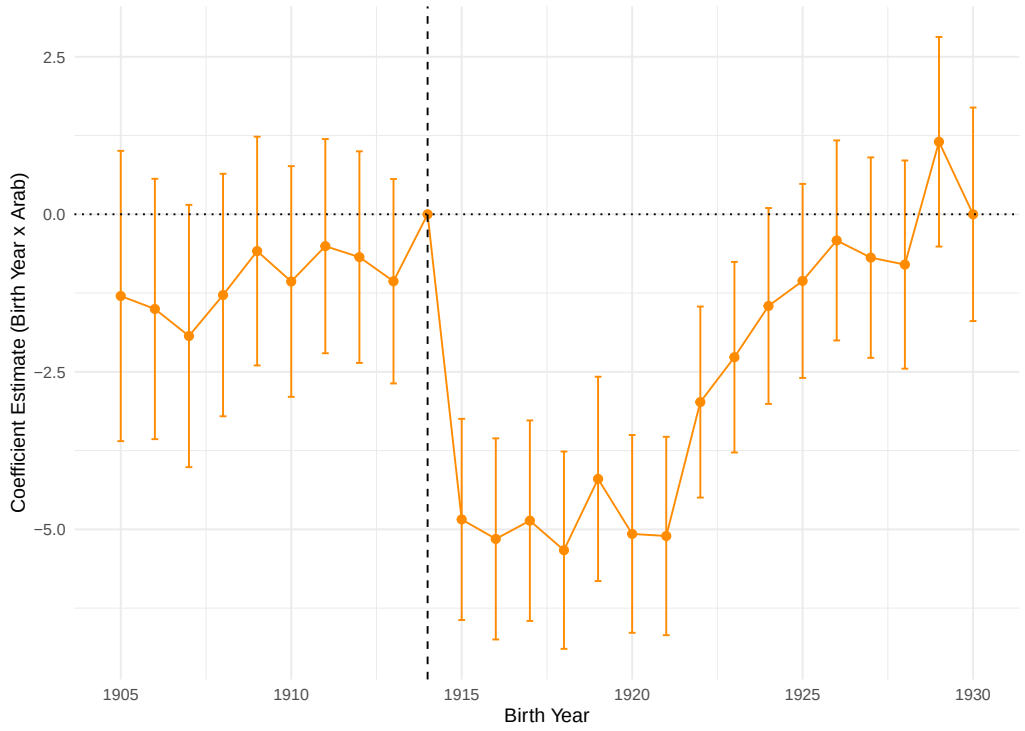


Figure 5: Estimated coefficients of *Birth year x Arab*

Note: The figure plots coefficient estimates for the interaction between birth year and Arab, showing how the effect varies by birth year and validating the identification strategy with the absence of pre-trends.

Within Arab families: The first analysis compares male siblings born before and after the Dow ruling within Arab families. The expectation is that siblings born after the ruling would have less foreign-sounding names (lower FNI) compared to their older siblings born before the ruling. This approach isolates the impact of the ruling by controlling for family-specific unobserved factors, such as cultural preferences and socioeconomic conditions, through the inclusion of household and mother fixed effects.

In both exercises I use the 1920 census wave and restrict the sample to birth cohorts from 1905 to 1920. This ensures the comparison is limited to siblings living in the same household, all of whom are 15 years or younger at census time. By excluding much older siblings who are still cohabiting, I mitigate potential biases stemming from differing assimilation profiles. For example, older siblings who remain in the household by 1920 may represent families with lower assimilation tendencies. Figure 6 shows that cohabitation was relatively common among the Arab population in the United States. Specifically, it plots the share of US-born men with an Arab father who were still living with the head of the household.

Table 2 presents the results of this analysis. The coefficient on *Post-Dow*, captures the difference

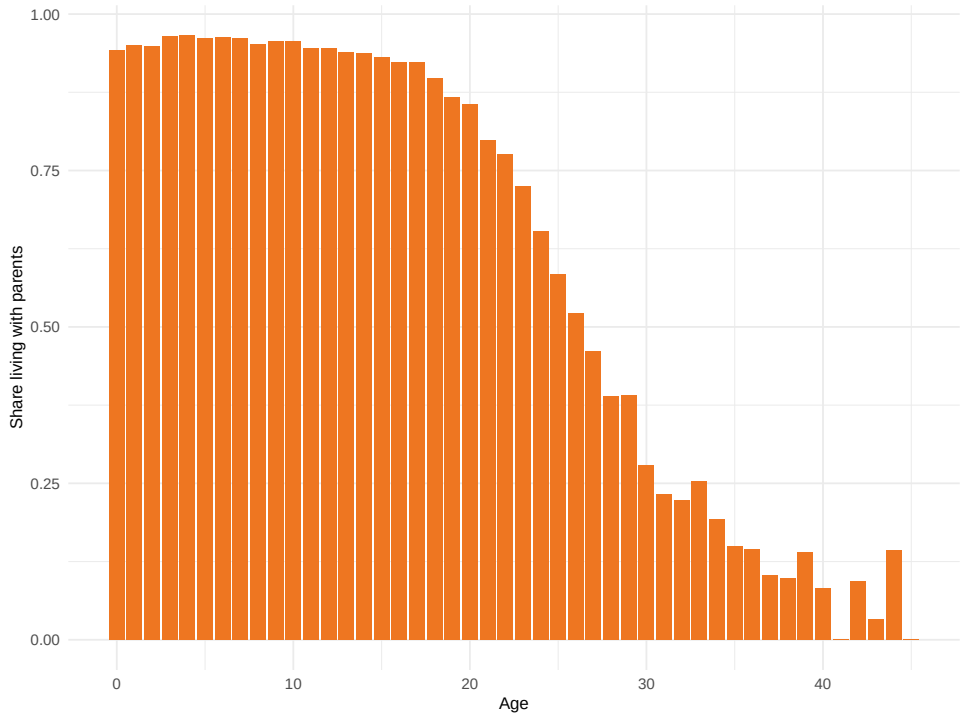


Figure 6: Share of US-born Arab men who live with their parents

Note: The figure depicts the share of US-born men with an Arab father who are still living with their parents. Data is from the 1920 full-count census

in FNI between siblings born before and after the ruling. The effect is statistically significant, negative, and economically meaningful, amounting to a decrease on the FNI scale of 7.4 points. This indicates that the ruling led to a shift towards less foreign-sounding names for Arab children born post-1915 compared to their male siblings, born pre-1915, within the same household or having the same mother. The robustness of the results across specifications—accounting for birth year, state of birth, birth order, and household or mother fixed effects—demonstrates that the observed effect is not driven by unobserved family-level heterogeneity.

Comparing Arab and Polish Families The second analysis extends the within-family framework by comparing the effect of the Dow ruling on Arab families to that on Polish families. Here, the focus is on the relative change in FNI for Arab siblings versus Polish siblings, both born to foreign-born fathers. Poles serve as a control group, representing a population unaffected by the Dow ruling but subject to similar broader societal and temporal influences. This approach follows the spirit of Fouka (2019), who used a similar within-family analysis to study assimilation.

The interaction term captures the differential impact of the ruling on naming practices in Arab families relative to Polish families. A negative and significant coefficient on this term, as shown

Table 2: Within-family (Arabs only)

FNI *(Mean = 66.20)*			
	(1)	(2)	(3)
Post-Dow	-7.810***	-7.376***	-7.406***
	(0.375)	(0.759)	(0.775)
Num. Obs.	16,464	16,464	16,464
R^2	0.026	0.011	0.011
RMSE	23.9	17.3	17.2
FE: Birth Year	Yes	Yes	Yes
FE: State of Birth	Yes	Yes	Yes
FE: Mother	No	No	Yes
FE: Birth Order	No	Yes	Yes
FE: Household	No	Yes	No

Note: Sample consists of all men born in the US to a foreign-born Arab father, who live in the same household as their father and at least one male sibling and who were 15 years old or younger at census time (1920). Heteroscedasticity-robust standard errors are reported. *** p<0.001, ** p<0.01, * p<0.05.

in Table 3, suggests that the Dow ruling specifically led to a more pronounced Americanization of naming practices among Arab families. Since Poles serve as the control group, this result indicates that the Dow ruling led to a more Americanized shift in naming practices (lower FNI) specifically among Arabs, relative to Poles, even after controlling for family-specific factors. The effect ranges from -3.7 to -5 point decrease on the FNI, depending on the specification.

