

Becoming White: How Mass Warfare Turned Immigrants into Americans^{*}

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How do groups on the social periphery assimilate into the social core of a nation? I develop a theory of cultural assimilation that highlights the way in which mass mobilization around warfare can reduce ethnic stratifications by incorporating low-status ethnic groups into the dominant national culture. To test the theory, I focus on the case of World War I in the United States—a period that closely followed a massive wave of immigration into the United States. Using an instrumental variables strategy exploiting the combination of the exogenous timing of the war and features of the draft system, I show that individuals of foreign, European nativity—especially, the Italians and Eastern Europeans—were more likely to assimilate into American society after serving in the U.S. military. I also provide evidence of backlash against Germans despite their service for the United States in World War I. I then go onto to show using a regression discontinuity design exploiting variation in exposure to compulsory schooling laws that mass education—a different nation-building strategy—has minimal explanatory power in explaining immigrant assimilation in the late 19th and early 20th centuries of American history. The theory and results contribute to our understanding of the ways in which states make identity and the prospects for immigrant assimilation in an age without mass warfare.

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Identity is an ever unfinished conversation.

Stuart Hall

INTRODUCTION

National culture and citizenship are foundational concepts to the construction of nation-states. As history tells us, though, constructing a truly national citizenry involves a long and often arduous process. In cases such as France, Weber (1976) shows how processes of modernization helped to create a French, national citizenry in the countryside. Other cases such as Ireland show how competing conceptions of identity can come into bloody conflict with hegemonic, national cultures. In essence, the relationship between national culture–shared values and beliefs–and citizenship–the encoding of national identity into law–depends on having a citizenry that believes itself to be part of an “imagined community” Anderson (1983).

But in a world where individuals have the ability to move from one nation to another, newly arrived groups at the social periphery generally do not instantly become a part of this dominant culture. Instead, these groups often lie at the periphery of the dominant group (the social core). This paper will focus on one specific instance of social core-periphery relations: the relationship between immigrants (the periphery group) and natives (the core group) in the early 20th century United States. Whether periphery members assimilate into the dominant national culture depends on whether these new groups wish to join the dominant, national group and on the social core’s willingness to accept these new groups into their own. The core puzzle, then, can be stated as follows: how do groups on the social periphery assimilate into the social core of a nation? Within the context of this paper, how did immigrants, who were considered as not-quite-American in the early 20th century, become Americans?

In this article, I provide a framework describing how mobilization for mass warfare can lead ethnic groups at the social periphery to integrate into the dominant, national culture. Participation in violence within the context of a national army can induce cultural assimilation by facilitating contact with individuals from the dominant group, generating shared experiences, and inculcating national values. Relatedly, individuals from the social core might become more accepting of these periphery groups upon observing that individuals from the periphery pay some cost to enter the group by risking their lives on behalf of the national group. These mechanisms can then lead veterans from these ethnic groups to assimilate into the broader national culture.

To test the argument, I focus on the case of the United States’ involvement in World War I (1917-1918)–a period that rapidly followed the end of the Age of Mass Migration. This pe-

riod saw a massive influx of European immigration largely of Italians, Germans, and Eastern Europeans into the United States (Abramitzky, Boustan, and Eriksson 2012, 2014). Though we now consider these groups to be “white Americans” today, the Irish, Italians, Jews, and Germans were only one step up above African Americans in the American racial hierarchy at the time. Given that these ethnic groups were on the cultural periphery, studying them in the context of the First Great War provides as close to an ideal case as possible in terms of their assimilation patterns with respect to war service. This context is also useful from an inferential perspective. The exogenous timing with respect to birth cohorts coupled with the use of a draft lottery facilitate using an instrumental variables strategy for causal identification. Together, these features make this case useful from both a substantive and empirical perspective.

Using an instrumental variables strategy, I find that men of foreign-born heritage who served in the military during World War I (WWI) were more likely to exert effort into assimilating into the American culture as proxied by marriages with natives, petitions for citizenship, and naming patterns. Moreover, I also find that veterans are more likely to become naturalized citizens indicating greater degrees of acceptance by white Americans. These results are robust to controlling for birth year polynomials, state fixed effects, county fixed effects, and ethnic group fixed effects. Heterogeneity across ethnic groups indicates further support for the theory. Groups like the Italians and Eastern Europeans/Jews were much more likely to be accepted into the dominant culture relative to other ethnic groups whereas the effects are muted amongst the Irish—a group who began assimilating into American culture much earlier in history. Results amongst Germans indicate the limits of cultural assimilation when certain ethnic groups become politicized (Hopkins 2010; Fouka 2016, 2017). While German veterans were more likely to invest effort into assimilation, they were *less likely* to become citizens on average. In addition, I find that the effect of war service on cultural assimilation as measured by name patterns and citizenship status are strongest among those groups who were least assimilated to begin with while assimilation is strongest in marriage markets among individuals from groups that were already more assimilated.

To explore if war service is unique in explaining patterns of cultural assimilation over the course of American history, I also examine the degree to which compulsory schooling—another nation-building institution—had similar effects on assimilation (Weber 1976; Hobsbawm 1990). Even within the historiography of American education, many prominent scholars and reformers advocated the use of public education as a way to “Americanize” immigrants (Cubberley 1947; Tyack 1976; Meyer et al. 1979; Bandiera et al. 2017). Evidence using a regression discontinuity design exploiting differential age eligibility restrictions for compulsory schooling suggest that this institution had minimal impact on immigrants’ assimilation.

Together, these results highlight the powerful effect that war mobilization can have on cultural assimilation.

Though the conventional wisdom tends to treat white identity as static, this paper builds on the field of “whiteness” studies to show the intimate role of the state in shaping the transformation of immigrants—who were considered less than white in a cultural sense—into white Americans (Ignatiev 1995; Roediger 1999; King 2000; Guglielmo 2003). Though much of this literature tends to focus on the way in which intergroup contact shapes immigrants’ sense of white identity, I draw on the state-building literature to show how the state has a particularly important role in shaping the boundaries of white identity (King 2000). In particular, I show that mass mobilization for warfare has played a fundamental role in helping individuals at the social periphery to assimilate into the social core. While the classic insight from works that highlight the relationship between warfare and the state is that mass mobilization for warfare can be conducive to state-building (Tilly 1990; Bensel 1990), progressive institutions (Scheve and Stasavage 2012, 2016; Scheidel 2017), and democracy (Levi 1997; Ferejohn and Rosenbluth 2016), this paper shows that this phenomenon runs much deeper: mass mobilization for warfare can fundamentally reshape our social identities. In this respect, this paper builds on Sambanis, Skaperdas, and Wohlforth (2015) who argue that warfare can increase national identification among the general populace. This study, however, places the focus on the direct effect of the military itself rather than the overall context of war. These themes also connects to the broader way in which the military, though one of the most conservative institutions, can also provide opportunities for minority groups to achieve social and political equality (Klinkner and Smith 1999; Parker 2010; Samii 2013; Stahl 2017).

This paper also contributes to our understanding of the politics of immigration and assimilation, a topic of contemporary importance given the rising tension between natives and immigrants in the Western world (Hopkins 2010; Hainmueller and Hangartner 2013; Halla, Wagner, and Zweimuller 2017). In line with the idea that the state has an important role in helping immigrants to assimilate into their respective nations, Hainmueller, Hangartner, and Pietrantuono (2017) and Hainmueller, Hangartner, and Pietrantuono (2015) find that the process of acquiring citizenship can break down barriers to, at least, the political incorporation of immigrants into a polity. This study suggests, however, a much less desirable way through which we can achieve not only political incorporation, but also social and cultural incorporation of immigrants. These results suggest that military service might be one way in which to achieve assimilation beyond political incorporation, though this obviously raises a number of troubling normative issues. Furthermore, the lack of an impact from the expansion of mass schooling suggests a unique role for the military in explaining the trajectory of immigrant

incorporation in American political development. In short, the state certainly has a role to play in assimilation immigrants into a nation, but the context in which this might happen at a large-scale suggests an irony in the process of immigrant assimilation: cultural incorporation of immigrants may come at the highest price. Despite finding evidence that military service induces assimilation into *white American* culture, this is not to say that such assimilation is necessarily desirable in a normative sense. The type of assimilation documented in this paper suggests that the process of Americanization largely revolved around removing diversity instead of celebrating it.

NATIONAL IDENTITY, WHITENESS, AND ASSIMILATION IN HISTORICAL PERSPECTIVE

Scholars have spilled much ink over the origins and nature of national identity. These theories tend to fall into two broad themes. The first emphasizes the central role of modernization, and in particular, the development of mass schooling and diffusion of capitalist economies in driving the development of national identity (Weber 1976; Anderson 1983; Hobsbawm 1990; Laitin 1992; Spruyt 1996). In this set of stories, mass education and markets provide opportunities for individuals of different ethnic groups to interact, for elites to inculcate their conception of national identity, and for individuals to adopt a common language. Though education and the development of market institutions have been central to state and nation-building efforts, Weber (1976) also notes the role of the military in creating a sense of national identity. I develop this idea in more detail in the following section.

In contrast to this set of theories, other scholars emphasize the exclusionary basis of national identity construction (Morgan 1975; Marx 1997; Smith 1999; King 2000; Marx 2005). These theories suggest that national identity only takes meaning when there are clear groups that can be excluded from that “imagined community.” When looking across the United States, South Africa, and Brazil, race and ethnicity takes center stage in forming the exclusionary basis of national identity. But race and ethnicity need not be the only bases for exclusion. Marx (2005) highlights how religion served as a foundation for national identity in European history through defining European national identity within the boundaries of religious communities.

This paper seeks to integrate both sets of explanations while simultaneously disentangling the precise state-building institutions that can facilitate inclusion of new groups into a largely exclusive conception of national identity. In particular, this paper will show how one of the major state institutions—the military—can facilitate the assimilation of periphery groups into national culture. I then go onto demonstrate how the other major state institution—mass education—did

not have nearly as powerful an impact in shaping national identity at least within the American context. In short, I seek to integrate both sets of theories of national identity formation by emphasizing the critical role of the state in turning excluded groups into included groups.

Before exploring the meaning of national identity in the American context, it will be useful to lay out precisely what I mean by the terms national identity formation, assimilation, and incorporation—concepts which I will use interchangeably in this paper. National identity formation, to borrow from Anderson (1983), is a process that consists of an individual forming an attachment with some common community (ie, nation). In the social psychology literature, this process of attaching one's identity to a common ingroup generally entails de-emphasizing other parochial identities such as race, ethnicity, or religion and valuing some national identity that supersedes these other identities (Gaertner et al. 1989; Charnysh, Lucas, and Singh 2015). For simplicity, assume that individuals have types of social identities from a set of social identities $s \in S$. Further assuming that identities for immigrants are mutually exclusive, we can express the multiplicity of social identities simply as a sum over identity weights θ_s as shown in Equation 1. For simplicities sake, suppose that immigrants have two potential identities: national identity θ_n and ethnic identity θ_e .¹ I can define assimilation simply as putting increased value on θ_n relative to θ_e . Assimilation or incorporation in this paper, then, is the process of having an immigrant value his new national identity over his previous ethnic identity.²

$$1 = \sum_{s \in S} \theta_s \quad (1)$$

Within the context of American history, national identity has been explicitly and implicitly tied up with race, ethnicity, and, specifically, “whiteness” (Gordon 1964; Ignatiev 1995; Smith 1999; King 2000). As the sociologist Milton Gordon points out, assimilation into American culture has primarily taken the form of “Anglo-conformity” in which new groups assimilate into white, Anglo-Saxon culture rather than other forms of assimilation such as the “melting pot” whereby natives also take components of the identity of new groups in creating a revised national identity (Gordon 1964). This core idea can be seen simply by interrogating the depths of American history.³ Though, today, we consider individuals of Irish, Italian,

¹Keeping with the social core-periphery language, one could also specify identity as weights over core identity versus periphery identity.

²The model proposed by Shayo (2009) to study the relationship between social identity and redistribution uses a similar specification of social identity.

³Even from the founding of the United States, ideas of American identity and citizenship relied on ensuring that white identity was synonymous with American identity (Morgan 1975).

and European heritage to be white Americans in the United States, this was not always the case. For much of American history, intergroup relations has been structured as a hierarchy of ethnicity with whites of Anglican-Saxon heritage at the top of the American ethno-racial hierarchy and groups such the Germans, Irish, Italians, and African Americans respectively down each rung of this ladder.⁴ Eventually, European, immigrant groups have more or less given up their ethnic identities, exchanged them for the “American” national identity, and are now viewed as essentially assimilated into American culture. How did this happen?

Though much of contemporary political science tends to treat the whiteness as a relatively fixed, scholars have provided a number of perspectives on this question. Ignatiev (1995) provides a relational theory that emphasizes how the presence of a lower status group can push the groups slightly above that low status group to engage in discrimination against groups at the bottom of the social hierarchy so as to become accepted by the groups at the top. In describing how the “Irish became white”, Ignatiev (1995) notes how the Irish systematically discriminated against African Americans in their efforts to advance up the American racial ladder in an effort to become “American” in the eyes of natives. The idea that exclusion as a basis for a common identity is not limited to just immigrant groups arriving throughout the 19th and 20th century—Morgan (1975) and Marx (1997, 2005) both note how exclusion on the basis of race or religion have been central to the foundations of national identity. Broadly speaking, this perspective traces the advancement of ethnic groups up the American ethno-racial hierarchy as a process borne out of intergroup relations.

What these perspectives tend to overlook, however, is the important role of the state as an independent force in shaping both the desire for ethnic groups to assimilate into the social core and the willingness of those in the social core to accept groups from the outside. Across a wide swath of literature in political science, scholars demonstrate how the state and its institutions play a crucial role in shaping a wide range of outcomes such as economic prosperity, inequality, and civil conflict. Particularly, the state plays a major role in shaping the boundaries of identity. For example, scholars show that the act of counting and classifying ethnic groups through censuses play a major role in shaping how individuals think of themselves and how they might antagonize out-groups (Kertzer and Arel 2002; Hochschild and Powell 2008; Lieberman and Singh 2017). Others show how language and homogenization policies can also lead individuals to hold onto or abandon their identities (Laitin 1992; Fouka 2016; Dehdari and Gehring 2017). Furthermore, states can also enforce racial hierarchies through

⁴In contemporary, public opinion research, for example, survey researchers ask individuals whether they agree with the statement that, “Irish, Italian, Jewish, and many other minorities overcame prejudice and worked their way up. Blacks should do the same without any special favors” (Kinder and Sanders 1996).

coercion and social policy (Marx 1997; Katzenelson 2014; Acharya, Blackwell, and Sen 2016; Mazumder 2016). The upshot from this literature is that we might suspect that the state could play a crucial role in the process of not only enforcing racial hierarchies, but facilitating certain groups to advance up it. Despite highlighting the important role of the state in shaping identity formation, much of these studies tend to miss the ways in which even more fundamental features of the modern state such as war-making can also transform identities of its citizens (Tilly 1990). It is also important to note that the process of assimilation into the social core is not necessarily normatively desirable. The transformation of ethnic identity into a broader national identity synonymous with white, Anglo-Saxon Americans is about dealing with diversity by removing it (King 2000). In the following section, I lay out a theory of the way in which participation in mass warfare can lead individuals at the social periphery to assimilate into the social core of a polity.

