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“How Ya Gonna Keep ‘Em Down on the Farm, After They’ve Seen Paree?” World War I Overseas Military Service and Rural Americans’ Postwar Occupational Mobility

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In the aftermath of World War I, U.S. discourse was animated by the concern that demobilized soldiers, having experienced the world outside of their hometowns, would resist returning to farms and to their preinduction occupations. Did military service really encourage an occupational shift? Were rural individuals especially susceptible to and was emplacement in foreign locales especially culpable for this change, as popular culture suggested? Focusing on North Dakota, a state with unusually detailed World War I records, this article uses a novel linked census–military data set and statistical analysis to examine how individuals’ place-based military experience might have inflected their postwar occupational mobility. Whereas univariate models support the contemporary perception that farm boys with overseas service were less likely to remain in agriculture, increasingly complex models suggest more nuanced interpretations, with civilian individual and contextual characteristics and their interaction being significantly predictive of farm leaving. Addressing substantive gaps in World War I historiography by contextualizing neglected subpopulations, this research also shows the value of using quantitative methods to engage with critical military geographies. Operationalizing theories of place–individual co-constitution through the analysis of longitudinal, individual data demonstrates how interest in soldiers’ experiences and in the spatiotemporally distant effects of war can be productively intertwined. *Key Words:* *big historical microdata, critical military geographies, occupational mobility, rural geography, World War I.*

Shortly after the Armistice halted World War I, a song speculating on the future of demobilized rural U.S. soldiers became wildly popular. The song’s sheet music cover juxtaposed a grandfatherly corn-cob pipe–smoking farmer with a Parisian can-can dancer (Figure 1), and its upbeat and humorous melody was accompanied on the first release’s phonograph by barnyard animal noises: This was truly a novelty song (Pasternak and Fields 1919; Young, Lewis, and Donaldson 1919). Yet the lyrics, styled as a conversation between an elderly farming couple, also spoke to serious contemporary concerns about the potential effects of the U.S. involvement in what was called “the European War,” and the subject matter’s relevance likely helped propel a second recording of the song to number two on 1919’s U.S. Top 100 charts (“Top Songs of 1919,” n.d.; Holsinger 1999; Keene 2011). As “Mother” insists that “farmers always stick to the hay,” her husband

contends that it was “a mystery” how “the boys” could be induced to remain in agricultural employment after the excitement of their transatlantic experiences (Young, Lewis, and Donaldson 1919). Concerns about farm leaving were hardly new. The decades after the Civil War were marked by persistent official discussion of rural depopulation and its expected attendant detriments: Fear of Malthusian checks, economic crises, and the undermining of the Jeffersonian yeoman ideal prompted commissions and legislation to address the “‘deficiencies’ of agriculture and country life” (Peters and Morgan 2004, 290; see also Blanke 2002; Gardner 2006; Danbom 2017). Grappling with the “profound cultural anxiety” surrounding perceived rural decline was a “central project” of U.S. popular discourse into the first decades of the twentieth century, with the rural being the target of literary nostalgia and—increasingly—satire, juxtaposed with urban modernity, threat, and opportunity

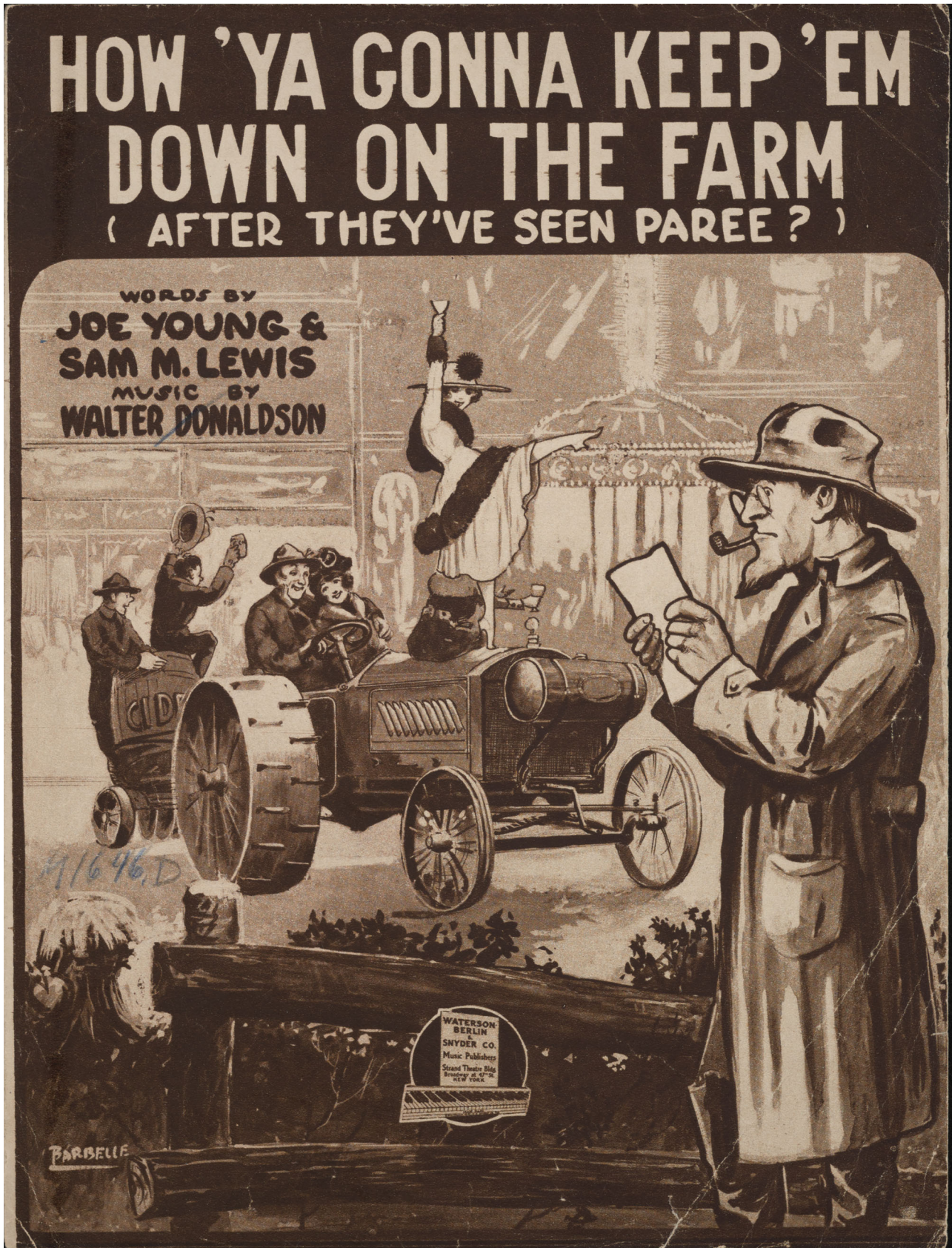


Figure 1. Cover of *How ya gonna keep 'em down on the farm (after they've seen Patee?)*. Image, lyrics, and sound recording available via the Library of Congress (<https://www.loc.gov/item/2013562671/>; Pasternak and Fields 1919; Young, Lewis, and Donaldson 1919).