This finding reinforces the main results by demonstrating that the shift in naming practices among Arabs is not merely a reflection of broader trends affecting all immigrant groups but is uniquely tied to the reclassification of Arabs as white following the Dow ruling. By incorporating family-level fixed effects and comparing siblings within the same household, this approach further strengthens the causal interpretation of the results. Furthermore, the result is also robust, yet smaller in magnitude, when including state of birth and birth-year fixed effects.

Table 3: Within family and across groups

FNI *(Mean = 63.68)*				
	(1)	(2)	(3)	(4)
Arab	-6.420	-6.671	10.727	10.842
	(14.666)	(14.650)	(8.963)	(9.005)
Post-Dow	-7.589***	-7.589***	9.342	8.346
	(0.393)	(0.393)	(22747.415)	(28787.410)
Post-Dow × Arab	-5.025***	-5.045***	-3.650***	-3.670***
	(0.535)	(0.544)	(0.630)	(0.637)
Num. Obs.	291,742	291,742	358,330	358,330
Adj. R^2	0.483	0.490	0.090	0.091
Fixed Effects: Household	Yes	No	Yes	No
Fixed Effects: Mother	No	Yes	No	Yes
Fixed Effects: Birth Year	Yes	Yes	Yes	Yes
Fixed Effects: County in 1930	No	No	Yes	Yes
Fixed Effects: State of Birth	Yes	Yes	No	No
Fixed Effects: State of Birth x Birth Year	No	No	Yes	Yes
Fixed Effects: Birth Order	Yes	Yes	Yes	Yes

Note: Sample consists of all men born in the US to a foreign-born (Arab/Polish) father, who live in the same household as their father and at least one male sibling and who were 15 years old or younger at census time (1920). Heteroscedasticity-robust standard errors are reported. *** p<0.001, ** p<0.01, * p<0.05.

5.1.3 Other minorities as a control group

In addition to comparing Arabs to Poles, I also consider other minority groups who were not classified as white during the same period. For instance, the Japanese were legally classified as non-white and consequently could not naturalize, following the outcome of *Ozawa v. US* in 1923. This provides an interesting contrast to Arabs, who had just been classified as white.

Table 4 presents the results of a cohort-based difference-in-differences estimation, as specified in equation 1. Similar to the findings reported in Table 1, we observe that in columns (2) and (3) Arabs Americanized their children's names post-Dow, as evidenced by a significant and negative effect on FNI. The effect is larger in magnitude compared to the analysis using Poles as a control group, suggesting a greater assimilation effort when comparing Arabs to groups that remained non-white. However, in column (1), which includes Japanese, Chinese, and Filipino groups, the estimated coefficient on the interaction term is statistically insignificant, though still negative. One possible explanation is that the Japanese, who faced similar legal challenges as the Arabs, might have been influenced by the Arab precedent and aimed to demonstrate "whiteness" through similar naming practices. Moreover, the classification of Arabs as white may have set a legal and social precedent that influenced naming behaviors in other minority communities. That said, this explanation may not fully hold, given that the Japanese population was primarily concentrated on the West Coast, limiting the likelihood of widespread spillover effects. I plan to investigate this potential spillover further in the next steps.

Table 4: Dow and Naming Patterns

	FNI		
	(1)	(2)	(3)
Arab	5.826***	-0.106	-6.301***
	(0.613)	(0.257)	(0.355)
Post-Dow x Arab	-0.013	-6.034***	-2.506***
	(0.568)	(0.279)	(0.393)
Observations	79,927	355,468	111,184
Adj. R^2	0.0376	0.0840	0.0349
FE: Birth year	Yes	Yes	Yes
FE: State of birth	Yes	Yes	Yes

Note: The dataset includes men born in the US (1905-1930) to a foreign-born father that is Arab or another nationality depending on the classification and grouping. In column 1, the control group consists of US-born men to Asian fathers(Japanese, Chinese, Filipinos). In column 2, the control group consists of the same groups as column 1 and US-born more to Mexican, Cuban, Indian, Puerto Ricans, and Greek. Column 3, I only include US-born children to Greek fathers. Heteroscedasticity-robust standard errors are reported in parentheses. *** p<0.001, ** p<0.01, * p<0.05.

Figure A.12 provides the event study analysis, which generally supports the DiD results, though the parallel trends assumption appears weaker for some minority groups. In Table B.6, I extend the analysis by including county-by-birth-year fixed effects. This means that the comparison is among individuals living in the same county and born in the same year, thereby controlling for local, time-varying factors that could influence naming decisions. When comparing individuals within the same county and birth year in Table B.6, the insignificant result persists yet the direction becomes positive, suggesting a more complex relationship that warrants further investigation, particularly concerning localized responses to racial classification policies.

5.2 Intermarriage and Residential Choices

I present here the results on intermarriage of men with white native women. Note that spouses are only spotted in the census if they live in the same household. Intermarriage is an indicator equal to 1 if a first-generation Arab/Pole male married a native-born white American (condition-

ing on race and nativity variables). I stack the 1910, 1920, and 1930 census waves and the sample comprises of first-generation married male Arabs/Poles aged 15 or older, from each census wave. Note that because I stack census waves, post-Dow is only census waves 1920 and 1930. I multiply the outcome variable by 100 to interpret the coefficients in percentage points.

Panel A of table 5 shows the results. The coefficient of 1.480 in column (3) means that, on average, the rate of intermarriage among Arab men increased by 1.48 percentage points post-1915, compared to the pre-1915 period and relative to the Polish men. In 1910, the intermarriage rate of Arab men was 5%. With an increase of 1.48 percentage points post-treatment, the intermarriage rate for Arabs in the post-1915 period would be approximately 6.48% if all else remains constant. This is a roughly 29.6% increase in the intermarriage rate compared to the 1910 level. This increase in intermarriage could indicate that Arab men became more socially acceptable or faced fewer barriers to marrying outside of their ethnic group, perhaps because they were now legally considered white and might have faced less discrimination as a result. However, due to the relatively high baseline in the pre-period, this increase suggests that Arabs potentially moved closer to the main in-group's culture after the ruling. Individual controls include age, labor force status, class of work (self-employed or works for wages), literacy, speaks English. Of course, this evidence is suggestive and descriptive and not causal. Note that men marrying native women at the time didn't automatically mean that they could get the US citizenship, they still have to go through the normal process.

Residential integration is another key variable that reflects assimilation, which is not entirely under the control of immigrants but requires coordination between immigrant and native populations. The outcome variable equals one if an immigrant household has at least one neighbor of native parentage. This variable is defined only for households with at least one observed neighboring household. As previously mentioned, neighbors are inferred based on the order of enumeration in manuscript records, as the census was conducted door-to-door until 1960. Using the information on the "line" of the manuscript record, along with the enumeration district, county, and state, neighbors are identified through preceding and subsequent lines.

Following Gagliarducci and Tabellini (2022), I restrict the analysis to first-generation male Arab and Polish immigrants who were at least 15 years old and were the head of their household. Restricting the sample to household heads ensures that we do not double-count individuals within a household. As shown in panel (B) of Table 5, Arab household heads are 0.797 percentage

points less likely to have a native-born neighbor post-Dow compared to Polish household heads. This result may reflect nuances in how residential integration occurs. If Arabs were more likely to marry native women, there may be gender-based heterogeneity at play, where women were more willing to intermarry, but the male household head was not willing to move out of an ethnic enclave. These possibilities are testable in the data, and I plan to explore them in future analyses as outlined in the next steps section.

Limitations of the current analysis: There are several limitations to the analyses of both intermarriage and residential integration using stacked census waves. First, the use of repeated cross-sectional data limits the causal interpretability of the results. Moreover, due to having only one pre-treatment period (1910), it is not feasible to formally test for parallel trends, which is a key assumption for difference-in-differences identification.