HOW MASS WARFARE LEADS TO CULTURAL ASSIMILATION

In this section, I draw on diverse literatures across political science, history, sociology, and economics to generate a theory of how participation in mass warfare can lead immigrants to assimilate from the social periphery into the social core of America. To briefly summarize the theory, I argue that individuals from the social periphery—in this paper, I consider the case of immigrants in the United States during the Age of Mass Migration—who serve in the military will be more likely to assimilate into the social core of a nation. Immigrant veterans are more likely to assimilate through inculcation into the social core's national identity or processes of socialization with members of the social core both of which shape an immigrant's preferences for assimilation. Moreover, natives might be more likely to accept immigrants who pay the cost of joining their group in the form of military service. These mechanisms suggest that the process of mass mobilization for warfare, though incredibly deleterious with respect to human life, might lead to the cultural incorporation of marginalized groups within a polity.

Demand for Assimilation: Inculcation and Socialization

First, military service might change the preferences of immigrants through direct inculcation. While individuals may learn their sense of national identity formally during schooling (Hobsbawm 1990) or casually through their interaction with the banalities of life in a nation-state (Anderson 1983; McNamara 2015), there are very few institutions like the military where individuals have the importance of national identity impressed upon them. These individuals are constantly exposed to the symbols of the American state and its dominant culture such as

the American flag (Kalmoe and Gross 2016; Levendusky, *Forthcoming*), common language (Laitin 1992), and the propaganda associated with a war effort (Yanagizawa-Drott 2014; Cantoni et al. 2017)—all of which have the ability to shift immigrants servicemen to want to become more assimilated. Moreover, the process of military training involves stripping individuals of their pre-existing identities and building them up into soldiers willing to go to great lengths for their nation. For instance, Captain Ralston Flemming—the head intelligence officer at Camp Jackson in South Carolina, noted in a memo to President Woodrow Wilson that “It has been our purpose to endeavor to impress a spirit of enthusiastic militant Americanism upon these men and so far we have been very successful” (Flemming 1918). If this type of inculcation noted by Captain Flemming was instituted systematically, then we should expect military service to induce cultural assimilation by fundamentally shifting the preferences of immigrants to *want to* become white Americans.

Second, military service could also change immigrants’ preferences for assimilation through socialization and intergroup contact. This mechanism lies at the heart of Weber (1976)’s account of the ways in which rural peasants in France gained their French national identity. Essentially, the military can reshape immigrants identity by exposing them to a wide variety of individuals especially natives who they would have otherwise not met or interacted with. Given that most socialization in the military would occur with white, natives, then we should expect immigrants to converge in their identities toward white, natives following standard models of socialization in the economics literature (Bisin and Verdier 2001). Moreover, the military is a ripe setting for intergroup contact to make immigrants feel closer to natives since the vast majority of individuals interact on an equal footing with each other and are required to cooperate with each other given battlefield objectives (Allport 1954; Pettigrew 1998; Wilcox 2011; Jha 2013; Samii 2013; Lowe 2017). For instance, Sgt. Alvin York noted in his memoir that he was initially disappointed at being assigned to a regiment with immigrants, but that eventually he felt that, “the Greeks, Irish, Poles, Jews, and Italians who were in my platoon … They were my buddies. I jes learned to love them” (Service). While this demonstrates that contact might have changed the beliefs of natives, it is also plausible that these same feelings could have been felt the other way around. Again, this mechanism suggests that participation in military service should lead immigrants to identify more as white Americans than non-veteran immigrants as a result of socialization in the military.

Acceptance

While preferences, to some degree, drive the demand for assimilation, we must also take into account natives’ willingness to accept immigrants into their social group. That is, assimilation

is fundamentally a *relational* phenomenon thereby requiring natives to reciprocate in their willingness to accept individuals from the social periphery into the social core. Why would military service lead natives to become more accepting of immigrant veterans? Given that military service is perhaps one of the costly actions an individual can take in service of his nation, natives might become more accepting of immigrant veterans after observing this cost. Within the logic of standard signaling models in game theory, this cost, then, should create a separating equilibrium in which natives are more likely to accept immigrants who pay this cost to signal their willingness to join the social core of white Americans. This notion of the way in which immigrants paid their cost of assimilation through military service was enshrined in both law (Wong 2008) and in broader American culture (King 2005).

Theoretical Expectations

To briefly summarize the conceptual framework, I argue that military service essentially does two things with regard to the assimilation of immigrants: (1) increases an immigrants' demand for assimilation and (2) increases the willingness of natives to accept immigrants into their group. I present the theory in Directed Acyclic Graph (DAG) form in Figure 1. From this theory, I extract several testable hypotheses:

H1: Immigrants who served in the military should be more likely to assimilate into the white native group.

Essentially, this hypothesis captures the reduced form result of both the immigrant demand and native acceptance factors that could influence assimilation patterns. The following two hypotheses attempt to isolate the demand and acceptance channels by examining variation across types of ethnic groups.

H2: The effect of veteran status should be smaller for individuals from groups that have largely assimilated already.

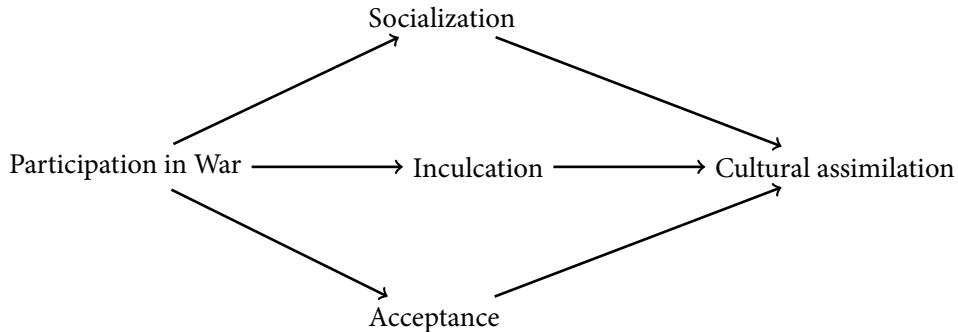
This hypothesis is an implication from the demand-side perspective of the theory. Individuals from groups that have already assimilated to a greater degree than individuals from other groups should update less about their own identity since their group has already been exposed to socialization and inculcation. Therefore, these types of individuals should update less about the value of national identity over ethnic identity since their prior beliefs about their own identity are already close to a national one rather than an ethnic one.

H3: The effect of veteran status should be smaller for individuals from groups who natives hold worse beliefs about especially with regard to outcomes that natives have direct control over.

If natives' willingness to accept immigrants matters, then we should expect individuals from groups who natives have a large distaste toward to assimilate less than other groups on

dimensions where natives have direct control over. By increasing the level of taste for discrimination against a certain ethnic group, this should make natives less likely to accept individuals from that group simply as a result of their preferences over groups.

Figure 1: A Directed Acyclic Graph of the Theory



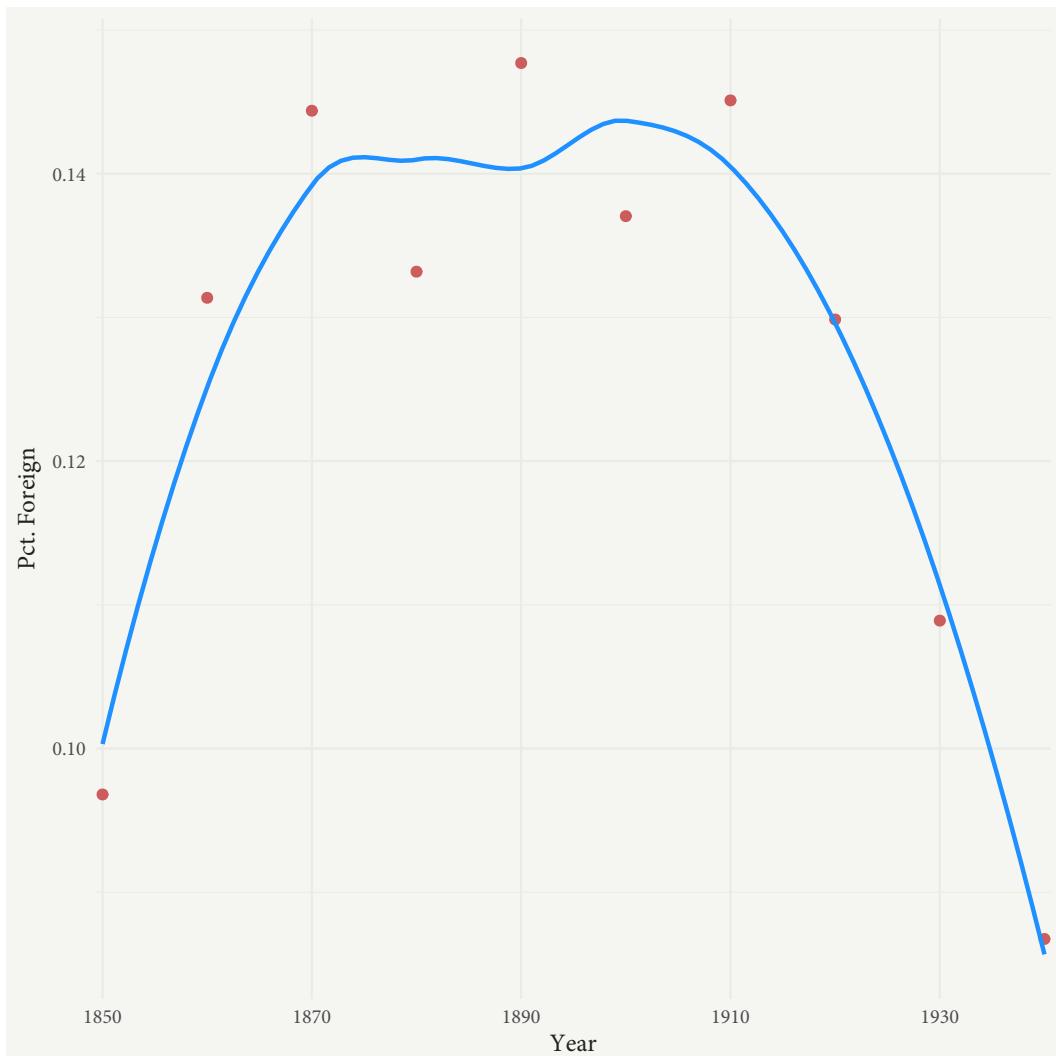
THE AGE OF MASS MIGRATION, WORLD WAR I, AND THE UNITED STATES

To test the theory, I focus on the case of the United States during World War I. While one could plausibly test this theory across a variety of different settings especially in Western Europe, I argue that this setting is useful for a number of reasons. First, the timing of World War I intersected a massive period of migration into the United States over the course of the late 19th into the early 20th century. This supply of immigrants creates variation in the ability of immigrants to assimilate into American society and variation across ethnic groups in the degree to which some groups might have already assimilated. Second, World War I was, in many respects, the first war in which there was mass mobilization of the populace especially with regard to military recruitment.⁵ Given the emphasis on the importance of *mass mobilization* for nation and state-building in the historical and comparative literatures, World War I presents a useful case since it is emblematic of these features. These factors, then, make the case of the United States' experience during World War I an ideal setting in which to test this theory.⁶

⁵Of course, the U.S. Civil War also represented a period of mass mobilization in the context of internal conflict. Bensel (1990) describes the uneven nature of military recruitment and organization particularly between the Union and Confederacy.

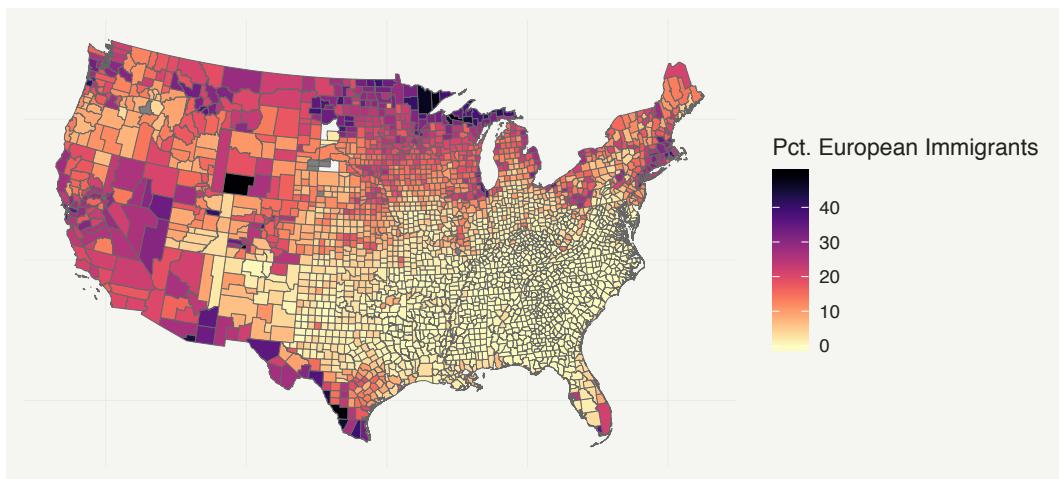
⁶Of course, the imposition of the Quota System in 1921 is important for interpreting this context. I return to this in more detail when discussing the results.

Figure 2: Pct. Foreign Born in the United States, 1850-1940



Source: Historical, Demographic, Economic, and Social Data: The United States, 1790-2002 (ICPSR 2896)

Figure 3: Pct. European Immigrants across the United States, 1910



Source: 1930 U.S. Census 30% Sample from IPUMS)

Many refer to the United States as a nation of immigrants and Figure 2 partially confirms this notion. Over the time period 1850-1940, Figure 2 shows that the percent foreign born population increases rapidly from 1850 from just under 10 percent of the population up to around 14 percent of the population during the periods. Though migration clearly is important in the aggregate, these national-level trends obscure ethnic and geographic variation as well. Some of the earlier European groups such as the British, Irish, and Germans tended to settle during the first half of the Age of Mass Migration while newer groups such as the Italians, Jews, and Eastern Europe arrived in the later periods. Except for the South, Figure 3 shows that European immigrants dispersed throughout the country particularly in areas like the Northeast, Midwest, and the West. Over time, immigrants tended to assimilate into American society—though, at varying rates across time and space (Abramitzky, Boustan, and Eriksson 2014, 2017).⁷ In short, the mass wave of immigration and the varying degrees of assimilation that subsequently followed the arrival of immigrants created conditions ripe for the group-level and structural factors to shape the transition of immigrants into Americans.