(J. G. Casey 2017; Newcomb 2017). With the U.S. involvement in the Great War, however, these concerns gained a new urgency. Rural areas had remained “economically marginal” relative to urban areas and the American heartland’s entanglement with urban, eastern, and foreign places via commodity and capital flows had left rural people feeling powerless even during the unprecedented agricultural prosperity of the 1900s and 1910s (Gardner 2006; Danbom 2017). These conditions would only be exacerbated by wartime demand and economic policies. Once the United States officially declared war in 1917, with the government not only advertising military service as a means to adventure and opportunity but also backing up this propaganda with Progressive programs to ensure and enforce soldiers’ literacy, health, and financial stability, such service was seen by many as an avenue out of the isolation and inertia of rural life (Trout 1999; Zieger 2000; Kennedy 2004; Keene 2011). In the immediate aftermath of a war unlike any the United States had previously experienced, Young and Lewis’s lyrics gave voice to a new manifestation of an abiding quandary, “How ya gonna keep ‘em down on the farm (after they’ve seen Patee)?”

To approach this question empirically, I rephrase the query as: Was overseas service predictive of rural doughboys’ postwar occupational mobility?, and apply quantitative methods to a novel set of longitudinal, spatiotemporally-located, big historical microdata.¹ Such data have not been much used by World War I historians or critical military geographers or, indeed, by geographers generally (cf. Connor 2019). This gap provides an opportunity, because these data and the models they enable can formalize theory about co-constitutive place–individual relationships, theory that has become foundational to both subfields. Building on understandings of place as permeable, networked, and shaped by the accumulation of past connections, Woodward (2019) argued that the “civilian and military worlds [are] co-constituted” (8), and Forsyth (2019) noted that military geographies must be seen as “the assemblage and entanglement of a series of processes, phenomena, histories, technologies, and discourse” (6). Critical military geographers and Great War scholars have increasingly identified the individual as the agent of these entanglements (Woodward 2014; “In the Heart of the Great War” 2017). The soldier’s body enacts the state’s sanctioned violence to militarize space and maintain territory (Tyner 2009); a

variety of “nonstate actors” reshape both military and civilian places through microscale activities like “enlisting, migrating, marrying and gossiping” (Capozzola 2014, 713–14). “Problematiz[ing] the scale at which we assume ... war to operate,” critical scholarship on World War I and other conflicts locates the discursive and material creation of military geographies in the emplaced, embodied practices of soldiers themselves (Rech et al. 2015, 54; see also McGeachan 2014).

In acting as this creative agent, the individual as emplaced, embodied military subject is formed. Place and self are “radically” co-constitutive: “each is essential to the being of the other” (E. S. Casey 2001, 684). Interacting with militarized environments—being trained, disciplined, and practiced in this interaction—body and identity are themselves militarized (Tyner 2009; Burchell 2013). Applying such a phenomenological perspective to the Great War, Wilson (2012) argued that soldiers became soldiers by laying barbed wire, digging trenches, and encountering the other: the enemy, the foreigner, the war dead. They became different from civilians (including the civilians they previously were) through their movements, their place making practices, and the suspension of peacetime morality. In short, soldiers became soldiers by having embodied experiences only possible in the military spaces they themselves created. Just as places are changeable, accumulative, and networked, however, so, too, are individual lives. E. S. Casey (2001) wrote that subjects are “forever marked by” experienced places, albeit sometimes in “subtle” ways, the “traces” of these places “continually laid down in the body, sedimenting themselves there” (688). Kinkaid (2020, 169) likewise invoked the “sedimentation of experience,” but—importantly—also stressed how emplaced experience is constituted through socially structured difference, with such difference also being “formed through lived practice.” Returning to Great War literature, Wilson (2012, 74) and others have acknowledged that soldierly experience was also shaped by the men’s “pre-war regional and class identities” and wider contemporary circumstances (Meigs 1997; Kinder 2015). Rather than being simply the product of the battlefield, soldiers and veterans were marked by a “hybridity” born of the accumulation of lived experience over time as they moved through different places, formed relationships, and took on membership in different

subpopulations—the material and discursive meaning of these contexts themselves being dynamic and historically contingent (Cronier 2004, 152; MacLean and Elder 2007). In his transitions from civilian to servicemember to veteran, the individual soldier demonstrates the permeability of the boundaries between civilian and military space and enacts their co-constitution, all the while creating himself through his successive emplacements.

Spatiotemporally located big historical microdata can be used within an empirical framework to examine how individuals entangle places via their accumulated experience. For instance, linking French World War I soldiers with their places of origin, Abramitzky, Delavande, and Vasconcelos (2011) were able to discuss how the characteristics of particular military places (the danger of certain sectors) operated through individual processes (deaths of *poilus* in regionally composed units) to produce new conditions in civilian places (unbalanced sex ratios in soldiers' home *départements*) that then affected individual postwar opportunities (within local marriage markets). Other statistical studies have employed data sets composed by linking individuals' Great War military records to other individual-level sources (Inwood and Ross 2016). U.S. work in this vein has included comparisons of civilians' and soldiers' morbidity, mortality, and employment status, finding that being a veteran could be detrimental to health but beneficial to social and economic standing (Doetsch 2012; Laschever 2013; Smith et al. 2015). These studies were not the first to quantitatively address World War I's demographic and socioeconomic effects (Rietzler 2017); however, twentieth-century research was arguably hindered by scholarly disinterest in these topics and methods after World War II, as well as by data limitations so severe as to call some studies' conclusions into question (Offer 1989; Harris 1993; Voth 1995). In contrast, the cited twenty-first-century studies show that using ample sets of located, longitudinal, individual data helps scholars avoid apples-to-oranges comparisons between different cohorts (who might have lived in very different historical and geographical contexts) and obviates the need to rely solely on preaggregated data that might obscure variations of interest. In building up from the level where dynamic processes like social and spatial mobility are actually occurring and in allowing the accumulating effects of these processes to be traced through—and

controlled at the level of—individual lives, methodologies founded on these data are both theoretically and practically satisfying (Buzar, Ogden, and Hall 2005; Ruggles 2014). As A. J. Bailey (2009, 411) contended, working at the level of emplaced life courses forwards critical geography prerogatives, stressing “how particular places and moments take on significance” to the creation and “perpetuation” of difference among groups and individuals. As McCalman et al. (2019) argued, quantitatively examining soldiers from this perspective “provides the best measures of the cost and opportunities of war exposure” (53).