Table 5: Intermarriage and Residential Integration

Panel A	**Married to Native**		
	(1)	(2)	(3)
Post-Dow	0.286***		
	(0.026)		
Arab	3.170***	4.858***	3.750***
	(0.194)	(0.198)	(0.206)
Post-Dow x Arab	2.295***	2.412***	1.480***
	(0.214)	(0.226)	(0.234)
Observations	947,368	947,375	947,368
Adj. R^2	0.096	0.032	0.114
Panel B	**Has a Native Neighbour**		
	(1)	(2)	(3)
Post-Dow	0.575***		
	(0.048)		
Arab	1.508***	3.557***	1.747***
	(0.156)	(0.160)	(0.171)
Post-Treatment x Arab	-0.519**	-1.151***	-0.797***
	(0.170)	(0.177)	(0.188)
Observations	990,489	990,489	990,489
Adj. R^2	0.036	0.004	0.047
Individual controls	Yes	Yes	Yes
FE: State	Yes	No	Yes
FE: County	Yes	No	Yes
FE: Year	No	Yes	Yes
FE: County-Year	No	No	Yes

Note: In Panel (A) the sample consists of first-generation Arab/Polish men that are married and 15 years and older from each sample wave. In panel (B) the sample consists of Arab/Polish household heads to avoid double counting, from each census wave. Post-Dow is thus defined for census waves 1920 and 1930. Individual controls include age, class of work (works for wages or self-employed), labor force status (employed or not), and speaking English or not. Heteroscedasticity-robust standard errors are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

6 Heterogeneous Responses

To deepen our understanding of the impact of the Dow's ruling on naming patterns among Arabs, I explore how these effects vary across different characteristics of the fathers, including class of work, years spent in the U.S., and the size of the Arab diaspora in the state of birth.

It is plausible that certain subsets of Arab families were more responsive to the new social and legal climate following the Dow ruling, based on specific characteristics. Moving away from Arab names for the children may have been a simpler decision for fathers who had lived in the U.S. for a longer time compared to those who were more connected to their culture, for whom choosing a non-ethnic name might have been a more costly decision (Fouka, 2019). Additionally, fathers who were self-employed or owned a business may have had greater incentives to assimilate due to their frequent interactions with the broader native-born population. Similarly, the size of the Arab diaspora in the state of birth could play a significant role. Fathers in areas with a large Arab community might have experienced less social pressure to Americanize their children's names, maintaining stronger cultural ties through their children's identities. In contrast, those in less concentrated diaspora settings may have chosen more Americanized names to facilitate assimilation into the broader community—or conversely, they might have maintained distinctly Arabic names to preserve cultural identity in the absence of a larger community. This heterogeneity analysis allows us to better understand which segments of the Arab population were most sensitive to the post-Dow shift.

Figure 7 shows the median FNI of US-born children of Arab fathers by birth year, distinguishing between children whose fathers either worked for wages (dashed blue line) or were self-employed or owned a business (solid red line). The figure reveals that assimilation, as indicated by lower FNI values, is more pronounced among the children of self-employed fathers. This finding suggests that self-employed Arab fathers or business owners might perceive higher returns to assimilation, which they demonstrate through naming choices, as also seen anecdotally in the Syrian Business Directory (Mokarzel and Otash, 1908). Moreover, self-employed individuals, who interact more frequently with the native population, may be more motivated to adopt Americanized names for their children to reduce potential discrimination.

Figure 8 presents the evolution of median FNI for children of Arab fathers, categorized by whether the father had spent above (solid red line) or below (dashed blue line) the median number of years in the United States. The figure indicates that children of fathers who had been in the U.S. longer

(above the median years) experienced a larger drop in FNI, suggesting that longer residence in the country might contribute to a greater inclination towards assimilation through naming as the fathers are relatively more established and less attached to their home. The classification into above or below median is computed for each birth year, using the father's years in the U.S. calculated as: father's years in the US = years in the US from the 1930 census − (1930 − birth year).

Finally, Figure 9 illustrates that Arab fathers residing in states, at the time of the child's birth, with a below-median share of the Arab diaspora were more likely to Americanize their children's names. This trend could be driven by several factors, including limited support from a smaller ethnic community, increased pressure to conform to the main in-group's culture, or the perception that Americanized names might enhance their children's social and economic prospects. The smaller community size may also create fewer opportunities to maintain cultural identity, thereby encouraging assimilation. Table A.3 presents the same results in a regression framework. Mostly, the heterogeneity dimensions are correlated with FNI in the expected way as outlined earlier except with the father's years in the US which is negative, yet small and not statistically significant.

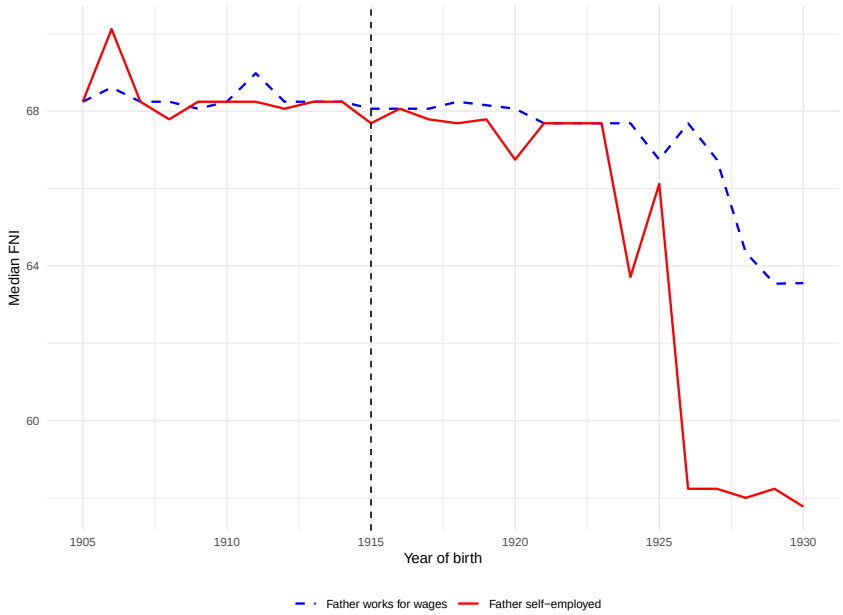


Figure 7: Evolution of Median FNI by Birth Year for Second-Generation Arabs, Differentiated by Father's Employment Type

Note: The blue dashed line represents children of fathers who worked for wages, while the red solid line represents children of fathers who were self-employed or owned a business. Arab fathers who were self-employed or owned a business tended to give their children more Americanized (i.e., less foreign) names compared to fathers who worked for wages.

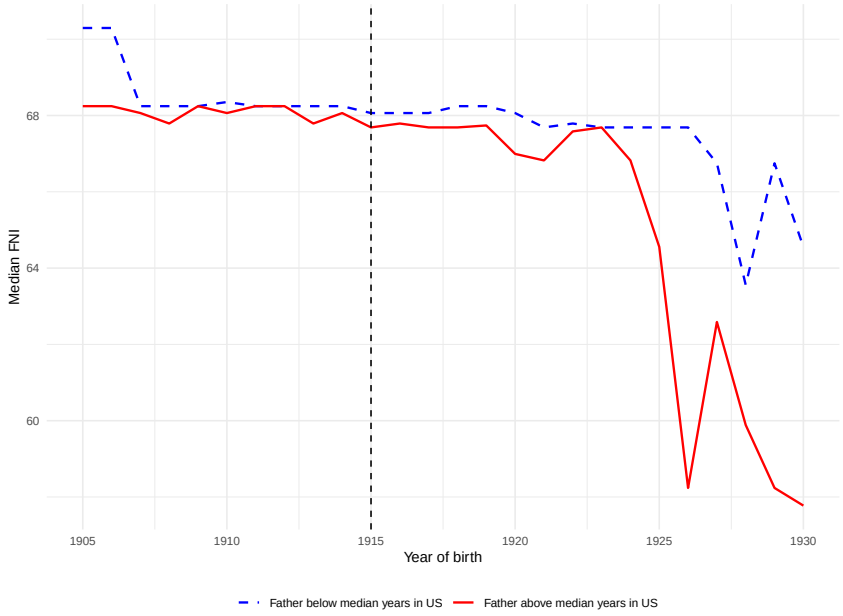


Figure 8: Evolution of Median FNI by Birth Year for Second-Generation Arabs, Differentiated by Father's Years in the U.S.