One such factor that I explore in this paper is the way in which World War I created structural conditions both conducive to cultural incorporation of immigrants and harmful for certain groups such as Germans. As mentioned before, World War I was one of the first modern conflicts with respect to its sheer scale of mobilization. Starting in 1914 in continental Europe, the United States spent much of the war articulating a non-interventionist position. It was only until Germany began a policy of unrestricted submarine warfare against shipping lines between the United States and Great Britain, which essentially forced President Woodrow Wilson's hand into joining the war—the timing of which was exogenous to the domestic conditions in the United States. Soon after declaring war against Germany and the Central Powers, the United States instituted multiple waves of compulsory military service ultimately leading the United States to have over four million men serving in the war. Despite the rise in discrimination against Germans during this time period, Fouka (2017) shows that Germans actually increased their efforts at assimilation by giving their children more American sounding names and by filing more petitions for citizenship. Though this political context is important, I explore how the direct participation in the war effort shaped assimilation patterns and then explore how this context might have differentially shaped Germans vs non-Germans effort at assimilating into the white American group and how whites subsequently responded to Germans efforts within this context.

⁷ Abramitzky, Boustan, and Eriksson (2012) show that the individuals who did decide to migrate tended to be low-skilled and that their returns to migration were actually quite low.

RESEARCH DESIGN AND RESULTS

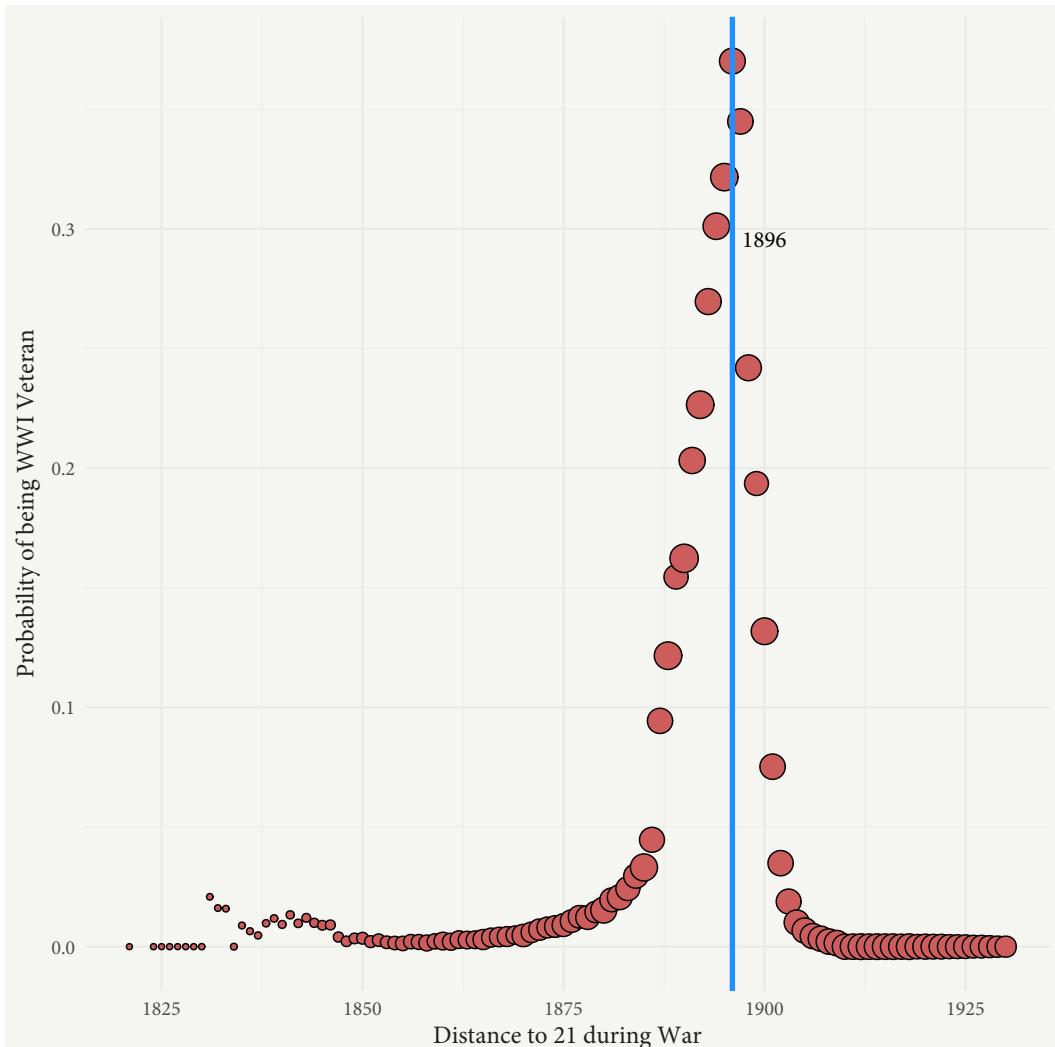
The theory suggests that immigrant men who serve in the military should become more assimilated into American society and culture. This requires evaluating the counter-factual claim of what would have happened to an individual had he not served in World War I. To assess this, I use an instrumental variables design inspired by Campante and Yanagizawa-Drott (2015) that exploits the interaction of an individual's birth cohort with respect to the timing of the war with features of the draft system whereby individuals who were 21 experienced a greater risk of serving in the war. With this identification strategy, I use individual-level data from the 1930 U.S. Census—the first census to record WWI veteran-status—to assess the degree to which military service among immigrants led to their assimilation into American society.

Identification

As stated above, the core research design in this paper is the instrumental variables strategy. Despite there being a draft for much of the United States' involvement in the war, there were still a great deal of individuals who chose to volunteer for the war effort. Since there was still an element of choice into whether men decided to join, this could induce bias if the individuals who chose to join were systematically different than men who did not volunteer. A simple regression of proxies for cultural assimilation on military service could just pick up on immigrant, men who already were more inclined to assimilate in the first place since they chose to risk their life for the United States. As a result, any estimates would pick up latent, unobservable characteristics about these men and not necessarily the counter-factual effect of what these men would have done had they not served.

To facilitate causal inferences, I focus on a specific type of variation in military service that is largely exogenous with respect to the aforementioned factors: the interaction of an individual's birth cohort/age with features of the draft system and general physical suitability for war service. Building on Campante and Yanagizawa-Drott (2015), I utilize an idiosyncratic feature of cohort variation in war service brought on by the imposition of a draft and the fact that most males tend to be in their prime physical shape in their 20s. Figure 4 plots the probability that an immigrant, male served as a veteran by the year of birth. Two clear patterns emerge: (1) there is a marked symmetry centered around individuals born in 1896 (those who were 21 during the midpoint of the war) and (2) that this likelihood of war service peaks for those individuals born in 1896 who were thus 21 years old during the midpoint of WWI. I exploit this unique feature of war mobilization—the symmetry around the peak service likelihood at the age of 21—as a plausibly exogenous encouragement into war service (Campante

Figure 4: Likelihood of WWI Service among Immigrant, Males by Birth Cohort



Source: 1930 Census, 20% Sample accessed through IPUMS. Size of the circles correspond to the number of individuals in each bin.

and Yanagizawa-Drott 2015). Concretely, this intuition can be captured by taking the absolute value of an individual's birth year from 1896—the cohort who would have been twenty-one during the war. The use of the absolute value from 1896 ensures that I am not simply capturing the fact that older men might be more or less likely to serve; rather, nineteen and twenty-three year olds during the war are “encouraged” exactly the same. Because of both the timing of the war with respect to an individual's age, one can use this plausibly exogenous variation as an instrumental variable.

Table 1: First-Stage Relationship between Distance to 21 and WWI Veteran Status

	WWI Veteran			
	(1)	(2)	(3)	(4)
Distance to 21 during War	-0.007*** (0.001)	-0.007*** (0.001)	-0.007*** (0.0003)	-0.007*** (0.0001)
Birth Year		✓	✓	✓
Ethnicity Fixed Effects		✓	✓	✓
State Fixed Effects			✓	
County Fixed Effects				✓
N	4,147,691	4,147,691	4,147,691	4,147,691
Adjusted R ²	0.086	0.092	0.092	0.090

*p < .1; **p < .05; ***p < .01

Standard errors adjusted for arbitrary clustering at the birth-year level in parentheses.

Fixed effects models use demeaned data by given unit.

The validity of this design also depends on several other assumptions—some that can be tested and others that cannot (Angrist and Pischke 2009). First, the instrument must be relevant in that it has a non-zero causal effect on war service. Given the exogeneity of the instrument, one can test this assumption by examining the first-stage relationship using Ordinary Least Squares (OLS). Table 1 shows that there is a strong and statistically significant relationship between an immigrant's distance to being 21 during the war and his likelihood of serving in WWI. On average, an additional year of being closer to 21 during the war increases an individual's propensity to serve in the war by approximately one percent. Given that the average mobilization rate nationally was around eight percent, this is substantively quite large. Additionally, these results are robust across a wide array of specifications including specifications with state by birth cohort trends and even county by birth cohort trends. The coefficient on the instrument remains virtually unchanged across all of these specifications yielding strong evidence consistent with the exogeneity assumption stemming from the timing of the war.

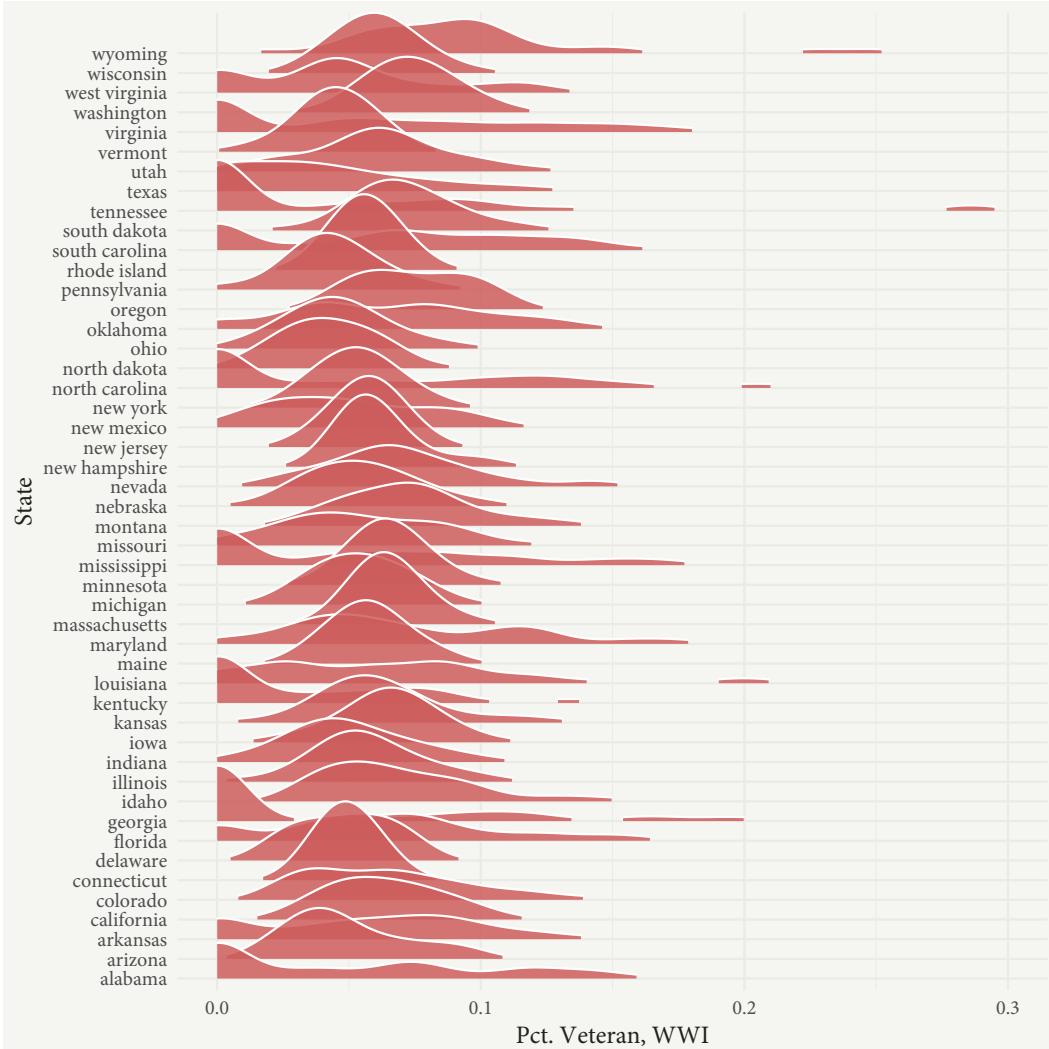
Next, this design must also satisfy the Stable Unit Treatment Value Assumption (SUTVA). This assumption states that there can be no interference among units and that war service is comparable across individuals. Since birth years are largely independent of other units, this context likely satisfies SUTVA. Moreover, the instrumental variables design must also satisfy a monotonicity assumption in that being closer to turning 21 should not induce individuals to become less likely to serve in the war. The main threat to this assumption would come from the possibility of draft dodging. At least according to the historical literature, there seems to be very little evidence that this practice was prevalent suggesting that it is also likely the case that this setting satisfies monotonicity. Finally, the validity of this design hinges on an exclusion restriction whereby distance to being 21 during the middle of the war can *only* affect cultural assimilation through military service. A threat to this assumption would occur if there were some other life event that happens as individuals get closer to 21 during the middle of WWI. The only other major political change that could happen is becoming eligible to vote. Given the historical context, there is little evidence to support the notion that becoming eligible to vote in elections should lead to cultural assimilation. The 1918 election was not a major presidential election and cultural assimilation was not an election issue at the time. Thus, the proposed instrument—distance to being 21 during the middle of the war in 1918—satisfies these key assumptions needed for this design to recover the Local Average Treatment Effect (LATE).

Data and Estimation

To test the relationship between war experience and cultural assimilation, I primarily rely on individual-level data from the 1930 decennial U.S. Census. While ideally one would use the full service records for all males who either volunteered or were conscripted into the military during WWI, these records were unfortunately destroyed in a fire at the U.S. National Archives in 1973. As a next best data source, I utilize the 1930 U.S. Census, which is the first census to collect data on an individual's service in WWI. These individual-level censuses are a rich and largely untapped source of data in American politics. The decennial census contains a wealth of information including an individual's nativity, education, occupation, and residence among a whole host of other variables. For this paper, I extract a 20% random sample of all males who indicated that they had some foreign nativity (either they themselves were born outside of the United States or at least one of their parents had foreign nativity).⁸ As one might notice, veteran status itself is measured post-treatment, which could induce bias into any statistical

⁸I choose a 20% to make sure that I include individuals from enough counties across the United States so as to be able to reliable include county fixed effects. One could use the entire population data from the census though this would become computationally quite expensive.