This case study applies a life course perspective to examining the effects of war exposure on a long-neglected Great War subpopulation: rural U.S. soldiers. The paucity of work on World War I in the United States has often been shrugged off as arising from the distance of the country's homes from and its soldiers' belated arrival to the Western front (Capozzola et al. 2015), yet these very factors were formative of the uniqueness of Americans' experiences. During the Great War, the persistent civilian–military binary was mapped onto a particular imaginary of “home” versus “front”: Wartime propaganda relied on perceived threat to the home–front boundary to galvanize efforts to maintain it (James 2009); a soldier's traversal of this boundary was essential to his claims to authentic war experience (Cronier 2004; Wilson 2012). For Americans, this dichotomy was emphasized by the material reality that such a traversal required travel overseas. For U.S. soldiers, Keene (2011, 131) argued, lack of service abroad thus became a “badge of shame.” The higher value of overseas service was likewise reflected in higher bonuses for veterans who had served in Europe (Dickson and Allen 2004) and in memorial practices that emphasized sacrifice in the trenches (Arlington National Cemetery n.d.). With 2 percent of the nation's population serving abroad, overseas service made World War I different from previous U.S. mass military commitments. Yet, because sending doughboys abroad began closer to the Armistice than to the outbreak, another 2 percent of the population—more than 2 million individuals in uniform—never even crossed the Atlantic (Keene 2015). In other words, doughboys were split between those who had emplaced experience of traditionally defined military space (the Western Front) and those who only had experience of military space,

more broadly defined (stateside training camps). Previous research has found important differences distinguishing doughboys from civilians in their cohort, showing, for instance, that World War I veterans enjoyed a 3.6 percent wage premium over non-veterans in 1940 (Gabriel 2016), that being a veteran protected White men from downward social mobility (Doetsch 2012), and that having a member of one's own company gain "employment, all else equal, increase[d] a veteran's likelihood of employment by 0.8 percentage points" in 1930 (Laschever 2013, 1). The peculiarly U.S. divide between soldiers who served overseas versus those who did not, however, has not been sufficiently addressed (cf. Cunningham 2018). As Meigs (1997, 1) insisted, the uniqueness of Americans' World War I experience "cannot be stated too strongly" and the effects of its particular spatial structure on individuals deserves deeper study.²

Great War historiography has also been criticized for ignoring rural individuals and the populations they compose (Offer 1989), even though, as Ermacora (2015) contended, World War I was largely fought and enabled by members of this group. Great War studies have shown a recurrent interest in the discursive uses of the rural, whether in propaganda juxtaposing a pastoral homeland with the threat of industrialized warfare or in soldiers' own attempts to understand and find mental respite from the desolation of the front (Ermacora 2015; D. Gregory 2016). In the United States, historians have highlighted parallels in the redemptive, millenarian rhetoric applied to the front and to the frontier (Ellsworth 1960; Trout 1999; Whalan 2019). Histories addressing more material aspects of the conflict have typically only discussed rural places in terms of the significance of agricultural commodities to the prosecution of the war and its political alignments, rather than examining how the geographies built on these resources affected the men who were mobilized from them (Chambers 1987; Fleming 2003; Kennedy 2004). Farmers are introduced in reference to unsuccessful calls for draft exemptions, the successful expansion of draft deferrals, and the prevalence of draft dodging: efforts to escape military service rooted in animosity toward those urban interests perceived to be profiteering from the war and capable of undermining farmers' own wartime economic opportunities (Hachey 1993; Keith 2004). In short, farming individuals, when considered at all,

tend to be presented as firmly entrenched in a civilian and often antiwar half of a strict dichotomy between home and front. There has been little research into rural individuals as capable of direct war experience.

Statistically examining the entanglement of overseas and rural places through the medium of individual U.S. soldiers, I bring together two strands of critical military geography: the distant effects of militarism and emplaced experience, using the latter to address the former and forwarding a critical phenomenology that stresses the constitutive importance of spatially structured difference. Substantively, I investigate individual economic outcomes, a terrain unexplored by critical military geography and the dominant critical-cultural strain of Great War studies. Having already sketched out contemporary discourse and the lack of scholarship on the rural-military intersection, in the next section I introduce the linked data used here and speak in more detail about the specific context and individuals they describe. Highlighting important variations among subpopulations that would be hidden in aggregate data and paying special attention to the differences between draftees and volunteers, the preliminary analytical section presents logistic models predicting the likelihood of overseas service. The second analytical section presents a univariate model of postwar occupational change as predicted by overseas service and then proceeds to more complex models that complicate the univariate model's speciously straightforward results. Having found that civilian characteristics—but not service location—are significantly predictive of draftees' postwar occupational mobility, the article concludes by revisiting the discussion of quantitative research vis-à-vis Great War historiography and critical military geography in light of these findings.

North Dakotan Data and Context

I composed the data set used here by linking two sources of individual-level data, North Dakota's World War I military roster and the 1930 U.S. Census, and combining them with county-level aggregate data from the 1910 agricultural census (Haines, Fishback, and Rhode 2016). The roster contains the records of more than 30,000 Great War servicemembers "who claimed North Dakota as their home residence," providing such civilian details as

Table 1. Condensing Integrated Public Use Microdata Series (IPUMS) occupation classifications

OCC1950 codes	Occupations	Condensed categories	Farming categories
100–199	Farmers	Farming	Farming
800–899	Farm laborers		
<100	Professionals	White collar	Not farming
200–299	Managers		
300–499	Clerical and sales		
500–699	Craftsmen and operatives	Blue collar	
700–799	Services		
900–978	Blue-collar laborers		
980–996	Nonworkers	None	
979	Not yet coded ^a	Unknown	Unknown
997, 999	Missing, blank		
—	“Laborer[s]” ^b	Unspecified laborer	

^aIn the linked data, 979 census occupations were manually recoded where possible.