Note: The blue dashed line represents children whose fathers spent below the median number of years in the U.S., while the red solid line represents children whose fathers spent above the median number of years. The father's years in the U.S. are calculated as: years in the US from the 1930 census − (1930 − birth year). Arab fathers who lived in the U.S. for more than the median number of years were more likely to give their children more Americanized names (lower FNI).

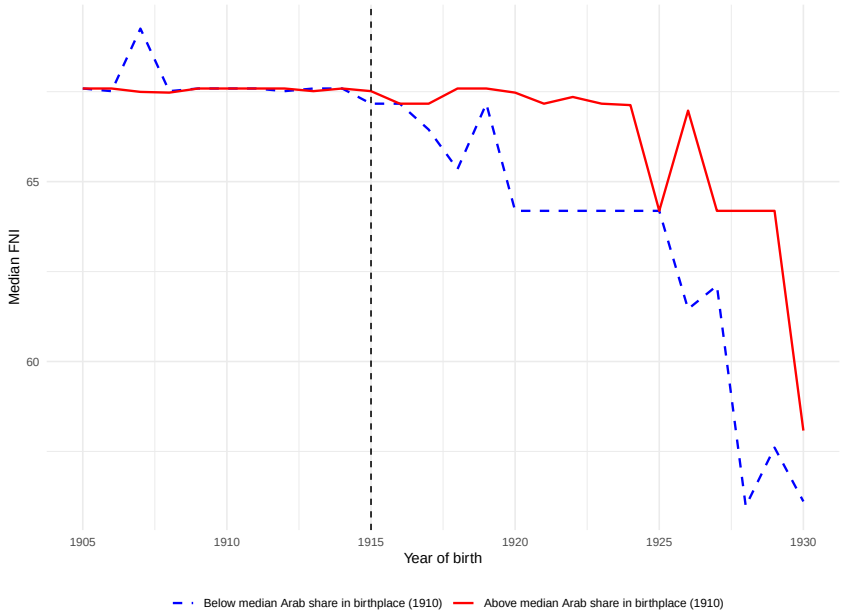


Figure 9: Evolution of Median FNI by Birth Year for Second-Generation Arabs, Differentiated by the Size of the Arab Diaspora in the State of Birth

Note: The blue dashed line represents children born in states with a below-median share of the Arab diaspora, while the red solid line represents those born in states with an above-median share of the Arab diaspora. The classification into above or below median is based on the pre-period (1910) distribution. Children born in states with a below-median share of the Arab diaspora were more likely to be given less foreign-sounding names.

7 Conclusions and Next Steps

This paper examined how legal inclusion affects immigrant assimilation effort, using the case of Arab immigrants from Greater Syria during the Age of Mass Migration. Specifically, I studied the impact of the 1915 *Dow v. United States* ruling, which ended the debate on whether or not Arabs are white, and thus eligible for naturalization.

Using a cohort-based difference-in-differences and event study approach, I find that the Dow ruling led to a significant but potentially short-lived decline in the distinctiveness of names, indicating a shift towards more Americanized naming practices for US-born children of Arab fathers. This follows from having Poles, a group generally perceived as white, as the control group. I also use other control groups were not necessarily perceived as white and I find similar results in terms of the direction of the effect. The within-family analysis further reinforces these findings by comparing siblings born before and after the Dow ruling. Furthermore, descriptive evidence suggests that the response was heterogeneous, depending on factors such as father's occupation, years in the US, and the size of the Arab diaspora in the state of birth.

Beyond naming practices, I analyzed assimilation outcomes that required coordination between immigrants and natives, such as intermarriage and residential integration. The results show that intermarriage rates among Arab men increased significantly after 1915 compared to other immigrant groups perceived as white, while residential integration outcomes were mixed.

A novel contribution of this research is the development of the Arabic Americanization Index, which traces cultural shifts in Arabic names based on phonological adaptations, providing a culturally nuanced measure of assimilation. This analysis is complemented by the use of unique historical data from Arab-American newspapers, highlighting the role of media in shaping community identity and cultural integration.

The results have policy implications for the current and heated debate about naturalization policies with many countries making the requirements harsher. By examining how the *Dow v. United States* ruling lowered the barriers to naturalization for Arab immigrants, this paper shows that granting legal inclusion can encourage cultural assimilation and increase social acceptance. In the context of ongoing discussions about tightening or loosening naturalization criteria, this work underscores the potential benefits of inclusive policies in fostering integration and enhancing social cohesion.

Next Steps: Moving forward, I plan to extend this research in several directions. First, I aim to further investigate the Ozawa v. United States case in greater detail, comparing it to the Arab context to understand the differing outcomes between Japanese and Arab immigrants, since the former wasn't classified as white, yet the latter was. I also intend to explore potential spillover effects from the Dow ruling on other immigrant groups. Additionally, I will improve the analysis on residential integration and intermarriage, aiming for a more causal interpretation of these results.

In the realm of political outcomes, I initially investigated voter registration data from California, Ohio, and Massachusetts, focusing on if Arabs registered to vote or not (conditional on being naturalized), and observing their political affiliation (only exists for California). However, due to the need for manual data collection and a limited sample size, especially in California, this exercise may not be very informative. Instead, I plan to look naturalization rates and participation in the US military during World War I as indicators of political integration.

I also plan to conduct text analysis on both American newspapers and Arab-American newspapers to understand public discourse and community identity formation during this time. I specifically want to show that the Dow ruling was a prominent event. Furthermore, I will apply the novel measure of Arabic Name Americanization that I developed to further quantify cultural shifts. I also intend to explore additional dimensions of heterogeneity, including a similar analysis for female children, to provide a more comprehensive understanding of the assimilation process across different subgroups. I am also interested in the integration and assimilation patterns of Arab immigrants in the US, from an economics perspective, echoing the analysis of Abramitzky and Boustan (2022) specifically for the Arabs.