Figure 5: World War I Mobilization by State among Immigrants



Source: 1930 U.S. Census from IPUMS

analyses. Importantly, the casualty rate for Americans was fortunately quite low ($\approx 100,000$ or around 0.2% of all infantry). Since these rates were so low, it is unlikely that non-random variation in casualty rates could induce any substantial bias into these results. In sum, the granularity of this data and the large sample size allows me to study heterogeneous effects by ethnic groups and across outcomes while conserving sufficient power for the instrumental variables strategy.

War Service: The primary independent variable of interest is whether a male of foreign na-

tivity served in the military during WWI. One point to note is that this measure only captures those individuals who *survived* the war. Because casualties are plausibly exogenous and since the overall casualty rate was actually quite low (around 4%), this issue should not significantly threaten any inferences. Overall, the mobilization rate among immigrants was approximately 6%. Figure 5 plots the distribution of the county-level mobilization rate by state. While there seems to be very little variation across states, there does seem to be substantial geographic variation across counties within states. To account for this, the main estimating equations will rely on county fixed effects so as to only compare individuals within a given county in a certain state.

Cultural Assimilation: The primary dependent variable of interest is the degree to which male, immigrants are able to culturally assimilate into the social core—in this case, mainstream, American society. This, of course, is quite a broad concept; moreover given the lack of fine-grained survey data during this time, it is impossible to quantitatively know how immigrants perceived their social identity. Instead, I rely on a plethora of behavioral measures that I can measure during this time period: marriage to foreigners vs. natives, petitions for citizenship, actual naturalization, and naming conventions for children. I explain the logic for each measure below.

Marriage: Marriage is both an expression of love and one's own social identity. A wealth of research across political science, sociology, and economics shows how preferences over social groups shape marriage patterns across race, class, and partisanship (Fisman et al. 2008; Alford et al. 2011; Banerjee et al. 2013; Anderson et al. 2014; Huber and Malhotra 2016). If marriage is one way through which groups reify their social identities, then intermarriage—or marriage with someone outside one's own ethnic group—indicates processes consistent with weakening one's own ethnic identity in favor of a broader national identity. At the same time, inter-ethnic marriages also reflect social acceptance of these groups in a way much deeper than words alone. In other words, intermarriage across ethnic groups represents the “final stage of assimilation” (Gordon 1964). Not only is marriage important as an expression of one's own social identity, but it also socializes future generations into particular world views (Bisin, Topa, and Verdier 2004; Davenport 2016). Among children with inter-ethnic marriages, we should then expect assimilation to persist through the intergenerational transmission of these weaker ethnic identities in favor of more national ones (Bisin and Verdier 2001; Bisin, Topa, and Verdier 2004). Finally in the context of the early 20th century United States, rates of inter-ethnic marriage were quite low reflecting the vast potential for military service to propagate cultural assimilation through marriage markets (Pagnini and Morgan 1990; Roland G. Fryer 2007).

Petitions for Citizenship: Citizenship captures the degree to which groups on the social periphery *politically integrate* into a nation. For individuals not born in the United States, the choice to become a citizen reflects, in part, an individual's expressed demand for being a part of a political community. During the early 20th century, individuals who wished to become a citizen and resided in the United States for at least two years had to first file papers, usually with state and county courts, indicating that they wished to become a U.S. citizen. After at least three more years, individuals could then file petitions for naturalization with a court, which could then be accepted or rejected by the court. While work by Fouka (2016, 2017) collects and uses these petitions for naturalization to similarly measure the demand for political assimilation, coverage across the United States is quite small, which would thus drastically reduce the sample size. Instead, I rely on the 1930 U.S. Census, which recorded whether an individual had filed a declaration of intent, but had not yet become naturalized.

Naturalization: While petitions for citizenship capture an immigrant's demand for political assimilation, naturalization itself reflects both demand from the immigrant's perspective and the dominant group's willingness to accept that immigrant into society. Not only does citizenship represent state-sanctioned political assimilation, but it can also be a catalyst for further political and social integration (Hainmueller, Hangartner, and Pietrantuono 2015, 2017). Given the importance of naturalization in the overall process of assimilation, I create an indicator from the 1930 U.S. Census reflecting whether an immigrant male was a naturalized citizen.

Naming Conventions: Names, to varying degrees, reflect social identities. An increasingly large literature in economic history uses individuals' names to produce more fine-grained measures of assimilation (Sue and Telles 2007; Algan, Mayer, and Thoenig 2013; Abramitzky, Boustan, and Eriksson 2014; Fouka 2016, 2017; Abramitzky, Boustan, and Eriksson 2017). The use of names essentially measures parents preferences over a vector of social identities that they could choose to express through their children. By using names as a proxy for cultural assimilation, one can understand variation in preferences over identity across ethnic groups and within ethnic groups since some names are considered more "American" than others despite (i.e, Josef vs. Joseph). Not only are names consequential in terms of measuring a parent's efforts at assimilating their children into a dominant culture, but also because the character of one's name can shape employment prospects and experiences with the state (Bertrand and Mullainathan 2004; Pager 2007; Algan, Mayer, and Thoenig 2013; Rubinstein and Brenner 2014; White, Nathan, and Faller 2015; Abramitzky, Boustan, and Eriksson 2017; Biavasci, Giulietti, and Siddique 2017). To operationalize this, I follow Biavasci, Giulietti, and Siddique (2017) and Fouka (2016, 2017) and compute the American Name Index (ANI) for each indi-

vidual i of birth cohort b and sex s :

$$ANI_{i,b,s} = \frac{\sum_{j \in native_{b,s}} \mathbb{1}(Name_{i,b,s} = Name_{j,b,s})}{\max(\sum_{j \in native_{b,s}} \mathbb{1}(Name_{i,b,s} = Name_{1,b,s}), \dots, \sum_{j \in native_{b,s}} \mathbb{1}(Name_{i,b,s} = Name_{J,b,s}))} \quad (2)$$

The numerator measures the number of native individuals who share the same first name as i while the denominator measures the maximum number of individuals that share the same first name as i effectively standardizing the index between zero and one. Larger values of this measure reflect more “American” names. In addition to seeing if veterans themselves are changing their names to become more “American”, I also compute the ANI for their children by taking the mean ANI for all individuals in the household who are neither the person of interest nor the spouse. For all regression results, I use the $\log(ANI + 0.01)$ to account for the skewed nature of the distribution.⁹

With these outcomes and identification strategy, I proceed to estimate regressions of the following form using two-stage least squares (2SLS):

$$WarService_{i,k,c} = \lambda DistTo21_i + \theta X_i + \alpha e_k + \gamma u_c + \eta_{i,k,c} \quad (3)$$

$$Y_{i,k,c} = \beta \widehat{WarService}_i + \theta X_i + \alpha e_k + \gamma u_c + \epsilon_{i,k,c} \quad (4)$$

To unpack the notation, the coefficient β represents the LATE of $WarService_i$ on the aforementioned measures of cultural assimilation Y_i . The coefficient λ represents the first-stage effect of $DistTo21_i$ on the likelihood that an immigrant served in World War I. Importantly, 1 shows that the instrument is quite strong with the F-statistic well above the suggested value of 10 (Stock and Yogo 2005). Moreover, the term X_i controls for birthyear so capture any secular trends over time.¹⁰ I also include a series of ethnic group fixed effects e_k for Germans, Irish, Italians, and Eastern Europeans such that all comparisons are made between individuals of the same ethnic group. Next, I include fixed effects for counties u_c such that comparisons are made between individuals living in the same county.¹¹ Finally, I cluster standard errors at

⁹This does not take into account households with other relatives outside of an individual’s children such as uncles, aunts, or grand-parents. Assuming that the treatment has no causal effect on those individuals, then the analyses should still recover the effect of veteran status on childrens’ naming patterns.

¹⁰Higher degree polynomials of birth year lead to multicollinearity problems in the IV estimation procedure so I do not include these in the main results.

¹¹One potential issue is that individuals could have moved counties upon returning from the war, which would induce post-treatment bias. The results are robust to using state fixed effects and not including any geographic unit fixed effects.

the birth cohort level though the results are robust to using heteroskedastic standard errors as well.

Main Results

Table 2: Effect of WWI Veteran Status on Cultural Assimilation: Ordinary Least Squares

	Spouse Native (1)	Naturalized (2)	Petitioned (3)	ANI (Self) (4)	ANI (Children) (5)
WWI Veteran	0.142*** (0.003)	0.026*** (0.002)	-0.025*** (0.001)	-0.105*** (0.005)	-0.036*** (0.005)
Birth Year	✓	✓	✓	✓	✓
Ethnicity Fixed Effects	✓	✓	✓	✓	✓
County Fixed Effects	✓	✓	✓	✓	✓
N	1,879,201	4,147,691	4,147,691	4,147,691	4,147,691

*p < .1; **p < .05; ***p < .01

Standard errors adjusted for arbitrary clustering at the birth-year level in parentheses.

Fixed effects models demean by county.

Does military service induce immigrant men to assimilate into white American society? If so, how large were these effects? To begin, I first examine the association between war service and cultural assimilation using OLS in Table 2. While the coefficients on spousal nativity and the individual's naturalization are in the right hypothesized direction, the coefficients on petitioning for citizenship and naming patterns are in the wrong direction. Importantly, these OLS results seem to run counter to the story in which those immigrants who feel already close to the nation are more likely to fight. Instead if there are social returns to veteran status such as prestige or assimilation, then we might expect the least assimilated individuals or those who face more discrimination to select into fighting. This would lead to a downward bias on the estimated coefficients when just relying on a selection-on-observables identification strategy. Therefore, I rely on an instrumental variables design described above that exploits the timing of the war alongside the imposition of a draft to identify the LATE of war service among those immigrants who would not have otherwise fought without being encouraged to do so.

Table 3 estimates the causal effect of war service on cultural assimilation of immigrants using 2SLS. These results indicate strong support for the theory. Veterans are less likely to marry someone of foreign-born nativity, more likely to become naturalized citizens, more likely to petition for citizenship, and more likely to change their own and their childrens' names to become more "American" sounding. Not only are these results statistically significant at the $p < 0.01$ level, the substantive effects are also quite large. For example, veterans are around

Table 3: Effect of WWI Veteran Status on Cultural Assimilation: Two-Stage Least Squares

	Spouse Native (1)	Naturalized (2)	Petitioned (3)	ANI (Self) (4)	ANI (Children) (5)
WWI Veteran	0.138*** (0.022)	0.058*** (0.010)	0.377*** (0.008)	0.205*** (0.025)	0.515*** (0.020)
Birth Year	✓	✓	✓	✓	✓
Ethnicity Fixed Effects	✓	✓	✓	✓	✓
County Fixed Effects	✓	✓	✓	✓	✓
N	1,879,201	4,147,691	4,147,691	4,147,691	4,147,691

*p < .1; **p < .05; ***p < .01

Standard errors adjusted for arbitrary clustering at the birth-year level in parentheses.

Fixed effects models demean by county.

14% less likely to marry another foreign born individual and almost 40% more likely to file paperwork for citizenship. Moreover, they also increase their own names and their childrens' *ANI* by 20% and 50% respectively. Finally, I find much smaller effects for naturalization rates that around 6% differences between veterans and non-veterans. Overall, these findings provide strong evidence that is consistent with the theory put forth in this paper.

Marriage Patterns

Table 4: Effect of WWI Veteran Status on Marriage Patterns: Two-Stage Least Squares

	Spouse Native (1)	Spouse Native Born and Parents Native (2)	Spouse Sec. Gen. (3)	Spouse Same Ethnic (4)
WWI Veteran	0.138*** (0.022)	0.186*** (0.011)	-0.048*** (0.018)	0.042*** (0.013)
Birth Year	✓	✓	✓	✓
Ethnicity Fixed Effects	✓	✓	✓	✓
County Fixed Effects	✓	✓	✓	✓
N	1,879,201	1,879,201	1,879,201	1,879,201

*p < .1; **p < .05; ***p < .01

Standard errors adjusted for arbitrary clustering at the birth-year level in parentheses.

Fixed effects models demean by county.

Besides from the results on whether the spouse is native, the above results are largely a function of an immigrant's own identification and not necessarily an equilibrium result of both his own identification and natives' acceptance. One particular margin that captures this dynamic is marriage patterns. Thus, I explore whether WWI service induced immigrants to marry natives with either one immigrant parent or no immigrant parents, natives with

no immigrant parents, second generation immigrants, and individuals with the same ethnic heritage (endogamous marriages). Table 4 displays results using 2SLS estimates of the same form as the main results shown in Table 3.

The results provide strong evidence showing that veteran status increased native acceptance as proxied by marriage patterns. Columns 1 and 2 in Table 4 show that veterans tend to marry natives between 14 and 19 percent more than non-veterans. Importantly, these results in Column 3 also show that immigrant veterans are less likely to marry second generation immigrants by about 5 percent relative to non-veterans. Finally, Column 4 shows that veterans are slightly more likely to marry women of the same birthplace as veterans though this is largely driven by second-generation immigrants. In short, these results provide strong evidence suggesting that not only did military service change immigrant's own sense of identity, but that they were more likely to be accepted into the social core (white American identity).