^bIn the roster, most “laborer[s]” could not be specifically identified as blue-collar or farm laborers.

name, birthdate and location, and prewar occupation, as well as information about individuals’ military service (Fraser 1931, 3). Wartime details typically include service branch, entry and exit methods, service duration, indication of overseas service, and places of draft registration, induction, training, and demobilization. The majority of federal sources about individual soldiers having been lost, such state-compiled comprehensive documentation is invaluable (U.S. National Archives and Records Administration n.d.). With the information available as text files from HathiTrust, I parsed the roster into standardized variables and categorized individuals’ occupations using a dictionary derived from text strings and OCC1950 codes in the Integrated Public Use Microdata Series (IPUMS)-provided 1930 census data (Ruggles et al. 2013). Table 1 summarizes how both roster and census occupations were condensed.

I assigned registration and entry places a county FIPS code by geocoding these locations and intersecting them with 1910 county boundaries (Manson et al. 2017). Individuals who moved states between birth and draft registration and those who moved counties between registration and induction were identified via mismatches in state names and county FIPS codes, respectively. I associated servicemembers with the contextual characteristics of their prewar lives by linking their registration counties to the 1910 agricultural census data via their FIPS codes. Here, I focus on these counties’ average farm value; the percentage of farms that were tenant operated; and the percentage of the county population that was classified by the census as urban, that is, living in an incorporated place with at least 2,500

inhabitants or an unincorporated place with at least 10,000 densely settled inhabitants (Minnesota Population Center n.d.). Localized variations in these place characteristics are visible in the maps of Figure 2.

Following the lead of previous studies, I use census data to indicate Great War soldiers’ outcomes (Doetsch 2012; Laschever 2013; Gabriel 2016). The 1930 census provides individuals’ full names, age, sex, state or country of own and parents’ birth, marital status, occupation, and veteran status (determined based on whether one served in wartime, regardless of location; U.S. Census Bureau 2017). In the IPUMS-provided 100 percent sample of the census employed here, all of these variables save name have been coded (Ruggles et al. 2013). As described more fully elsewhere, I used age (plus or minus three years), sex, and birthplace to suggest a pool of possible links between roster soldiers and 1930 census individuals and selected from among those candidate pairs on the basis of bigram comparisons of first and last names, removing ambiguously linked pairs that shared a member with another pair as well as pairs that did not include a census-identified World War I veteran (Cunningham 2018). This type of automated record linkage, based on deterministic rules for suggesting a pool of candidate records and selecting the most convincing matches, was pioneered by Ferrie (1996) in his work linking historical censuses and subsequently improved on by such techniques as using exact name matches to avoid the false positives introduced by using phonetic codes and employing the measured agreement of additional variables not used in the linkage process to select the