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A Setting and Data

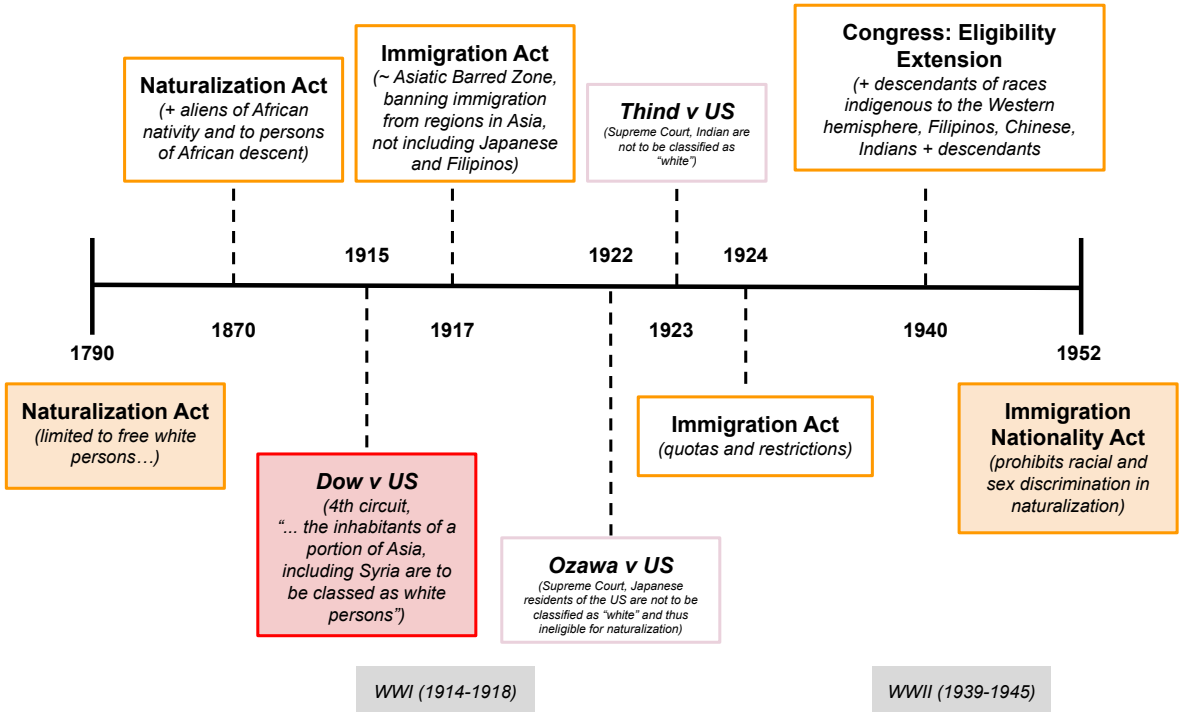


Figure A.1: Timeline of Naturalization and Immigration Laws

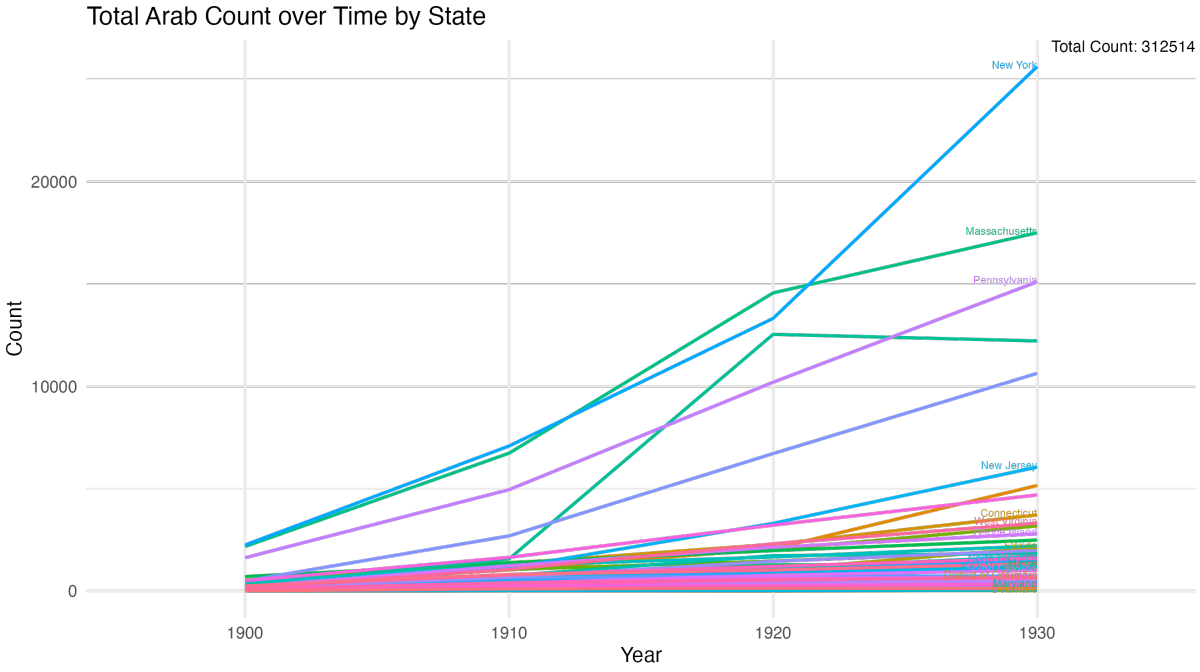


Figure A.2: Total count of Arabs over time state

Note: Figure shows that New York City and Massachusetts were the states that consistently hosted more Arabs during the 1900-1930 period.

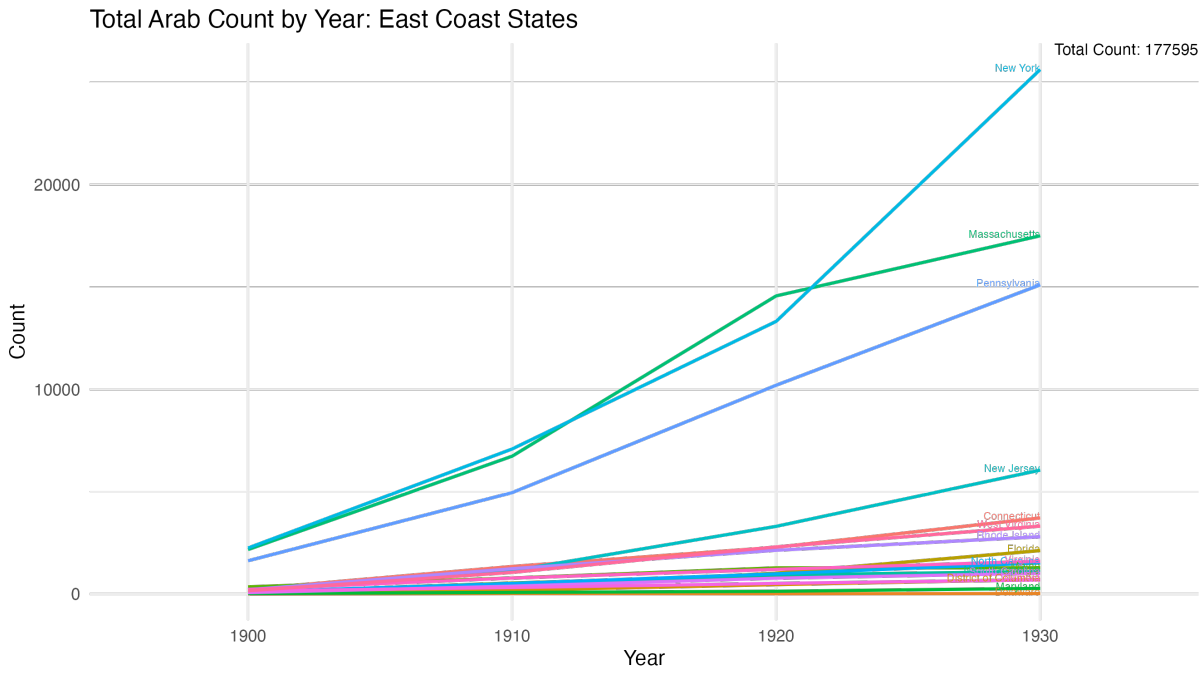


Figure A.3: Total count of Arabs over time: East Coast States

Note: The East Coast hosted the majority of the Arab diaspora. The region is generally understood to include the U.S. states that border the Atlantic Ocean: Connecticut, Delaware, Florida, Georgia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Rhode Island, South Carolina, and Virginia, as well as the federal capital of Washington, D.C., and non-coastline states: Pennsylvania, Vermont, and West Virginia.