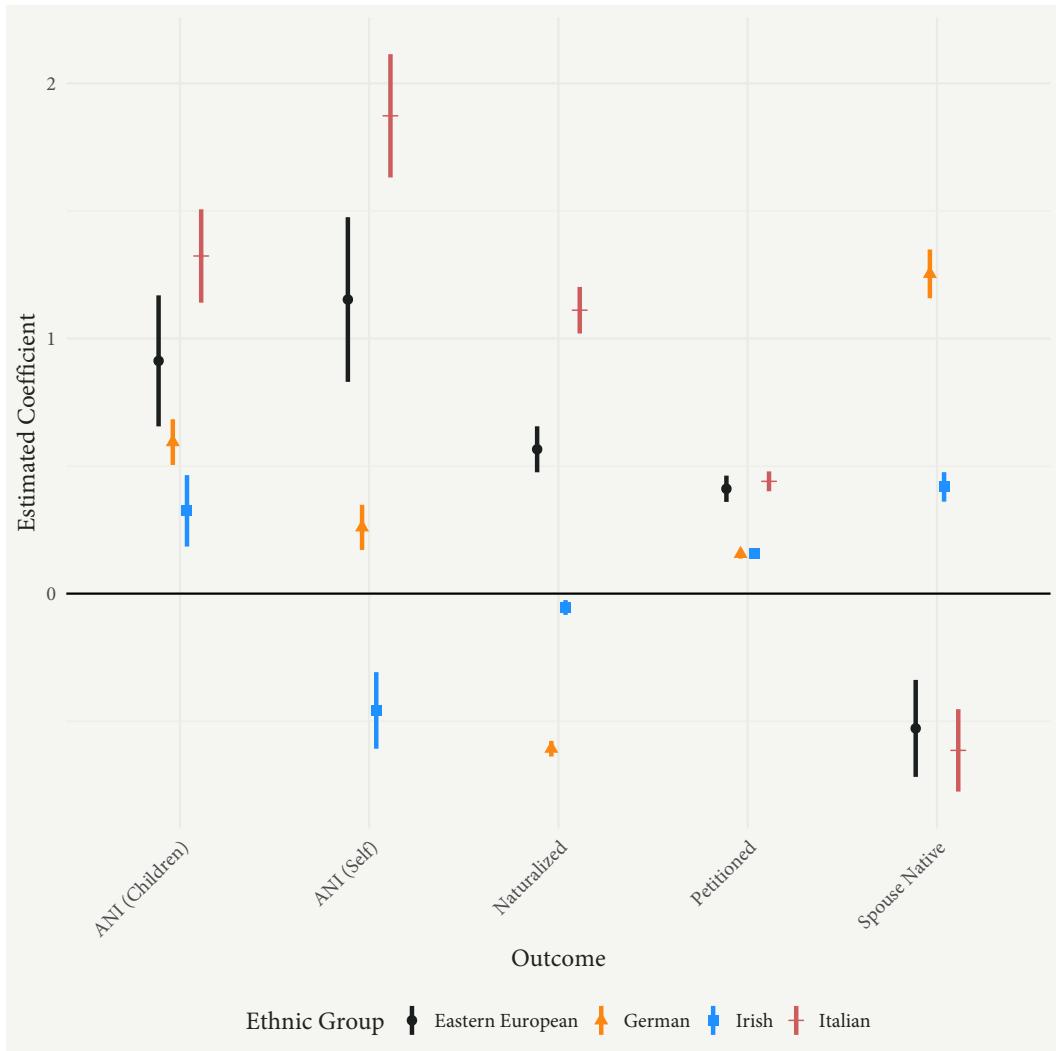
Effect Heterogeneity and the Boundaries of Assimilation

While the above results provide evidence consistent with the reduced-form implication of the theory, I also assess the degree to which immigrant demand and native acceptance might operate. To do so, I estimate regressions of the same form as shown in Table 3, but this time separately by the major European ethnic groups. Figure 6 displays the heterogeneous effects of war service on measures of cultural assimilation across the major European ethnic groups—Italians, Irish, Germans, and Eastern Europeans/Jews.

Immediately, a number of striking patterns emerge from these results. First, there is vast heterogeneity in the conditional LATEs (CLATE) of war service across ethnic groups. This suggests that the experience of war service is quite different depending on one's ethnic background. Not only is there variation across ethnic groups, but even *within ethnic groups* there is variation across the different outcomes. Mainly, the newer immigrants consisting of Eastern Europeans and Italians are more likely to assimilate along most of the dimensions except for marriage patterns where these individuals are actually more likely to marry someone who is also foreign born. This is consistent with Gordon (1964) who notes that marriage with natives is perhaps the final stage in assimilation whereas these other indicators of assimilation capture various other stages that are lower along this process. These findings on the stages of assimilation, then, are consistent with Hainmueller, Hangartner, and Pietrantonio (2017) who argue that political incorporation is an intermediate stage in assimilation rather than the final mark of it.

Another interesting pattern that emerges is the CLATE among the Irish across these outcomes is much more muted especially when compared to newer groups such as the Eastern

Figure 6: Heterogeneous Effects by Ethnicity



Notes: Point estimates with 99% confidence intervals constructed from birth year clustered standard errors are displayed for each ethnic group.

Europeans and Italians. Given the size of the data, we can also reject the null hypothesis that there are no differences between Irish vs. non-Irish immigrants. These results, when viewed alongside the results on the newer immigrant groups, provide evidence consistent with the demand-side mechanism explicated in Hypothesis 2. For newer immigrants where there is less assimilation and therefore more latent demand for assimilation, war service seems to have quite large effects. Instead for older groups like the Irish, and, to some degree, the Germans, the CLATE is much smaller in magnitude. In short, this provides suggestive evidence in favor of the idea that the inculcation and socialization effects of military service seem to operate for those groups where these experiences would matter the most.

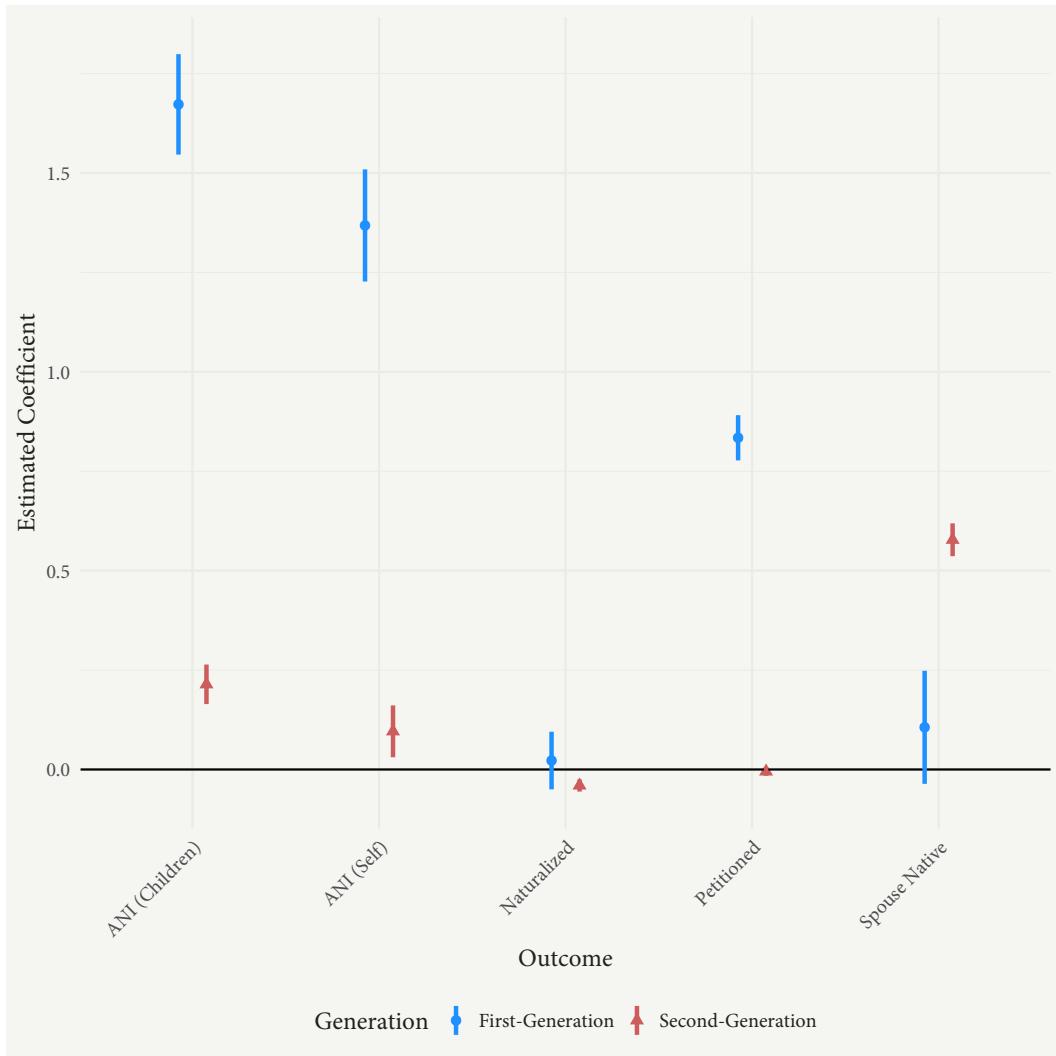
Finally turning to just the Germans, another set of interesting patterns emerges. Across all outcomes where individuals themselves can largely determine the outcome, veterans of German heritage seem to invest more in becoming assimilated. When it comes time for natives and the state to directly intervene, however, on cases of actual naturalization, Germans actually have a much lower effect relative to all other groups. Moreover, this effect is actually *negative* whereby German veterans of WWI are actually less likely to receive naturalization even though they seem to increase their rates of petitioning. These results are consistent with Hypothesis 3 from the theory where native preferences should also partially determine assimilation patterns. That is, when natives have a negative preference toward certain groups, then we should see natives being less likely to accept individuals from those groups into their own.

Another margin of heterogeneity is the generational status of an immigrant. Figure 7 plots the coefficient on veteran status using the same specification presented in Table 3 this time separately by first-generation and second-generation status. Consistent with the heterogeneity by ethnic groups, I also find that those who are less assimilated into American society—first-generation immigrants—are much more likely to change their names and their children to become more American. In addition, they are more likely to petition for citizenship while these effects are zero on second-generation immigrations. When it comes to marriage, however, second-generation immigrants are much more likely to marry someone who is not foreign relative to first-generation immigrants. These patterns, then, are consistent with the theory, which predicts that we should see the most amount of assimilation among those individuals who are the least assimilated to begin with.

Results Discussion

To briefly summarize the results before discussing their wider implications, I find that *on average* immigrant veterans of WWI are substantially more likely to assimilate across a wide variety of measures relative to non-veterans. When breaking these findings down by ethnic

Figure 7: Heterogeneous Effects by Generation



Notes: Point estimates with 99% confidence intervals constructed from birth year clustered standard errors are displayed for each generation group.

group, I find evidence consistent with the idea that inculcation and socialization may be important channels through which military service can affect assimilation. Moreover, I also find evidence that the preferences of natives also matter as well when looking at naturalization rates and marriage patterns—outcomes for which natives exert control.

These results speak to recent debates around the ways in which assimilation policies can and cannot lead to national identity formation and cultural assimilation. In a paper looking at the same time period, Fouka (2017) finds that forced assimilation in terms U.S. states banning the use of the German language in instruction actually leads to *less* assimilation. While, on face, these findings may run counter to the results in this paper, these discrepancies can be explained through the intergenerational model used by Bisin and Verdier (2001). Because the policy targeted children, parents increased their efforts at instilling their own social identities which then counteracts the assimilation policy. Instead, in this paper, I show that a shock to the parents themselves in the form of war service induces national identity formation and cultural assimilation because this is a context in which the intergenerational dynamics are not in operation.

The results in this paper also potentially link to a parallel literature on the effects of exposure to violence on pro-social behavior (Bauer et al. 2016). While violence and conflict are, of course, deleterious to economic development (Miguel, Satyanath, and Sergenti 2004), a recent line of research shows that individuals who either participate or experience violence can develop more pro-social attitudes and behaviors. Particularly in the developing context, scholars find that either direct participation in or experience with violence increases political engagement (Bellows and Miguel 2006; Blattman 2009; Bateson 2012), intra-group trust (Bauer et al. 2014), and altruistic behavior (Voors et al. 2012; Gilligan, Pasquale, and Samii 2014). In the context of this paper, immigrants' collective experience of going to war with native soldiers might have allowed for pro-social behaviors change to catalyze fundamental identity change (Cohen 2017). While this study itself cannot isolate the contribution of these links to identity formation, this does suggest the importance of future research in this area.

DID THE UNITED STATES MAKE NATIONAL IDENTITY WITHOUT WAR?

So far, this paper advances a theory of identity formation that emphasizes the central role of military service and provides evidence consistent with this framework. Did other types of nation-building efforts in the United States have similar effects? Answering this question is crucially important for understanding the historical development of the United States since mass warfare also involves heavy costs in terms of lives lost and destruction of property.

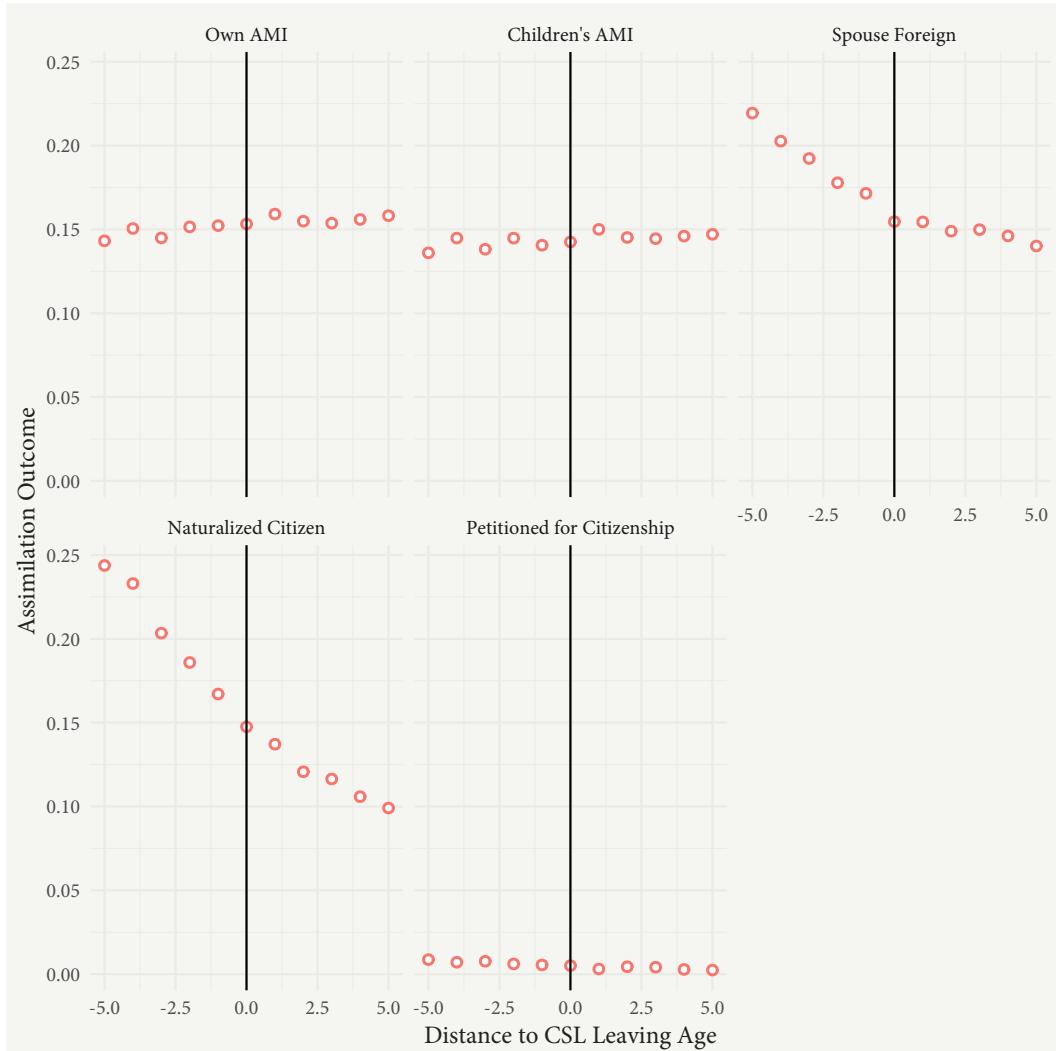
Whether nation-building depends on mass warfare or peaceful means such as the expansion of education and literacy has fundamental implications for how we should understand the process of identity formation and nation-building.