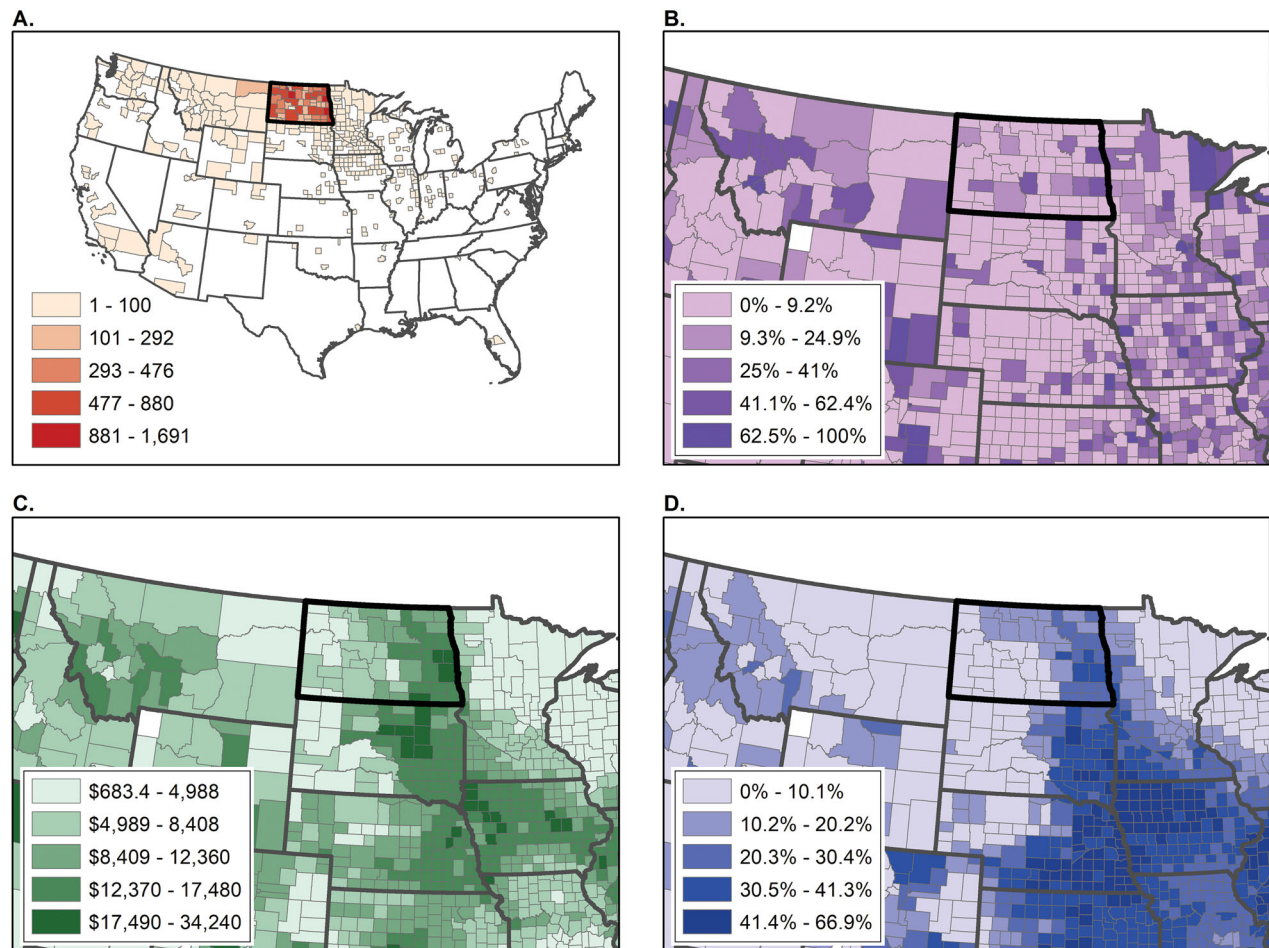


Figure 2. Contextual characteristics. (A) Registration by county, roster men with known registration location. (B) Percentage of county population that is urban, 1910. (C) Average farm value, 1910. (D) Percentage of farms that are tenant operated, 1910. Some mapped boundaries are modified to account for discrepancies between Manson et al.'s (2017) and Haines, Fishback, and Rhode's (2016) county codes; no analyzed individual registered in these counties. All variables are classified by natural breaks. North Dakota is thickly outlined in black (Fraser 1931; Haines, Fishback, and Rhode 2016; Manson et al. 2017).

best protocol for the data at hand (Eriksson 2015; M. Bailey et al. 2017; Connor 2019).

For this article, I reduced the linked data set to surviving male noncommissioned, noncareer army veterans who only began service after the United States declared war. I also removed those with extreme ages or service durations (those outside the 1st and 99th percentiles of possible values for these variables). For comparison, such “rank and file” individuals make up three quarters of the roster as a whole ($n = 23,056$). I further constrained the linked rank and file data set to include only those with known prewar marital statuses and known prewar and postwar occupations.³ Postwar occupations coded by IPUMS as unknown but readable in the census text were manually recoded where possible, and those described in the roster simply as

“laborer[s]” and thus not clearly categorizable as farm or industrial laborers were removed. I also recategorized birthplace to a few nativity codes. Table 2 summarizes the characteristics of all the surviving rank and file men in the roster, the linked rank and file population analyzed here ($n = 5,057$), and subsets of this linked subpopulation.

Using North Dakota's unusually detailed data allows an incisive but constrained focus on the specificities of this particular place and how it engaged with militarism in an era of rapid, multiscalar agricultural and societal change (Sylvester and Gutmann 2008). The age of mass migration's “epic” global population movement helped drive U.S. expansion across the Great Plains (Kaye 2011, 20). On the eve of the war in 1910, two thirds of North Dakota's population had been born outside the state,

Table 2. Comparing surviving rank and file soldiers in the roster to those in the linked data sets

Variable		Value	Surviving rank and file soldiers ^a (n = 23,056)	Linked rank and file soldiers used here				
				All identifiable prewar occupations		Prewar farming individuals		
				Drafted or volunteered (n = 5,057)	Drafted only (n = 3,762)	Drafted or volunteered (n = 2,664)	Drafted only (n = 2,124)	
Roster variables	Own and parental nativity ^b	Foreign-born	4,326 (18.76%)	563 (11.13%)	449 (11.94%)	324 (12.16%)	273 (12.85%)	
		Native-born, foreign or mixed parentage (second generation)	10,101 (43.81%)	2,594 (51.30%)	2,064 (54.86%)	1,408 (52.85%)	1,199 (56.45%)	
		Native-born, native parents (third generation)	6,252 (27.12%)	1,900 (37.57%)	1,249 (33.20%)	932 (34.98%)	652 (30.70%)	
		Native-born, unknown parents	2,369 (10.27%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	
		Unknown	8 (0.03%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	
		Year of birth ^{b,c}	M (SD)	1,892.91 (3.46)	1,893.81 (3.25)	1,893.45 (2.93)	1,894.08 (3.05)	1,893.75 (2.77)
		Age in 1930 ^{b,c}	M (SD)	37.09 (3.46)	36.19 (3.25)	36.55 (2.93)	35.92 (3.05)	36.25 (2.77)
	Prewar occupation	Farming	10,593 (45.94%)	2,664 (52.68%)	2,124 (56.46%)	2,664 (100%)	2,124 (100%)	
		Blue collar	4,554 (19.75%)	1,235 (24.42%)	810 (21.53%)	0 (0%)	0 (0%)	
		White collar	3,581 (15.53%)	1,158 (22.90%)	828 (22.01%)	0 (0%)	0 (0%)	
Unspecified “laborer”		2,022 (8.77%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)		
Known unemployed		967 (4.19%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)		
Blank/not given		1,339 (5.81%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)		
Draft registration status and entry method	Unregistered volunteer	2,855 (12.38%)	617 (12.20%)	0 (0%)	263 (9.87%)	0 (0%)		
	Registered volunteer	2,923 (12.68%)	678 (13.41%)	0 (0%)	277 (10.40%)	0 (0%)		
	Registered draftee	17,278 (74.94%)	3,762 (74.39%)	3,762 (100%)	2,214 (79.73%)	2,124 (100%)		
Months in service ^c	M (SD)	13.59 (6.84)	13.89 (6.82)	11.68 (5.53)	13.38 (6.67)	11.59 (5.52)		
	Service location	Domestic only	10,752 (46.63%)	2,257 (44.63%)	1,948 (51.78%)	1,270 (47.67%)	1,142 (53.77%)	
Overseas		12,304 (53.37%)	2,800 (55.37%)	1,814 (48.22%)	1,394 (52.33%)	982 (46.23%)		
Moved state, birth to registration	No	5,585 (24.22%)	1,530 (30.26%)	1,325 (35.22%)	823 (30.89%)	752 (35.41%)		
	Yes	14,616 (63.39%)	2,884 (57.03%)	2,424 (64.43%)	1,568 (58.86%)	1,365 (64.48%)		
	Unknown/ unregistered	2,855 (12.38%)	643 (12.72%)	13 (0.35%)	273 (10.25%)	7 (0.33%)		

(Continued)

Table 2. (Continued).