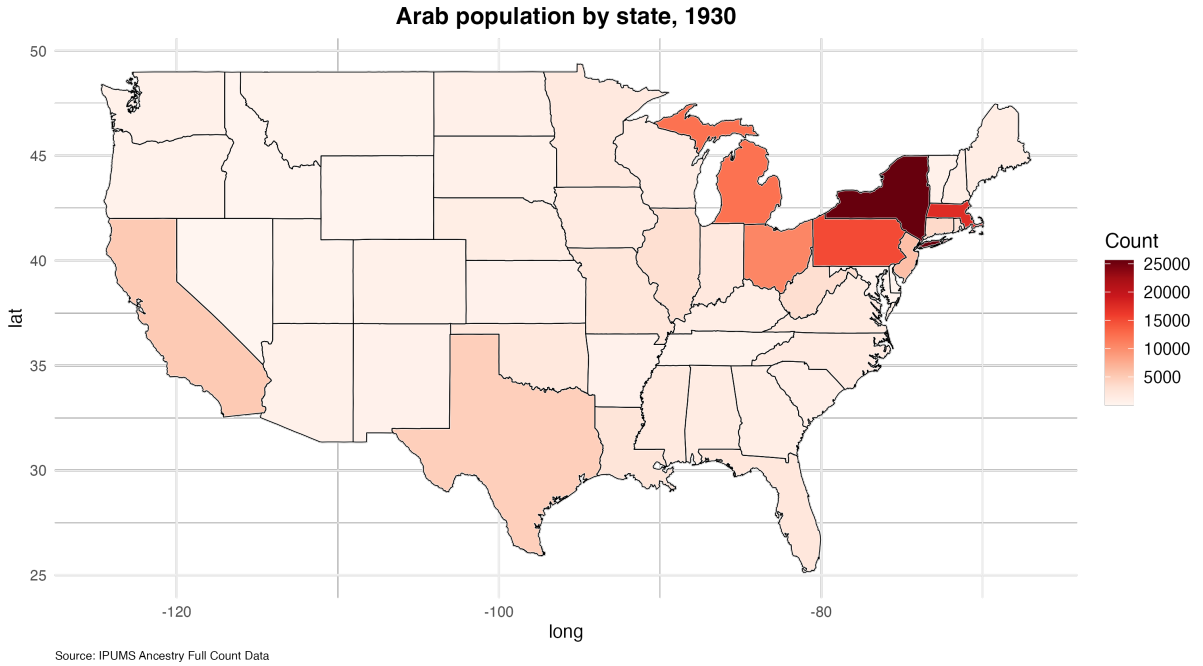


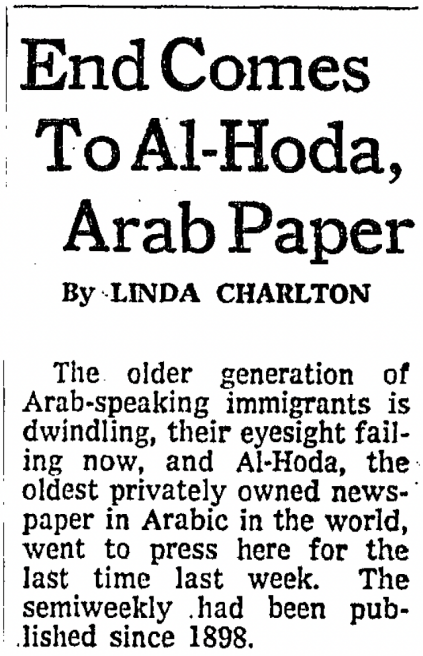
Figure A.4: Total count of Arabs by US state in 1930

Note: Darker shades of red indicate higher counts of the Arab population.

Table A.1: Number of US-born Males by Father's Ethnicity

Ethnicity	Pre-Dow Count	Post-Dow Count
Arab	12,288	41,291
Polish	176,043	408,094
Japanese	5,080	29,543
Chinese	1,861	4,952
Filipino	126	1,625
Indian	341	927
Mexican	39,252	189,572
Puerto Rican	554	5,398
Cuban	1,810	3,372
Greek	7,229	55,489

Note: This table provides the count of US-born children to fathers of the listed ethnicities. Counts are divided by the pre- and post-Dow periods.



End Comes To Al-Hoda, Arab Paper

By LINDA CHARLTON

The older generation of Arab-speaking immigrants is dwindling, their eyesight failing now, and Al-Hoda, the oldest privately owned newspaper in Arabic in the world, went to press here for the last time last week. The semiweekly had been published since 1898.

Figure A.5: Snapshot of an article published in the New York Times in September, 1971

Note: The article goes in length into the history of the paper and the evolution of its content and readership from the early Arab migration wave till the day of the article.

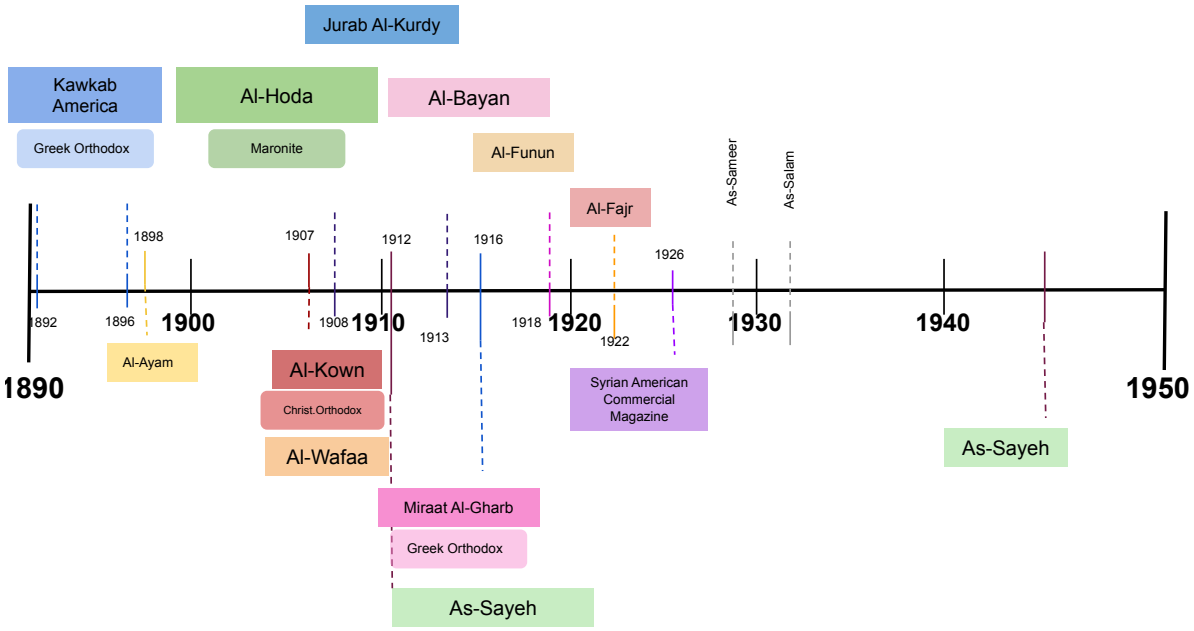
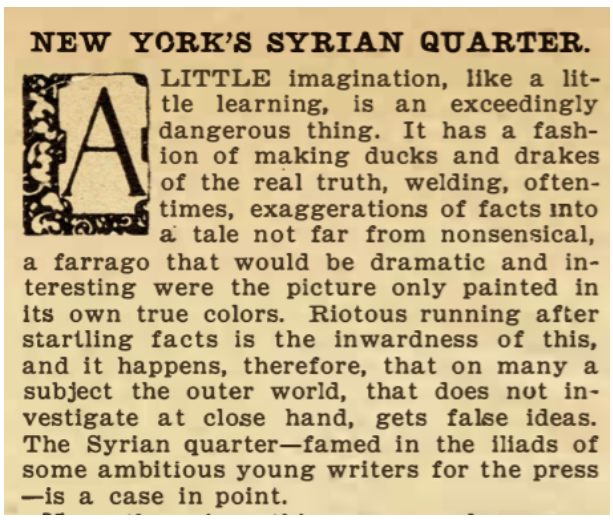


Figure A.6: Arab-American newspapers timeline



NEW YORK'S SYRIAN QUARTER.

A LITTLE imagination, like a little learning, is an exceedingly dangerous thing. It has a fashion of making ducks and drakes of the real truth, welding, oftentimes, exaggerations of facts into a tale not far from nonsensical, a farrago that would be dramatic and interesting were the picture only painted in its own true colors. Riotous running after startling facts is the inwardness of this, and it happens, therefore, that on many a subject the outer world, that does not investigate at close hand, gets false ideas. The Syrian quarter—famed in the iliads of some ambitious young writers for the press—is a case in point.

Figure A.7: Snapshot of an article describing New York's Syrian quarter



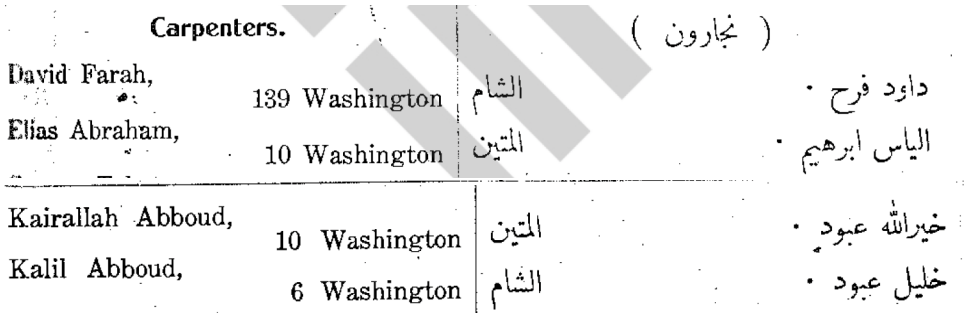
OCTOBER 14, 1893. THE ILLUSTRATED AMERICAN. 453

A PLAGUE OF MEN.