One such peaceful policy posited by scholars is the way in which compulsory schooling was used as a nation-building policy in the late 19th and early 20th centuries (Bandiera et al. 2017). The idea that mass education and literacy are crucial determinants of national identity formation has been articulated by a number of historians and social scientists (Weber 1976; Anderson 1983; Hobsbawm 1990). Particularly in context of the United States, several historians point out that the primary motivation of CSLs was to assimilate immigrants into the broader society (Cubberley 1947; Tyack 1976; Meyer et al. 1979; Bandiera et al. 2017). For example, the Dillingham Report, commissioned by a number of U.S. senators, representatives, and federal bureaucrats during 1907-1911 emphasized the need for schools to “americanize” immigrant children: “The most potent influence in promoting the assimilation of the family is the children, who, through contact with American life in the schools, almost invariably act as the unconscious agents in the uplift of their parents” (Dillingham 1911, Vol. 29, pg. 42). Assimilation, then, may not be solely driven by mass warfare; instead, peaceful means such as mass schooling might also achieve the same goals.

To test this explanation, I use data from Bandiera et al. (2017) on the timing of the passage of compulsory schooling laws (CSLs) across U.S. states in addition to information on the age groups for which the CSLs applied. Building on a large literature that uses shocks to CSLs to identify the causal effect of education on a number of outcomes, I use a regression discontinuity design that exploits quasi-experimental variation in individuals who were just young enough to be under the CSL system compared to those who were just old enough to avoid having to be under his or her state’s CSL (Larreguy and Marshall; Marshall 2016; Cavaille and Marshall 2017). Assuming that these individuals are comparable across observables and unobservables, one can use a regression discontinuity design to identify the causal effect of CSLs on assimilation patterns immigrants.

Using data on the differential exposure of CSLs across states and birth cohorts combined with data from the same sample of immigrant men from the 1930 U.S. Census who were either immigrated to the U.S before the passage of the CSL in his state or were born in the U.S., I plot the binned mean of cultural assimilation as measured across a wide array of outcomes in Figure 8. Across all measures of assimilation, there are no discontinuous breaks between those who the CSLs barely applied versus those individuals for which the laws did not apply. Given the large sample size, it is unlikely that the null results on CSLs are driven by power issues. Moreover, these null effects hold when using a formal regression setup using either linear or

Figure 8: Effect of Compulsory Schooling Laws on Assimilation: Discontinuity Design



Notes: Points are binned means within each group of immigrant men at a certain distance to the age threshold ($N = 193,182$).

local linear regression methods.¹²

Instead of the RDD setup used by Larreguy and Marshall, I also use a difference-in-differences (DID) commonly used in the labor economics literature (Angrist and Krueger 1991; Oreopoulos 2006). This design exploits the differential timing of CSLs across birth cohorts and across states to identify the causal effect of CSLs on immigrant assimilation. Again, these results, provided in the Online Appendix, demonstrate that compulsory schooling had little impact on assimilation. In fact when looking at first-generation immigrants, results from the DID design suggest that CSLs *reduced* assimilation—a result consistent with Fouka (2016). Overall, these results are consistent with Goldin and Katz (2008, 2011) who find very minor effects of CSLs on educational attainment in the early 20th century United States. These null results are likely driven by the decentralized nature of education in the United States, which could have driven weak implementation of these laws. Thus, evidence from two different identification strategies point the same conclusion: the state was not able to peacefully build national identity through mass education at least in the United States.

CONCLUSION

How did immigrants become (white) Americans? In this paper, I advance a theory that emphasizes the central role of the state in shaping the cultural incorporation of marginalized groups such as immigrants into a polity; particularly, I argue and show that participation in mass warfare is an important factor in moving individuals from the social periphery into the social core of a nation. Using an instrumental variables strategy exploiting the exogenous variation in the likelihood of military service across birth cohorts paired with individual-level, administrative data on over 4 million immigrants from 1930 U.S. Census, I find that *on average* immigrant veterans were more likely to marry natives, more likely to petition for citizenship, more likely to become naturalized citizens, and more likely to name themselves and their children more “American” sounding names. When examining heterogeneity across ethnic groups, I also find that these effects seem to be concentrated among newer immigrant groups such as Eastern Europeans and Italians and less so among the Irish. This finding is consistent with the notion that military service has the potential to inculcate and socialize individuals into a national culture. When looking at Germans, I find that natives’ preferences and the backlash they had against German immigrants mattered in terms of the ability of Germans to ultimately become U.S. citizens. In addition, I find that the effect of war service on assimilation as measured by naming patterns and citizenship seems to be strongest among

¹²See the Online Appendix for further results.

first-generation men while assimilation in the marriage market is strongest among second-generation men. I also show that immigrant veterans have higher levels of economic status despite missing out on labor market experiences back at home (Angrist 1990). Finally, I also show that other nation-building efforts in U.S. history such as compulsory schooling had little effect on the immigrants' cultural assimilation using an age discontinuity design.

In general, the theory and results provide further evidence of the powerful force of mass warfare in the creation of political order, democracy, and equality (Tilly 1990; Scheve and Stasavage 2012; Ferejohn and Rosenbluth 2016; Scheidel 2017). While the vast majority of studies in this tradition emphasize the role that warfare has on our political institutions, I provide a novel theory in which warfare can fundamentally reshape our *social identities*. This idea is related to the broader notion that mass mobilization can change the ideological context of a nation. For example, Klinkner and Smith (1999) recount how World War II shifted ideas about the compatibility of democracy and the Jim Crow system of racial discrimination in the United States. Moreover, Mazumder (2017) shows that mass warfare in the United States also contributed to gender equality especially by reshaping women's political and social views. While these studies tend to highlight the broader ideological changes that come with mass warfare, this paper highlights the incredibly personal way in which participation in mass warfare can reshape who we are.

This paper also has important implications for contemporary debates about the way in which liberal societies can incorporate immigrants. Though scholars have convincingly shown that immigrants face a massive degree of discrimination, we know much less about the factors that can help to incorporate immigrants (Hopkins 2010; Newman 2012; Fouka 2016, 2017). Several recent studies show that the state can play an important role in facilitating immigrant incorporation. For example, Hainmueller, Hangartner, and Pietrantuono (2015, 2017) show that providing citizenship to immigrants increases their assimilation into society across political and social dimensions. At the same time, Hainmueller and Hangartner (2013) show that natives preferences over these immigrants play a strong role in determining which immigrants natives are willing to accept into their society. There are many factors that influence both an immigrant's willingness to assimilate and natives' willingness to accept an immigrant that shape the decision to naturalize. Instead, I show that participation in mass warfare can jointly affect both channels. More importantly, it does not seem that the rise of mass schooling had a role to play in shaping cultural assimilation in American history—an important finding to note given the extensive literature on the central role of mass education in shaping national identity. This suggests that future work should seek to better understand the conditions under which mass education can and cannot shape national identity formation.

On a much broader note, this study, when viewed alongside the broader literature on the relationship between warfare and egalitarianism, raises a number of thorny normative questions. Are the status-leveling features of mass warfare compatible with the principles of liberal democracy especially when considering the mass violence and destruction associated with warfare? If warfare does actually lead to prodigious societal progress, what are the prospects for maintaining equality and reducing new inequalities in an age where nations no longer engage in mass warfare for normative and technological reasons? Obviously, there are no easy answers for these questions, but in an age where discrimination and inequality are now again on the rise, we must grapple with this irony of social progress.

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APPENDIX 1: DATASET CODEBOOK AND CONSTRUCTION

- ***Dependent Variables:***

- **Spouse Foreign Born**

* IPUMS constructs additional variables on spouses based on information collected on spousal relationships in the 1930 U.S. Census for those who were listed as married. From this, I use the variable $nativity_{sp}$ which has information on whether the spouse was foreign-born, native-born, native-born but with one parent foreign, and native-born but with both parents foreign. Using this, I create a binary indicator for whether an individual's spouse was foreign-born ($nativity_{sp} = 5$).

- **Naturalized Citizen**

* Given the importance of immigration at the time, the census collected information regarding citizenship status on all enumerated foreign-born residents. This variable $citizen$ provides information on whether the individual was a naturalized citizen, filed citizenship petitions (first papers), or none of the above. I create a binary indicator for naturalized citizens based on $citizen = 2$.

- **Petitioned for Citizenship**

* From the $citizen$ variable, I also create a binary indicator for whether an individual filed his/her petition for citizenship ($citizen = 4$).

- **American Name Index (ANI)**

* I compute the ANI variable as follows:

$$ANI_{i,b,s} = \frac{\sum_{j \in native_{b,s}} \mathbb{1}(Name_{i,b,s} = Name_{j,b,s})}{max(S_{1,b,s}, \dots, S_{J,b,s})}$$

where

$$S_{i,b,s} = \sum_{j \in native_{b,s}} \mathbb{1}(Name_{i,b,s} = Name_{j,b,s})$$

I use data from the restricted 1930 Census files available on the NBER Server to get a list of names for native born individuals. I then pre-process this list to drop names that are below a certain threshold of popularity (at least 0.11% percent of other individuals must also have that name) to ensure that I only keep names that have been transcribed correctly. Then, I aggregate by the name separately by gender and birth cohort to create counts of native names stratified by gender and birth year. Then to calculate the numerator of the ANI , I compute the number of natives who share the same name as a given individual in my dataset for a given

gender and birth year. Finally, I standardize this measure by the most popular name within that birth year and gender cell to ensure that results are comparable across individuals. To compute this measure for children of individuals, I repeat this same process individually for each child and take the arithmetic mean across all children of a given individual. Given the skewed distribution of this measure, I transform it using $\log(ANI + 0.01)$.

- Labor Force Participation

- * The variable *labforce* contains information on labor force participation status. From this variable, I create a binary indicator of whether the individual was counted as in the labor force based on whether *labforce* = 2 and 0 otherwise. There were also cases in which this information was missing (*labforce* = 0) leading me to code those individuals' labor force status as *NA*.

- Log(Occupation Score)

- * To compute the Log of an individual's occupation score, I simply take the $\log(occscore + 1)$ transformation of the *occscore* variable. This variable measures a proxy for income by assigning individuals an occupation score based on the average income of those who hold that occupation in 1950.

- Professional Occupation

- * The variable *occ1950* contains information on the nature of an individual's occupation if he or she was in the labor force. Using the coding scheme from [IPUMS](#), I classify workers as being in professional occupations based on a 1950 basis if their code was between 0 and 99.

- Sales Occupation

- * The variable *occ1950* contains information on the nature of an individual's occupation if he or she was in the labor force. Using the coding scheme from [IPUMS](#), I classify workers as being in sales occupations based on a 1950 basis if their code was between 400 and 490.

- Laborer Occupation

- * The variable *occ1950* contains information on the nature of an individual's occupation if he or she was in the labor force. Using the coding scheme from [IPUMS](#), I classify workers as being in sales occupations based on a 1950 basis if their code was between 910 and 979. This variable is distinct from being a farm laborer.

• Independent Variables

- WWI Veteran (Endogenous Variable)

- * The variable *vet1930* contains information on veteran status and the conflict in which the individual served if he was a veteran. From this variable, I create a

binary indicator of whether the individual served in WWI based on if $vet1930 = 1$ and 0 otherwise.

- **Birth Year**

- * Birth year comes from the *birthyr* variable in the census.

- **Distance to 21 during Midpoint of War (Instrument)**

- * To calculate the instrument, I simply take the absolute value of the difference between being born in 1896 (the point at which an individual would be 21 during the war) and one's birth year.

- **Ethnic Group Fixed Effects**

- * The 1930 U.S. collected information on an individual's birth country as well as his/her parent's country. Using the *tpl*, *mbpl*, and *fbpl* variables, I construct indicators for whether an individual has explicit German, Irish, Italian, Polish, or Russian Heritage based on either being born in one of these countries or having at least one parent born in one of these countries.

- **County Fixed Effects**

- * I create indicators for county fixed effects by concatenating the *statefips* variable with the *county* variable in IPUMS. These produce county FIPS codes.

- **State Fixed Effects**

- * I create indicators for state fixed effects using the *statefips* variable.

APPENDIX 2: THE NATURALIZATION PROCESS

The naturalization process governing immigrants between 1906-1952 followed the below steps:

1. After residing in the United States for at least two years, an immigrant could then file his or her declaration of intent to naturalize. These are commonly referred to as “first papers” or petitions for citizenship.
2. After an addition two to seven years, an immigrant who has filed his/her “first papers” becomes eligible to file for naturalization. This process required an immigrant to present affidavits from two witnesses who could speak to the immigrant’s residence and his/her moral character.
3. Upon receiving the affidavits, the immigrant’s district court solicited an investigation by the Bureau of Immigration and Naturalization Services (INS).
4. Finally, the district judge makes a decision based on INS’s recommendations to either grant or reject citizenship to the petitioning immigrant.

There were also a number of exemptions particularly for immigrants who served in WWI. Particularly, immigrants who fought in WWI had the declaration of intent requirement waived for them thus fast-tracking them toward citizenship if they wished.

APPENDIX 3: THE DRAFT AND ITS OPERATION

Instituted under the Selective Service Act of 1917, the “draft” was the second time in American history in which the United States government conscripted men to fight in a war with the other being the U.S. Civil War. The U.S. government administered the draft through a largely federalized system whereby local and district draft boards registered and administrated the selection of draftees who would go onto serve by lottery. While the draft did not apply to first-generation residents who had not filed their declarations of intent for citizenship (first papers), first-generation immigrants volunteered in large numbers.

During the war, there were three major registration drives. The first occurred on June 5th, 1917, which required all men between the ages of 21 to 30 to register. The next drive occurred on June 5th of the following year for all men who turned 21 following June 5th of 1917. In between the second and third draft lotteries, the Selective Service Act of 1917 was challenged and upheld as constitutional. Following this decision, the United States a final lottery on September 12th, 1918, which also expanded the age range to 18 to 45. Once the war ended in 1919, the United States rapidly disbanded the draft registration boards and officially ended the institution of the draft on July, 15th 1919. Table 5 details the exemption requirements.