		Linked rank and file soldiers used here					
		Surviving rank and file soldiers ^a (n = 23,056)	All identifiable prewar occupations		Prewar farming individuals		
Variable	Value		Drafted or volunteered (n = 5,057)	Drafted only (n = 3,762)	Drafted or volunteered (n = 2,664)	Drafted only (n = 2,124)	
1910 aggregate data ^d	Moved county, registration to induction	No	15,837 (68.69%)	3,667 (72.51%)	3,385 (89.98%)	2,077 (77.97%)	1,962 (92.37%)
		Yes	3,097 (13.43%)	708 (14.00%)	338 (8.98%)	297 (11.15%)	141 (6.64%)
		Unknown/ unregistered	4,122 (17.88%)	682 (13.49%)	39 (1.04%)	290 (10.89%)	21 (0.99%)
	Percentage of registration county population that is urban	M (SD)	12.03 (17.55)	12.02 (17.38)	11.44 (16.91)	8.86 (15.35)	8.53 (14.95)
	Average farm value in registration county (\$ in thousands)	M (SD)	10.64 (5.11)	10.54 (26.16)	10.54 (5.11)	10.24 (4.92)	10.27 (4.93)
	Percentage of farms in registration county that are tenant operated	M (SD)	16.37 (10.38)	16.09 (10.40)	16.07 (10.37)	15.62 (10.16)	15.70 (10.17)
	1930 census and linked variables	Cleaned IPUMS-coded 1930 census occupation	Farming	—	1,516 (29.98%)	1,300 (34.56%)	1,321 (49.59%)
		Blue collar	—	1,763 (34.86%)	1,227 (32.62%)	881 (33.07%)	633 (29.80%)
		White collar	—	1,756 (34.72%)	1,218 (32.38%)	449 (16.85%)	326 (15.35%)
		Known unemployed	—	22 (0.44%)	17 (0.45%)	13 (0.49%)	11 (0.52%)
Marital status before 1917, derived from 1930 census		Unmarried	—	4,900 (96.90%)	3,653 (97.10%)	2,607 (97.86%)	2,084 (98.12%)
		Married	—	157 (3.10%)	109 (2.90%)	57 (2.14%)	40 (1.88%)

Note: IPUMS = Integrated Public Use Microdata Series.

^aRank and file soldiers comprise 79.6 percent of the full roster. Among all rank and file soldiers, the roster (published in 1931) lists 5.43 percent as deceased.

^bIn the linked data set, age and nativity are census-derived.

^cThese statistics are calculated among those with known data.

^dThese statistics are calculated among those who registered for the draft and whose place of registration is known.

twice the national average, and its percentage of first- and second-generation Americans (72 percent) was closer to that of New York (64 percent) and Massachusetts (67 percent) than it was to any state in the predominantly rural South (7 percent overall), most of the other states in the Midwest (44

percent overall; Minnesota 72 percent, Wyoming 67 percent), or of the United States as a whole (36 percent).⁴ The state's diversity was almost wholly ethnic rather than racial.⁵ With adult males outnumbering females 1.41 to 1, and with many of these males being relatively young (36.8 on average)

and never married (40 percent), North Dakota's population in 1910 still bore the demographic characteristics of the frontier (Gutmann et al. 2012).⁶ This unique set of population characteristics was accompanied by other northern Great Plains-specific patterns and connections. In contrast to other rural U.S. places, the Great Plains were enmeshed in a global market economy of nascently mechanized monoculture—with its attendant promises and insecurities—almost from the start of European-American settlement (Saloutos and Hicks 1951; Tweton and Jelliff 1976; Highbie 1997; Kaye 2011). By 1909, North Dakota was already producing 17 percent of the nation's wheat, its investment in farm machinery was three times the national average, and the state's high land values continued to be associated with high levels of tenancy, a form of tenure that, although often viewed as a step in a farming life course from farm laborer to farm owner, could also be a marker of poor or unstable economic circumstances (Saloutos and Hicks 1951; Hachey 1993; Highbie 1997; Gardner 2006). Challenging the ideal of modest and stable family farms espoused in government and popular discourse, the northern Great Plains were characterized by mobility and flux, and as Kaye (2011) highlighted, individuals were an agent of this dynamism, “changing both profession and residence with bewildering speed and frequency” (24). The distinction between urban and rural was fluid, as individuals moved locally between farms and cities to take advantage of shifting employment opportunities (Highbie 1997). When the war came, the northern Great Plains' engagement with the new military reality was preconditioned on its past, the conflict altering rather than erasing the intra- and interplace networks that gave the region its character. The North Dakota data thus cannot stand in for other rural places with their very different demographic histories, economic ties, and racial and ethnic compositions. Rather, they serve to highlight the uniqueness of place, a case study of one manifestation of “the rural.”

Similarly, using the 1930 census to measure outcomes is both practical and problematic. Previous statistical studies and critical qualitative agendas have both argued for the need to look beyond the disturbance of war and its immediate aftermath (Herman and Yarwood 2014; Gabriel 2016; Ekbladh 2017). U.S. demobilization was sudden and poorly planned: Within just seven months of the Armistice, 8 percent of the workforce returned from military life, dumped into a labor market already saturated

with civilian workers freshly released from wartime employment (Chambers 1987; Coffman 1998; Kinder 2015). In the midst of recession, nearly 4 million workers went on strike in 1919 (Ford 2005). By mid-decade, nonagricultural sectors of the economy had improved, the army of occupation had returned, and doughboys who might have temporarily revisited prewar living situations would have had time to establish more stable postwar patterns (Ford 2005). Pinpointing when the United States had returned to normality, however, is challenging, if not impossible. World War I exacerbated the country's existing rural dynamism. Ironically, both the prosperity that preceded the Armistice as gross farm income doubled and average farm value trebled in response to high demand and government policy and the postwar agricultural depression that ensued when these supports were removed helped to drive a recursive cycle of farm consolidation and expanding cash crop monoculture, mechanization, and mortgages (Blanke 2002; Gardner 2006; Ermacora 2015; Danbom 2017). The reduction of rural opportunities for laborers and midsized farmers caused by this agricultural modernization, coupled with the draw of the cities, contributed to an “absolute rural population decline of 1.2 million people” over the 1920s (Danbom 2017, 184). This drop was manifested in the continued Great Migration from the south and the novel “emptying out” of the Great Plains, as well as in the majority of linked prewar farming individuals in Table 2 having left agrarian occupations by 1930 (Stock 2014). Because any attempt to choose a cutoff date on the basis of supposed stability in such a changeable system is arbitrary, deciding when to measure Great War soldiers' outcomes is best approached methodologically. The 1930 census, unlike the preceding or following censuses, comprehensively identifies World War I veterans. In linking the data, 1930s veteran status acts as a validation variable, increasing confidence that the link between roster soldier and census individual is correct and ensuring that the calculated association between overseas service and postwar occupational change is as accurate as possible (M. Bailey, Cole, and Massey 2020).