SOME strange elements have insinuated themselves into the immigration problem. It is not the most obvious factors in the question that are the most interesting, even though they be the ones of paramount importance. To the superficial observer it would seem absurd to consider seriously the part played in the corruption of our national life by Syrians. And yet the student of the situation who sets out to examine the subject in all its phases and aspects, may not disregard even such an obscure and apparently insignificant detail as is suggested by the steadily increasing colony of dusky Orientals who have planted a patch of the of his own country. Ingenious cabinets of olivewood, rude jewelry not unlike that of Benares, bits of sandstone said to have come from the ruins of King Solomon's temple and accompanied by printed slips in "English as she is spoke," attesting that fact, gimcracks for feminine adornment made of amber and silver, fans of musky sandalwood, long, gilded flasks of rose attar, and boxes of figs make up the outlandish stock in trade with which these white-teethed, black-bearded, and suave spoken aliens hope to coze a competence from the rich Occidentals. In the winter, the peripatetic merchants, still following the course of wealth and fashion, betake them-

SOME RECENT ARRIVALS FROM DAMASCUS.

Figure A.8: Article in the Illustrated American about Syrian immigrants. Titled *A Plague of Men.*



Carpenters.		(نجارون)	
David Farah,	139 Washington	الشام	داود فرح ٠
Elias Abraham,	10 Washington	المتين	الياس ابرهيم ٠
Kairallah Abboud,	10 Washington	المتين	خيرالله عبود ٠
Kalil Abboud,	6 Washington	الشام	خليل عبود ٠

Figure A.9: Snapshot from a page for New York City in the Syrian Business Directory (1908-1909)

Note: It shows the type of industry, names of owners in Arabic, where they're from in the Middle East, the business' street address, and the corresponding English names. This directory is organized by city within every state.

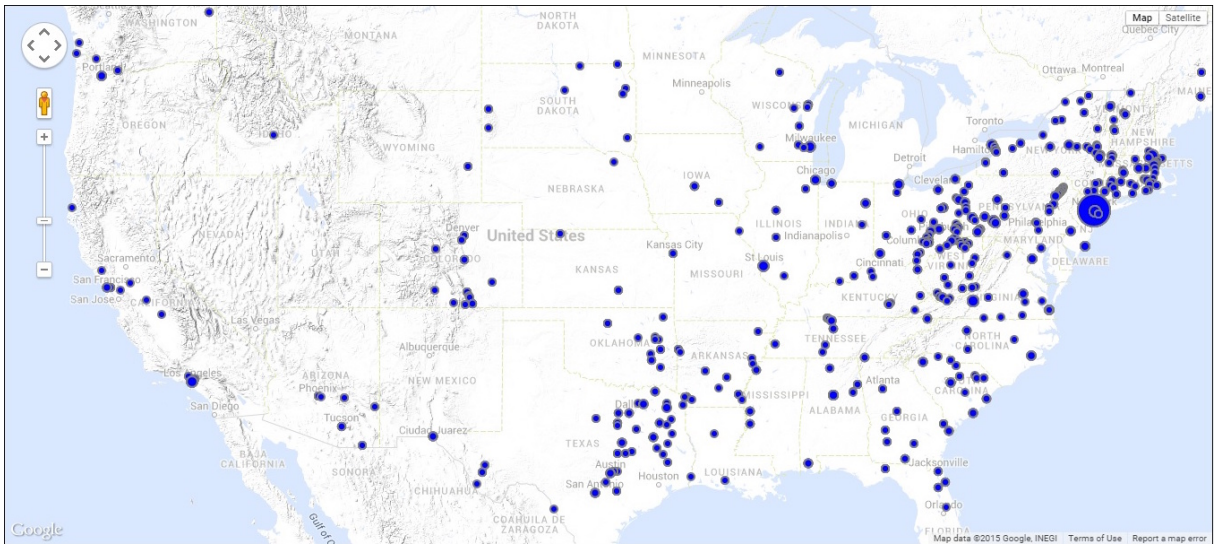


Figure A.10: Map of Arab-American Businesses: Syrian Business Directory (1908-1909)

Note: The geographic distribution of the businesses follows the distribution of the Arab diaspora across US states. Map by KCLDS.

A.1 Transliteration guidelines

The transliteration methodology for Arabic to English involves mapping Arabic consonants to their closest English equivalents and approximating Arabic vowels based on common pronunciation. Special attention is given to Arabic letters that lack direct English equivalents, which are represented by English letter combinations (e.g., "kh" for خ). Short vowels (اَ fatha, اِ kasra, اُ damma) are sometimes implied rather than written, while long vowels are represented by "a," "u," and "i" for ا (Alif), و (Waw), and ي (Ya), respectively. Key consonants include "A" or omitting the Alif (أ) when it starts a word, "dh" for ذ, and "gh" for غ. Distinctive sounds, such as ع (Ayn) and ء (Hamza), may be represented with an apostrophe or omitted. Names are transliterated consistently to preserve readability; for example, إلياس becomes "Ilyas," نخله becomes "Nakhleh," and مراد داود becomes "Murad Dawood."

Arabic Name	**English Transliteration**
إلياس	Ilyas
ابراهيم	Ibrahim
جرجي	Jurji

Table A.2: An example of Arabic names and their English transliterations

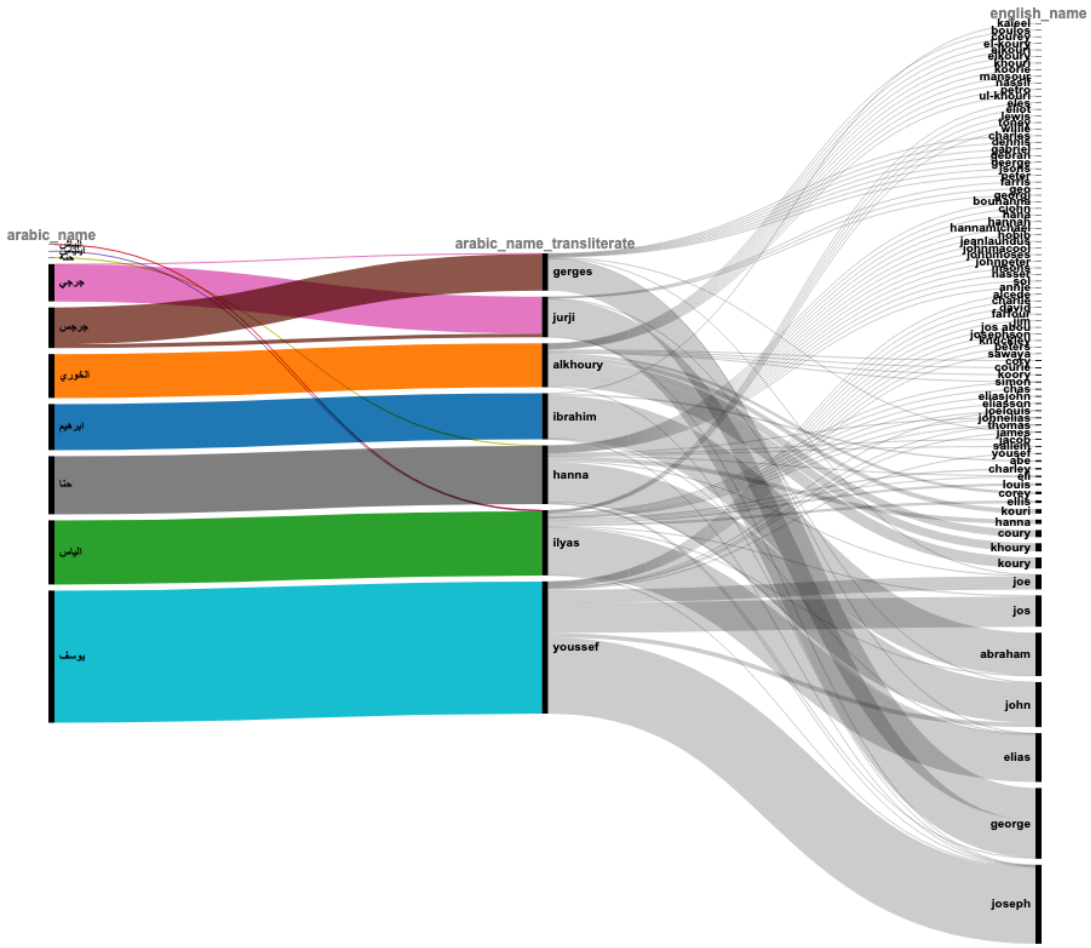
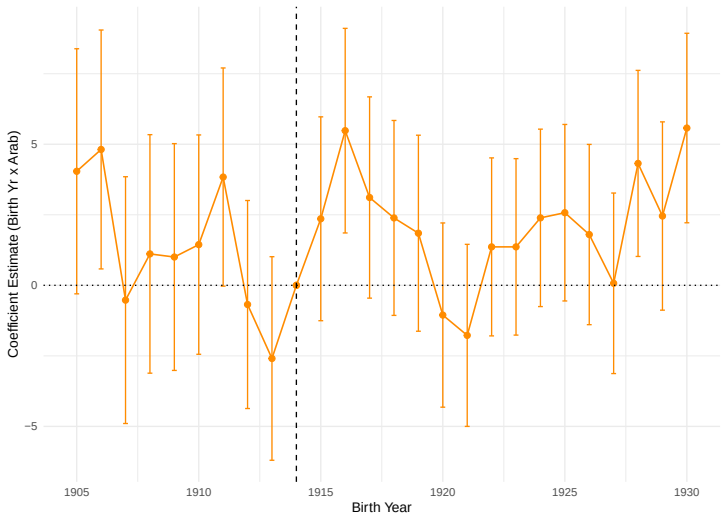
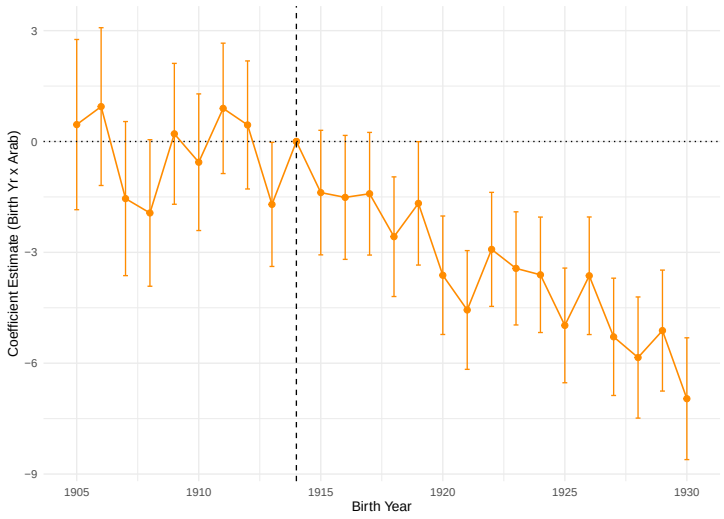