Table 5: Draft Exemption Rules

Draft Class	Category
I	Liable to military service in the order determined by the national drawing
II	Temporary (dependency) discharge from draft; effective until Class I in the jurisdiction of the same Local Board was exhausted; registrants with both wife & children, or any father of, motherless children, where such wife & children were not mainly dependent upon the registrant's labor for support; also, registrants whose wives could support themselves through employment
II	Temporary (dependency) discharge from draft; effective until Classes I & II in the jurisdiction of the same Local Board was exhausted; registrants who were responsible for children not their own & who were dependent on registrant's labor for support; registrants who had aged, infirm or invalid parents or grandparents mainly dependent on registrants' government employees
III	Temporary (dependency) discharge from draft; effective until Classes I, II & III in the jurisdiction of the same Local Board was exhausted; any married registrant whose wife or children were mainly dependent on registrant's labor for support; also included mariners employed in sea service
IV	Exemption or discharge from draft; including: ordained ministers, students who on May 18, 1917 had been prepared for ministry in a recognized theological or divinity school, persons in the military or naval service of the United States (officers & enlisted men), alien enemies, resident aliens, persons found to be totally & permanently physically or mentally unfit for military service, persons shown to have been convicted of any crime designated as treason or felony, or an "infamous" crime, licensed pilots actually employed in the pursuit of his vocation

Table 6: Adapted from Anne Yoder, MILITARY CLASSIFICATIONS For Draftees: <http://www.swarthmore.edu/Library/peace/conscientiousobjection/MilitaryClassifications.htm>

APPENDIX 4: SUMMARY STATISTICS, ROBUSTNESS CHECKS, AND ADDITIONAL RESULTS

Summary Statistics

Table 7: Summary Statistics on Main Independent, Dependent, and Control Variables

Statistic	N	Mean	St. Dev.	Min	Max
WWI Veteran	4,147,691	0.061	0.240	0	1
Spouse Foreign Born	1,879,201	0.421	0.494	0	1
Naturalized Citizen	4,147,691	0.221	0.415	0	1
Petitioned for Citizenship	4,147,691	0.047	0.213	0	1
Log(American Name Index) (Self)	4,147,691	-3.313	1.787	-4.605	0.010
Log(American Name Index) (Children)	4,147,691	-3.467	1.766	-4.605	0.010
American Name Index (Self)	4,147,691	0.166	0.288	0.000	1.000
American Name Index (Children)	4,147,691	0.156	0.294	0.000	1.000
Birth Year	4,147,691	1,896.416	19.505	1,821	1,930
Distance to 21 (Instrument)	4,147,691	16.318	10.694	0	75
Any Parent from Ireland	4,147,691	0.095	0.293	0	1
Any Parent from Italy	4,147,691	0.118	0.323	0	1
Any Parent from Eastern Europe	4,147,691	0.163	0.370	0	1
Any Parent from Germany	4,147,691	0.173	0.378	0	1

Figure 9: Distributions of American Name Index

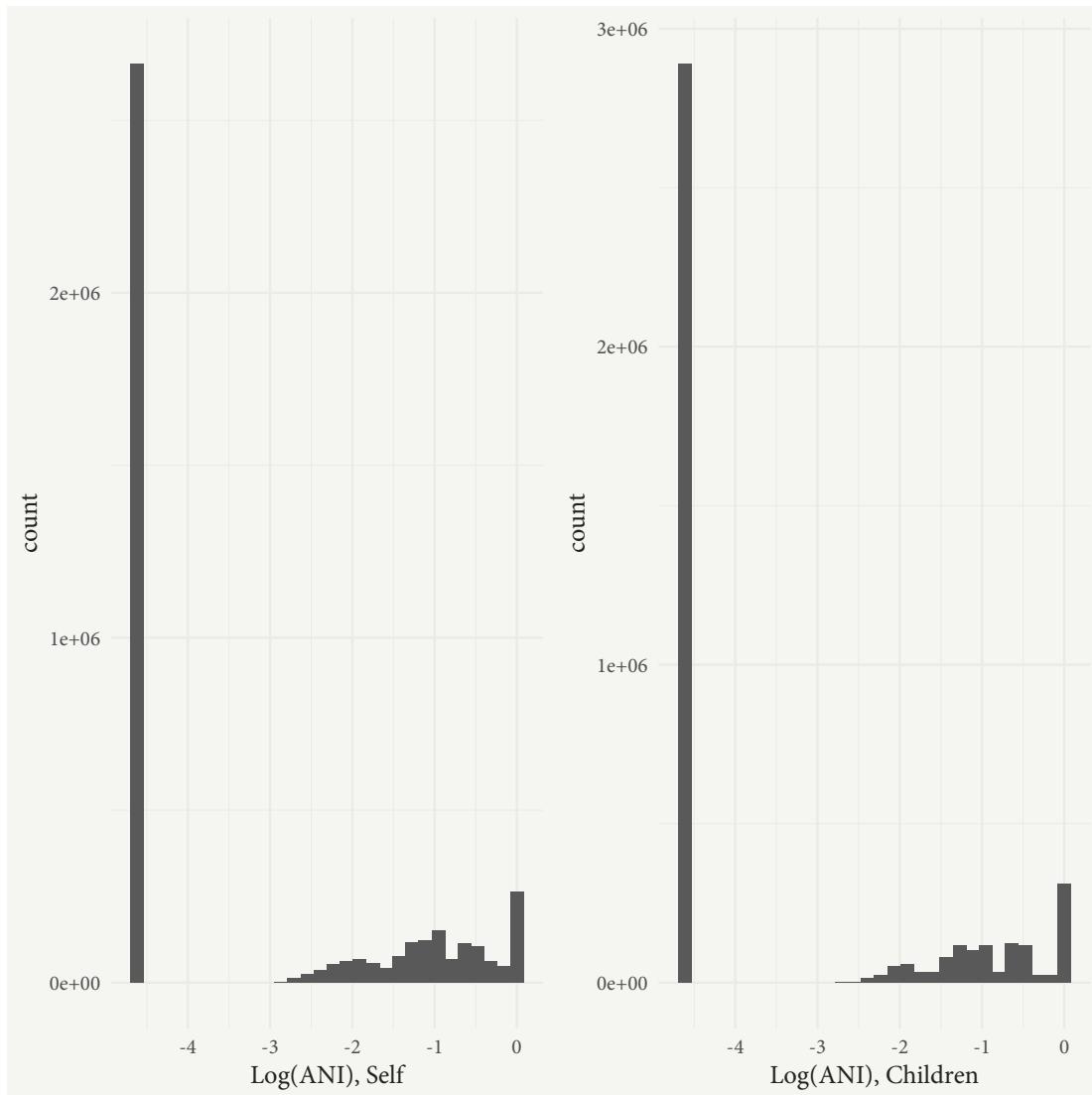


Figure 10: Geographic Distribution of Immigrant Mobilization

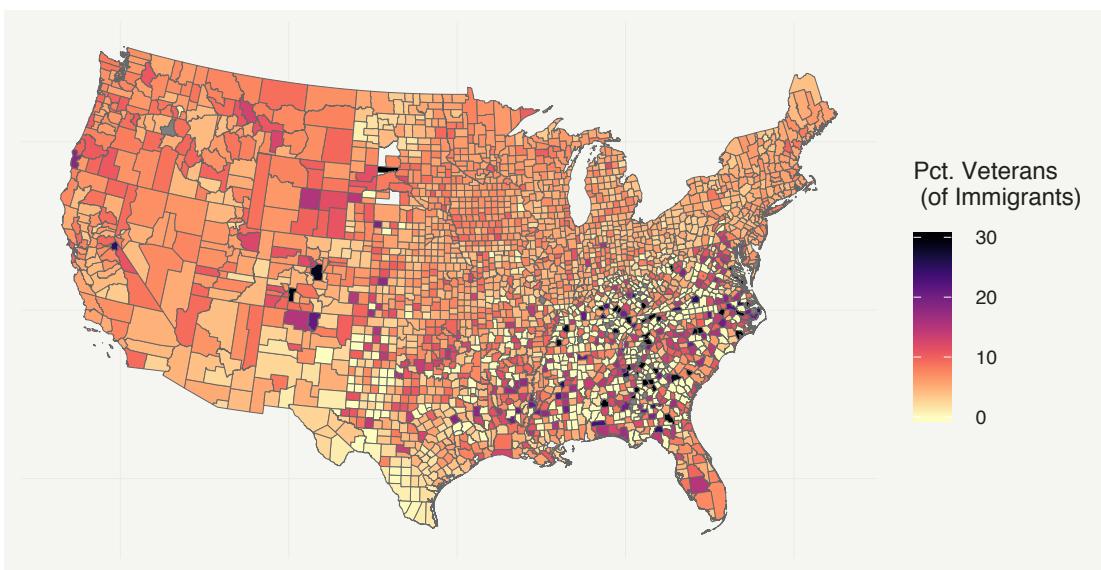
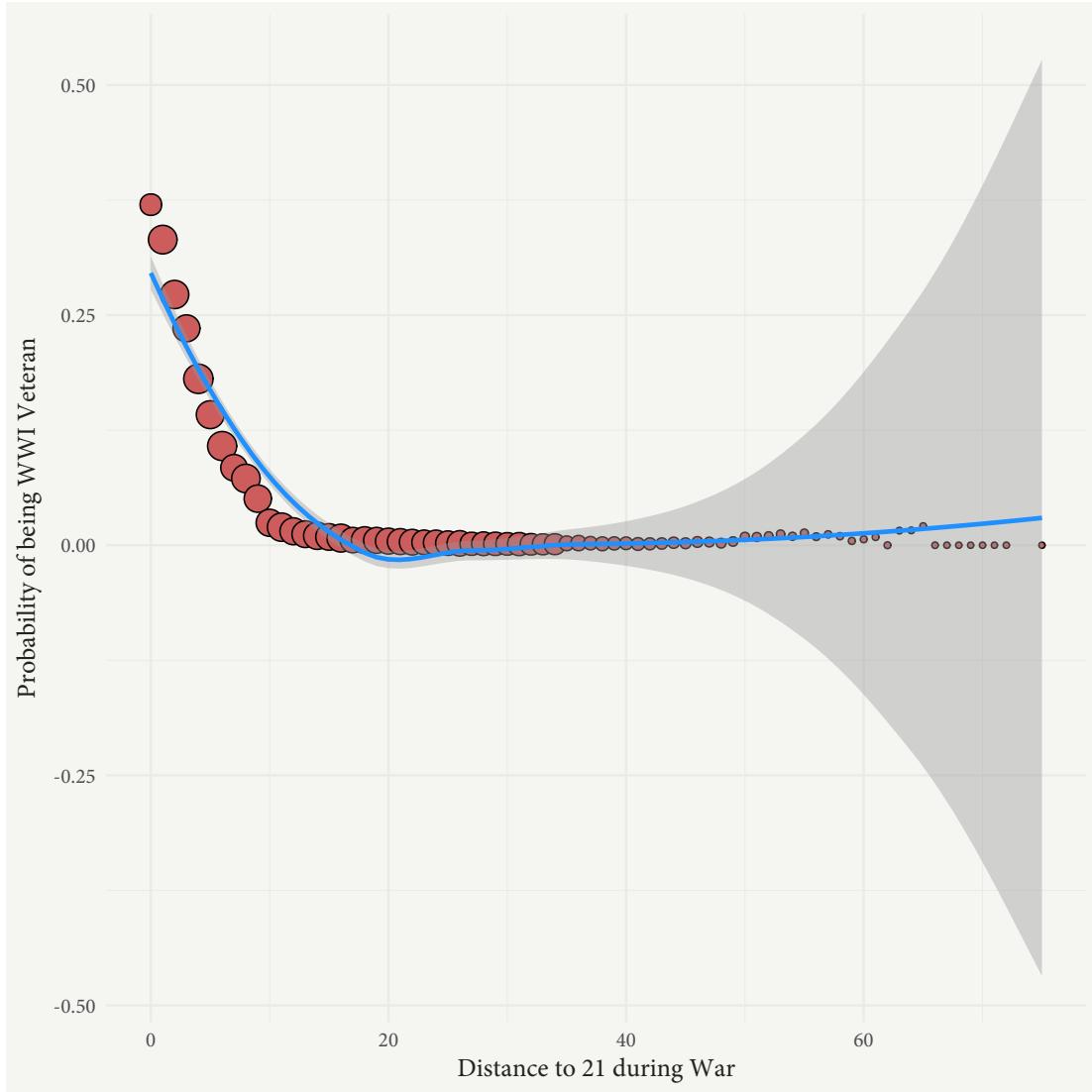


Figure 11: Raw Binned First-Stage Relationship between Distance to Cohort Service Peak and Probability of being a Veteran



Raw First-Stage Relationship

Figure 12: Raw Binned First-Stage Relationship between Distance to Cohort Service Peak and Probability of being a Veteran by Ethnic Group