Preliminary Analysis: Subpopulation Patterns and Predicting Overseas Service

Many factors affected who served overseas in the first place. As demonstrated in this section, although

Table 3. Cross-tabulations of entry method with location of service among linked rank and file soldiers of identifiable prewar occupations

Entry method		Domestic only	Overseas	Total (column %)
Drafted	Frequency	1,948	1,814	3,762
	(row %)	(51.78%)	(48.22%)	(74.39%)
Volunteered	Expected	1,679	2,083	
	Frequency	309	986	1,295
	(row %)	(23.86%)	(76.14%)	(25.61%)
Total	Expected	578	717	
	frequency	2,257	2,800	5,057
	(column %)	(44.63%)	(55.37%)	(100%)
Diagnostics		Chi-square = 303.89 ($p < 0.0001$), Cramer's V = 0.2451		

figures drawn from the North Dakota records reassuringly conform to broad patterns known from the literature, only the detail of such microscale observations can highlight the diversity among the different subpopulations defined by these factors. The first wave of draft registration did not occur until two months after war was declared, and voluntary enlistment was discontinued in the army in December 1917 (Keene 2011): Volunteers as a whole thus had a head start on the process that moved men from training camps to the front. This is reflected in the cross-tabulation in Table 3 where there are more overseas volunteers and fewer overseas draftees than expected based on the proportions of these groups within the population.⁷ Age, marital status, nativity, and prewar occupation, interacting with personal choices and operating through shifting national guidelines and the discretion of local draft boards, had an influence on who entered the military, when, and how. The average U.S. recruit was in his early twenties and single, but the ages at which men could legally serve changed over the course of the war and the classification system that would eventually defer the drafting of married men (provided they were adequately supporting their dependents) was not implemented until after the training camps had been filled with the first wave of inductees (Chambers 1987; Keene 2011). There were enlistment restrictions on Central Powers natives and draft exemptions for noncitizens, yet the foreign-born served in higher numbers than their proportion of the prewar population (Keene 2011). Based on his review of questionnaires issued to U.S. World War I veterans in the 1970s, Meigs (1997, 14) noted that 56 percent of the “better educated” respondents enlisted “enthusiastically,” whereas only 41 percent of farmers and laborers reported having

done so. This aligns somewhat with Table 4, where there are fewer farming volunteers (but more blue-collar volunteers) than expected.

Examining these various factors in concert, Table 5 presents logistic models predicting overseas service for linked rank and file prewar farmers, blue-collar workers, and white-collar workers. Farming and second-generation Americans were the most common values for the occupation and nativity variables among North Dakotan veterans; hence their use as the reference categories in this and subsequent models; age is used as a fixed effect throughout. Considering all soldiers in the sample (Models 1–2), single men, blue-collar workers, and volunteers were more likely to serve overseas than those of other prewar marital statuses, occupations, or entry methods. When considered separately, however, different characteristics are significantly predictive for draftees versus for volunteers, with registration county urban population percentage and movement from that county—but not marital status or occupation—being significantly predictive for the latter alone (Model 3 vs. Model 5). Similarly, although duration of service is positively predictive of serving abroad, it is only significantly so for draftees (Model 4 vs. Model 6), for whom it eliminates most of the significance of prewar, civilian predictors. D. Gregory (2015) used the metaphor of a conveyor belt to describe the movement of men during World War I; for the drafted men analyzed in these models, once a man entered military space, military schedules do indeed appear to have been the dominant determinant of which military places he experienced. Given the demonstrated convolutions of entry method and prewar occupation, the outcome models in the next section focus either on draftees or the formerly farming for the sake of clarity.

Table 4. Cross-tabulations of prewar occupation with entry method among linked rank and file soldiers of identifiable prewar occupations

Prewar occupation		Drafted	Volunteered	Total (column %)
Farming	Frequency	2,124	540	2,664
	(row %)	(79.73%)	(20.27%)	(52.68%)
Blue collar	Expected	1,982	682	
	Frequency	810	425	1,235
White collar	(row %)	(65.59%)	(34.41%)	(24.42%)
	Expected	919	316	
Total	Frequency	828	330	1,158
	(row %)	(71.50%)	(28.50%)	(22.90%)
Total	Expected	861	297	
	Frequency	3,762	1,295	5,057
Diagnostics	(column %)	(74.39%)	(25.61%)	(100%)
	Chi-square = 95.18 ($p < 0.0001$), Cramer's $V = 0.1372$			

Outcome Analysis: Occupational Mobility

Table 6 presents a univariate model predicting occupational mobility on the basis of location of military service. Compared to rank and file soldiers who only served domestically, those with experience abroad were 28 percent more likely to have changed occupations between preinduction as recorded in the roster and enumeration in the 1930 census. Narrowed to prewar farming individuals, the subject of Young and Lewis's lyrics, the statistics tell a similar story: Agrarian doughboys were less likely to stay "down on the farm" if they had "seen Patee." The catchy simplicity of this soundbite becomes complicated in more complex models, however.

Focusing on the formerly farming in Table 7, nativity, prewar spatial mobility, and volunteering are all significant predictors of postwar occupational change. Entry method and moving between registration and entry appear to be closely related as adding the former to the model removes the significance of the latter (Models 2–5 vs. Model 1). All things being equal, a volunteer is at least 70 percent more likely to leave farming than a draftee. Narrowing the focus in Table 8 to just those prewar farmers who were drafted, individual prewar civilian factors—having U.S.-born parents, moving between birth and registration—remain significantly and positively predictive of postwar mobility. Proceeding from Table 7 to Table 8, agricultural aspects of civilian place retain a hint of significance (Models 3–4), whereas urban population percentage remains highly significant (Model 5) among draftees. For the drafted subset, however, serving overseas fails to be a significant predictor of farm leaving even at the relatively lax

alpha of $p < 0.1$ (Table 8, Models 2–6).⁸ Resituating formerly farming individuals among their nonfarming contemporaries, Table 9 presents models predicting occupational change for linked draftees of all three prewar occupational groups. Overseas service is but a weakly significant predictor of occupational change ($p < 0.1$); the effect of prewar occupation is both stronger and more significant. Although civilian context interacts significantly with and differentially among occupations, tested interactions of service location with occupation and with urban percentage were insignificant.