Figure A.11: Alluvial figure of the most common *Americanization Paths*

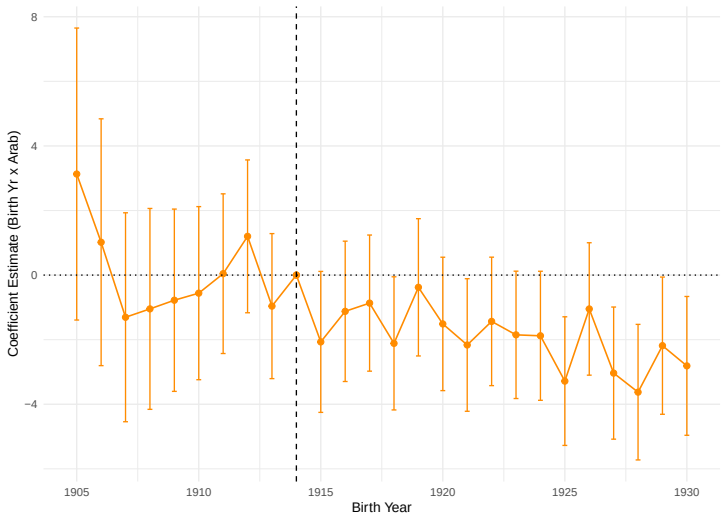
Note: It shows the Arabic names, their transliterations to English, and their corresponding English names from the Syrian Business Directory (Mokarzel and Otash, 1908)



(a) Control: Asian father



(b) Control: Asian + other minorities' fathers



(c) Control: Greek father

Figure A.12: Estimated coefficients of *Birth year x Arab* across different control groups

Table A.3: Effects of Father's Characteristics and Arab Share on FNI

	FNI		
	(1)	(2)	(3)
Father self-employed	0.214		
	(0.518)		
Post-Dow x Father self-employed	-1.46**		
	(0.592)		
Father's years in the US		-0.148***	
		(0.031)	
Post-Dow x Father's years in the US		-0.059	
		(0.036)	
Above Median Share (1910)			-3.367***
			(0.930)
Above Median Share x Post-Dow			2.278***
			(0.472)
Observations	35,993	45,143	50,615
Mean FNI	58.79	58.98	59.25
FE: Birth year	Yes	Yes	Yes
FE: State of birth	Yes	Yes	Yes

Note: Sample consists of men born in the US 1905-1930 to an Arab father. Heteroscedasticity-robust standard errors in parentheses. The share of Arabs is computed based on the child's state of birth in 1910. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

B Robustness: Inclusion of more Fixed Effects

Table B.4: Dow and Naming Patterns

FNI *Mean (64.34)*			
	(1)	(2)	(3)
Arab	0.405*	-0.021	-0.040
	(0.216)	(0.210)	(0.242)
Post-Dow x Arab	-1.625***	-1.906***	-1.350***
	(0.244)	(0.243)	(0.287)
Observations	625,254	625,254	625,254
RMSE	23.7	23.9	23.3
Adj. R^2	0.0384	0.0308	0.0440
FE: Birth Year	Yes	Yes	Yes
FE: State of Birth	Yes	Yes	Yes
FE: County	Yes	No	No
FE: State	No	Yes	No
FE: County-Year	No	No	Yes

Note: The dataset includes men born in the US (1905-1930) to a foreign-born (Arab or Pole) father. Heteroscedasticity-robust standard errors are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table B.5: Dow and Naming Patterns: Within-family

FNI *(Mean = 63.68)*		
	(1)	**(2)**
Post-Dow	9.342	8.346
	(22747.415)	(28787.410)
Arab Dummy	10.727	10.842
	(8.963)	(9.005)
Post-Dow x Arab Dummy	-3.650***	-3.670***
	(0.630)	(0.637)
Observations	358,330	358,330
Adj. R^2	0.090	0.091
Fixed Effects: Household	Yes	No
Fixed Effects: Mother	No	Yes
Fixed Effects: Birth Year	Yes	Yes
Fixed Effects: County in 1930	Yes	Yes
Fixed Effects: Birth Order	Yes	Yes
Fixed Effects: State of Birth x Birth Year	Yes	Yes

Note: Sample consists of all men born in the US to a foreign-born (Arab/Polish) father, who live in the same household as their father and at least one male sibling and who were 15 years old or younger at census time (1920). Heteroscedasticity-robust standard errors are reported. *** p<0.001, ** p<0.01, * p<0.05.

Table B.6: Effects of Dow Ruling on Foreign Name Index (FNI)

	FNI		
	(1)	(2)	(3)
Arab	3.503***	-1.763***	-6.421***
	(0.982)	(0.390)	(0.464)
Post-Dow x Arab	0.744	-3.865***	-1.988***
	(1.093)	(0.435)	(0.513)
Observations	79,927	355,468	111,184
RMSE	27.0	28.6	24.1
Adj. R^2	0.0370	0.1257	0.0551
FE: Birth Year	Yes	Yes	Yes
FE: State of Birth	Yes	Yes	Yes
FE: County-Year	Yes	Yes	Yes

Note: The dataset includes men born in the US (1905-1930) to a foreign-born father that is Arab or another nationality depending on the classification and grouping. In column 1, the control group consists of US-born men to Asian fathers(Japanese, Chinese, Filipinos). In column 2, the control group consists of the same groups as column 1 and US-born more to Mexican, Cuban, Indian, Puerto Ricans, and Greek. Column 3, I only include US-born children to Greek fathers. Heteroscedasticity-robust standard errors are reported in parentheses. *** $p<0.001$, ** $p<0.01$, * $p<0.05$.