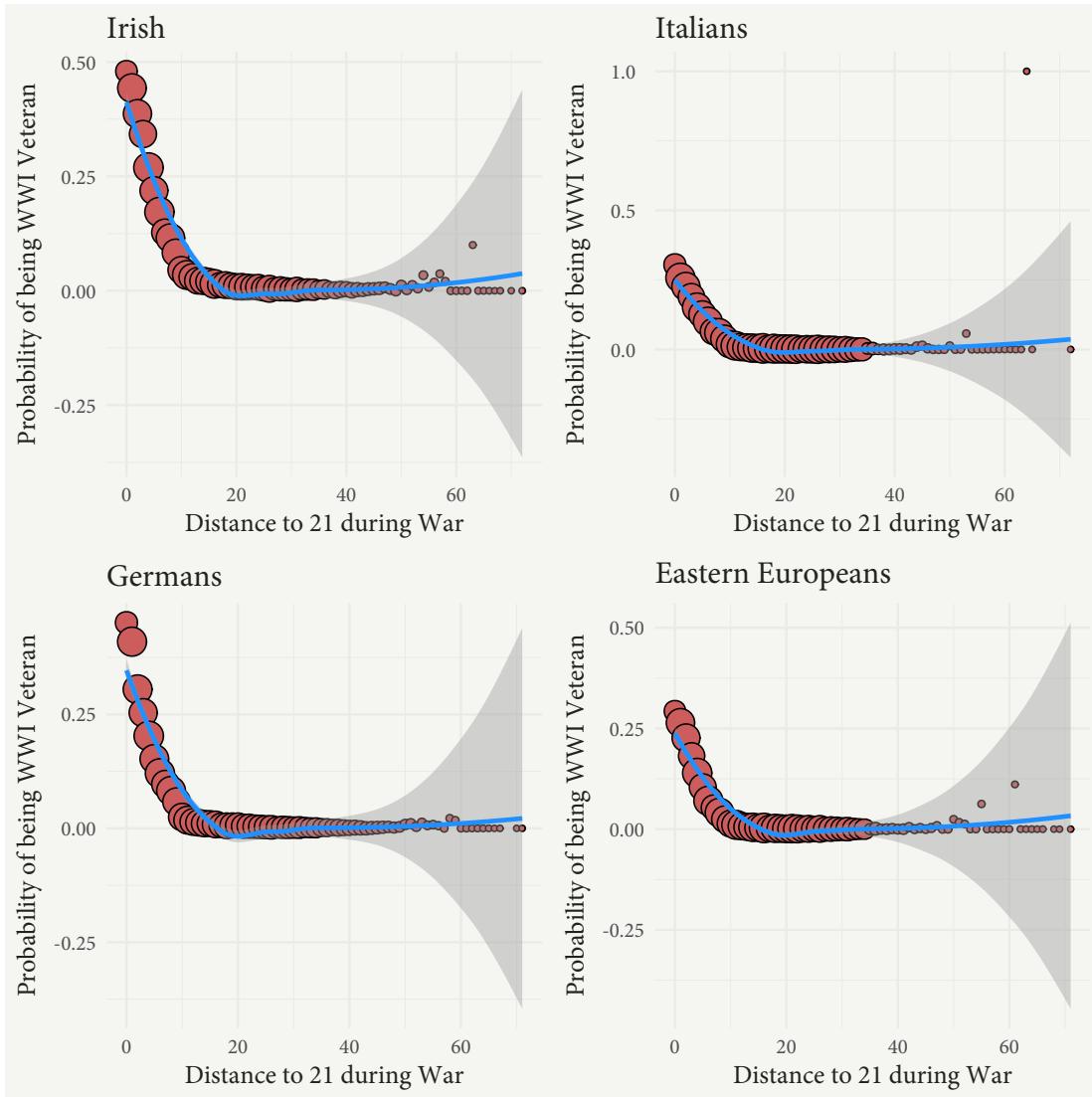
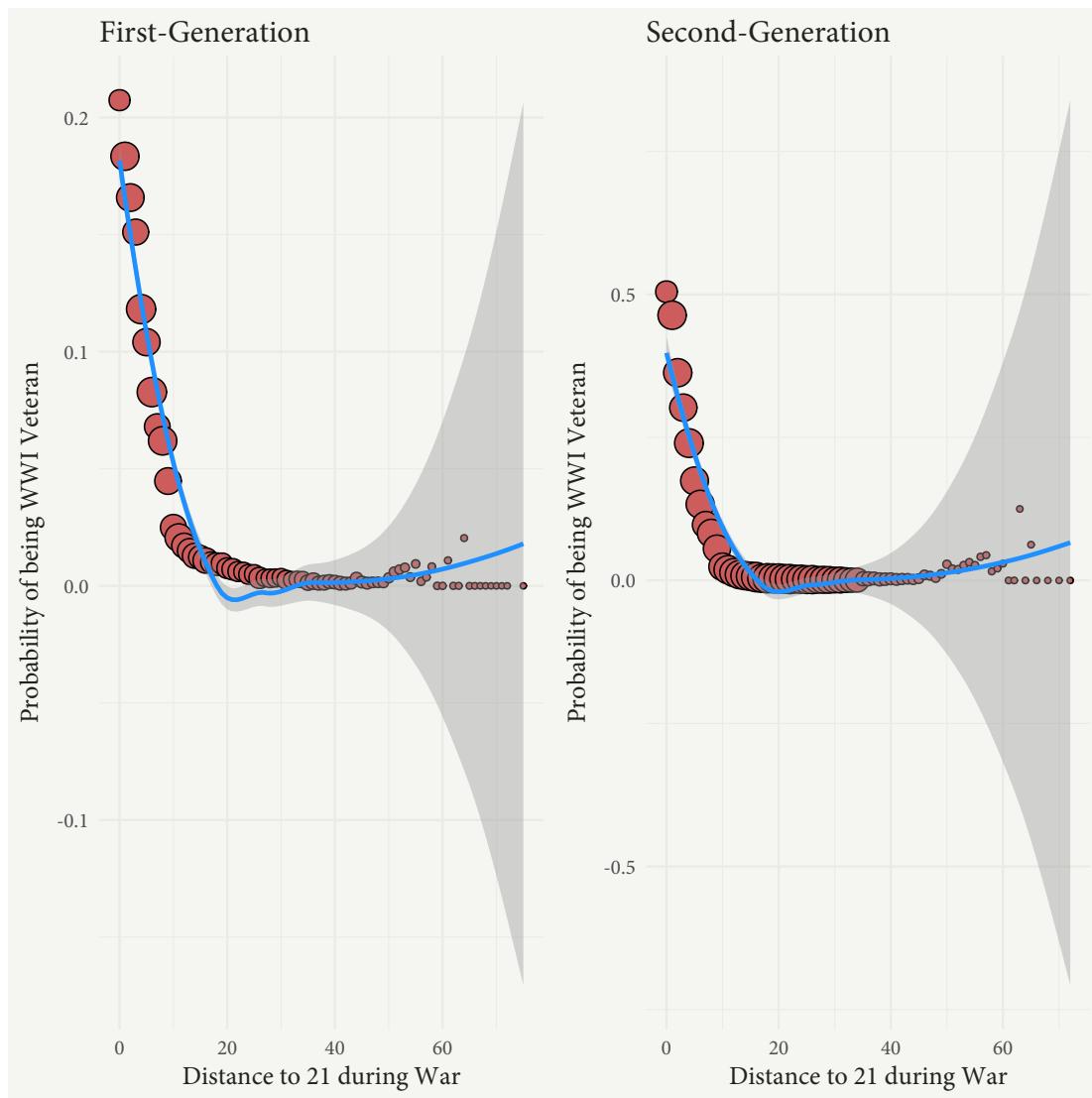


Figure 13: Raw Binned First-Stage Relationship between Distance to Cohort Service Peak and Probability of being a Veteran by Generation



Robustness of First-Stage Results to Differential Birth Cohort Trends

Table 8: First-Stage Relationship between Distance to 21 and WWI Veteran Status: Robustness to Birth Cohort Trends

	WWI Veteran	
	(1)	(2)
Distance to 21 during War	-0.007*** (0.001)	-0.007*** (0.001)
Birth Year	✓	✓
Ethnicity Fixed Effects	✓	✓
State Fixed Effects	✓	
County Fixed Effects		✓
State by Birth Year Trends	✓	
County by Birth Year Trends		✓
N	4,147,691	4,147,691
Adjusted R ²	0.094	0.096

*p < .1; **p < .05; ***p < .01

Standard errors adjusted for arbitrary clustering at the birth-year level in parentheses.

Models estimated using lfe package in the R computing environment.

Reduced Form Results
Table 9: Reduced Form Relationship among Men

	Spouse Foreign (1)	Naturalized (2)	Petitioned (3)	ANI (Self) (4)	ANI (Children) (5)
Distance to 21	0.002*** (0.0003)	-0.0004*** (0.0001)	-0.002*** (0.00003)	-0.001*** (0.0002)	-0.003*** (0.0001)
Birth Year	✓	✓	✓	✓	✓
Ethnicity Fixed Effects	✓	✓	✓	✓	✓
County Fixed Effects	✓	✓	✓	✓	✓
N	1,879,201	4,147,691	4,147,691	4,147,691	4,147,691

*p < .1; **p < .05; ***p < .01

Standard errors adjusted for arbitrary clustering at the birth-year level in parentheses.

Fixed effects models demean by county.

Heterogeneous Effects by Ethnic Group

Table 10: Effect of WWI Veteran Status on Cultural Assimilation among Irish: Two-Stage Least Squares

	Spouse Native (1)	Naturalized (2)	Petitioned (3)	ANI (Self) (4)	ANI (Children) (5)
WWI Veteran	0.418*** (0.023)	-0.054*** (0.011)	0.156*** (0.008)	-0.458*** (0.059)	0.324*** (0.055)
Birth Year	✓	✓	✓	✓	✓
County Fixed Effects	✓	✓	✓	✓	✓
N	186,254	392,071	392,071	392,071	392,071

*p < .1; **p < .05; ***p < .01

Standard errors adjusted for arbitrary clustering at the birth-year level in parentheses.

Fixed effects models demean by county.

Table 11: Effect of WWI Veteran Status on Cultural Assimilation among Germans: Two-Stage Least Squares

	Spouse Native (1)	Naturalized (2)	Petitioned (3)	ANI (Self) (4)	ANI (Children) (5)
WWI Veteran	1.253*** (0.037)	-0.608*** (0.012)	0.156*** (0.007)	0.260*** (0.035)	0.594*** (0.035)
Birth Year	✓	✓	✓	✓	✓
County Fixed Effects	✓	✓	✓	✓	✓
N	424,028	718,103	718,103	718,103	718,103

*p < .1; **p < .05; ***p < .01

Standard errors adjusted for arbitrary clustering at the birth-year level in parentheses.

Fixed effects models demean by county.

Table 12: Effect of WWI Veteran Status on Cultural Assimilation among Italians: Two-Stage Least Squares

	Spouse Native	Naturalized	Petitioned	ANI (Self)	ANI (Children)
	(1)	(2)	(3)	(4)	(5)
WWI Veteran	-0.614*** (0.063)	1.111*** (0.036)	0.440*** (0.015)	1.873*** (0.094)	1.323*** (0.072)
Birth Year	✓	✓	✓	✓	✓
County Fixed Effects	✓	✓	✓	✓	✓
N	176,969	490,299	490,299	490,299	490,299

*p < .1; **p < .05; ***p < .01

Standard errors adjusted for arbitrary clustering at the birth-year level in parentheses.

Fixed effects models demean by county.

Table 13: Effect of WWI Veteran Status on Cultural Assimilation among Eastern Europeans: Two-Stage Least Squares

	Spouse Native	Naturalized	Petitioned	ANI (Self)	ANI (Children)
	(1)	(2)	(3)	(4)	(5)
WWI Veteran	-0.528*** (0.074)	0.566*** (0.035)	0.411*** (0.020)	1.153*** (0.126)	0.912*** (0.100)
Birth Year	✓	✓	✓	✓	✓
County Fixed Effects	✓	✓	✓	✓	✓
N	261,995	677,923	677,923	677,923	677,923

*p < .1; **p < .05; ***p < .01

Standard errors adjusted for arbitrary clustering at the birth-year level in parentheses.

Fixed effects models demean by county.

Heterogeneous Effects by Generation

Table 14: Effect of WWI Veteran Status on Cultural Assimilation among First-Generation: Two-Stage Least Squares

	Spouse Native (1)	Naturalized (2)	Petitioned (3)	ANI (Self) (4)	ANI (Children) (5)
WWI Veteran	0.106* (0.056)	0.022 (0.028)	0.834*** (0.022)	1.368*** (0.055)	1.673*** (0.049)
Birth Year	✓	✓	✓	✓	✓
County Fixed Effects	✓	✓	✓	✓	✓
N	980,853	1,552,398	1,552,398	1,552,398	1,552,398

*p < .1; **p < .05; ***p < .01

Standard errors adjusted for arbitrary clustering at the birth-year level in parentheses.

Fixed effects models demean by county.

Table 15: Effect of WWI Veteran Status on Cultural Assimilation among Second-Generation: Two-Stage Least Squares

	Spouse Native (1)	Naturalized (2)	Petitioned (3)	ANI (Self) (4)	ANI (Children) (5)
WWI Veteran	0.578*** (0.016)	-0.040*** (0.006)	-0.005 (0.004)	0.096*** (0.025)	0.214*** (0.019)
Birth Year	✓	✓	✓	✓	✓
County Fixed Effects	✓	✓	✓	✓	✓
N	898,348	2,595,293	2,595,293	2,595,293	2,595,293

*p < .1; **p < .05; ***p < .01

Standard errors adjusted for arbitrary clustering at the birth-year level in parentheses.

Fixed effects models demean by county.

Compulsory Schooling Results: Regression Discontinuity

Table 16: Effect of Compulsory Schooling Laws on Cultural Assimilation: RDD Results with OLS

	Log(AMI Self)	Log(Children's AMI)	Spouse Foreign	Naturalized Citizen	Petitioned for Citizenship
	(1)	(2)	(3)	(4)	(5)
CSL	-0.023 (0.023)	-0.004 (0.021)	-0.001 (0.004)	-0.001 (0.007)	-0.0001 (0.001)
Constant	-3.521*** (0.071)	-3.592** (0.068)	0.157*** (0.016)	0.146*** (0.018)	0.005*** (0.001)
Bandwidth	5	5	5	5	5
N	193,182	193,182	134,192	193,182	193,182

*p < .1; **p < .05; ***p < .01

Standard errors adjusted for arbitrary clustering at the state level in parentheses.

Compulsory Schooling Results: Difference-in-Differences

Table 17: Effect of Compulsory Schooling Laws on Cultural Assimilation: Difference-in-Differences Results

	Log(AMI Self)	Log(Children's AMI)	Spouse Foreign	Naturalized Citizen	Petitioned for Citizenship
	(1)	(2)	(3)	(4)	(5)
Prop. School Years under CSL	0.006 (0.052)	-0.015 (0.042)	0.008 (0.011)	0.088*** (0.019)	0.003*** (0.001)
State Fixed Effects	✓	✓	✓	✓	✓
Birth Year Fixed Effects	✓	✓	✓	✓	✓
N	5,528,813	5,528,813	2,054,383	5,528,813	5,528,813

*p < .1; **p < .05; ***p < .01

Standard errors adjusted for arbitrary clustering at the state level in parentheses.

Table 18: Effect of Compulsory Schooling Laws on Cultural Assimilation: Difference-in-Differences Results among Males

	Log(AMI Self)	Log(Children's AMI)	Spouse Foreign	Naturalized Citizen	Petitioned for Citizenship
	(1)	(2)	(3)	(4)	(5)
Prop. School Years under CSL	-0.005 (0.060)	-0.016 (0.046)	-0.0003 (0.011)	0.092*** (0.019)	0.005*** (0.001)
State Fixed Effects	✓	✓	✓	✓	✓
Birth Year Fixed Effects	✓	✓	✓	✓	✓
N	2,748,538	2,748,538	1,002,768	2,748,538	2,748,538

*p < .1; **p < .05; ***p < .01

Standard errors adjusted for arbitrary clustering at the state level in parentheses.

Table 19: Effect of Compulsory Schooling Laws on Cultural Assimilation: Difference-in-Differences Results among First-Generation

	Log(AMI Self)	Log(Children's AMI)	Spouse Foreign	Naturalized Citizen	Petitioned for Citizenship
	(1)	(2)	(3)	(4)	(5)
Prop. School Years under CSL	-0.109 (0.087)	-0.085 (0.068)	0.194*** (0.041)	-0.105*** (0.034)	0.018*** (0.003)
State Fixed Effects	✓	✓	✓	✓	✓
Birth Year Fixed Effects	✓	✓	✓	✓	✓
N	306,993	306,993	179,340	306,993	306,993

*p < .1; **p < .05; ***p < .01

Standard errors adjusted for arbitrary clustering at the state level in parentheses.

Table 20: Effect of Compulsory Schooling Laws on Cultural Assimilation: Difference-in-Differences Results among Second-Generation

	Log(AMI Self) (1)	Log(Children's AMI) (2)	Spouse Foreign (3)	Naturalized Citizen (4)	Petitioned for Citizenship (5)
Prop. School Years under CSL	0.017 (0.059)	-0.009 (0.048)	0.003 (0.008)	0.000 (0.000)	0.000 (0.000)
State Fixed Effects	✓	✓	✓	✓	✓
Birth Year Fixed Effects	✓	✓	✓	✓	✓
N	5,221,820	5,221,820	1,875,043	5,221,820	5,221,820

*p < .1; **p < .05; ***p < .01

Standard errors adjusted for arbitrary clustering at the state level in parentheses.