Calculating some sample probabilities gives a firmer grasp on these results. Based on Table 9, Model 4, a sedentary second-generation farmer of about average prewar age and marital status (age twenty-three, unmarried), from an average county (12 percent urban), after serving an about average number of months (fourteen) entirely in the United States, would have a 0.4190 probability of leaving farming. If he had exactly the same characteristics except for having served abroad, his probability of changing occupations would rise to 0.4644. If the same individual had been a white-collar worker, however, his probabilities of occupational mobility would have been 0.1745 and 0.2026 after domestic only and overseas service, respectively. For the farming doughboy who had "seen Patee," coming from a more urban registration county (e.g., Grand Forks County, North Dakota's most urban county at 45 percent) would increase his probability of occupational change to 0.5475, but such a civilian context would result in only a 0.1545 probability of leaving a white-collar occupation. Considering differences in multiple variables at once—something only detailed

Table 5. Overseas service as predicted by prewar civilian characteristics, service entry method, and service duration

Among	All linked rank and file soldiers		Draftees		Volunteers	
	(1)	(2)	(3)	(4)	(5)	(6)
Foreign born	-0.0706 (0.114)	-0.0622 (0.117)	-0.0943 (0.124)	-0.196 (0.185)	0.581 (0.547)	0.537 (0.711)
Third generation	0.121 (0.079)	0.0812 (0.080)	0.0993 (0.087)	0.0226 (0.121)	-0.0492 (0.184)	-0.186 (0.234)
Married prewar	-0.578** (0.205)	-0.657** (0.225)	-0.639* (0.260)	-0.239 (0.323)	-0.970 [†] (0.528)	-0.369 (0.679)
Blue collar	0.457*** (0.092)	0.425*** (0.088)	0.425*** (0.101)	0.278 [†] (0.152)	0.379 (0.280)	0.650* (0.298)
White collar	0.0438 (0.094)	-0.00835 (0.097)	0.0579 (0.110)	0.111 (0.129)	-0.353 (0.236)	-0.0652 (0.312)
Moved state, birth to registration	0.129 (0.080)	0.137 (0.088)	0.104 (0.092)	-0.00199 (0.111)	0.306 (0.207)	0.217 (0.284)
Moved county, registration to entry	0.480*** (0.106)	-0.209 (0.137)	-0.0124 (0.127)	-0.0417 (0.164)	-0.814* (0.320)	-0.865* (0.436)
Reg. county % urban	-0.00130 (0.003)	-0.00313 (0.003)	-0.00192 (0.003)	-0.00421 (0.004)	-0.0164** (0.005)	-0.0187** (0.006)
Volunteered		1.594*** (0.174)				
Months in service				1.347*** (0.045)		0.358 [†] (0.193)
Duration squared				-0.0352*** (0.001)		-0.00103 (0.005)
Constant	-0.772 (1.094)	-0.744 (1.331)	0.0145 (1.000)	-10.36*** (0.901)	2.748** (0.926)	-3.579 [†] (2.144)
Observations	4,335	4,335	3,685	3,685	638	638
AIC	5,760.0	5,560.1	4,928.8	2,750.7	608.8	439.1

Note: Reference categories: For nativity, second generation; for prewar occupation, farming. Fixed effect is age. AIC = Akaike's information criterion. Standard errors in parentheses, clustered by county.

[†] $p < 0.10$.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

Table 6. Occupational change of linked rank and file soldiers as predicted by overseas service

Among	Prewar farming, blue-collar, and white-collar individuals	Prewar farming individuals
Overseas service	0.249*** (0.058)	0.315*** (0.078)
Constant	-0.483*** (0.043)	-0.148** (0.056)
Observations	5,057	2,664
AIC	6,848.4	3,680.5

Note: AIC = Akaike's information criterion. Standard errors in parentheses.

** $p < 0.01$.

*** $p < 0.001$.

individual-level data allow—if the sample draftee was a spatially mobile farmer from Grand Forks County who served abroad, he would have a 0.6499

probability of occupational change; if he were instead a domestically serving white-collar worker from Ward County, sedentary all his known life before induction, he would only have a 0.1572 probability of being something else in 1930.

Concluding Discussion

One of the most common narratives of “the war to end all wars” holds that military service utterly changed individuals, wiping away the contours set by their prewar lives (Horne 2019). The effect of service duration on draftees in Table 5 and the simplistic accounting of the predictive power of overseas service in Table 6 might lead one to anticipate a similar story here. For the doughboys examined in this article, however, neither “seeing Pore” nor length of exposure to military places more generally

Table 7. Occupational change as predicted by civilian characteristics and service entry method among formerly farming rank and file soldiers

	(1)	(2)	(3)	(4)	(5)
Foreign born	-0.0139 (0.139)	-0.0163 (0.139)	-0.0233 (0.142)	-0.0258 (0.143)	-0.0121 (0.142)
Third generation	0.483*** (0.097)	0.459*** (0.098)	0.462*** (0.112)	0.464*** (0.112)	0.459*** (0.109)
Married prewar	0.420 (0.309)	0.400 (0.310)	0.390 (0.298)	0.390 (0.298)	0.407 (0.306)
Moved state, birth to registration	0.331*** (0.097)	0.331*** (0.097)	0.414*** (0.089)	0.425*** (0.095)	0.350*** (0.079)
Moved county, registration to entry	0.420** (0.130)	0.156 (0.150)	0.180 (0.144)	0.175 (0.145)	0.156 (0.145)
Volunteered		0.559*** (0.156)	0.546** (0.184)	0.551** (0.184)	0.531** (0.186)
Reg. county average farm value (\$ in thousands)			0.0253* (0.011)		
Reg. county % farms tenant operated				0.0136* (0.007)	
Reg. county % urban					0.0109*** (0.003)
Constant	-0.556 (0.834)	-0.506 (0.828)	-0.884 (0.707)	-0.837 (0.700)	-0.716 (0.700)
Observations	2,370	2,370	2,370	2,370	2,370
AIC	3,235.5	3,224.4	3,218.7	3,216.9	3,211.0

Note: Reference categories: For nativity, second generation. Fixed effect is age. AIC – Akaike’s information criterion. Standard errors in parentheses, clustered by county in Models 3 through 5.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

was significantly predictive of occupational change by 1930 at the conventional alpha of $p < 0.05$ when other factors are taken into account. Perhaps as Kennedy (2004) posited for members of the American Expeditionary Forces in general, these North Dakota soldiers did not spend enough time living and dying in the trenches of France to absorb the full effects of this emplaced experience on their bodies and psyches. Perhaps service abroad had but short-term influence on personal economic circumstances: impermanent impacts uncapturable with the available data. In any case, whatever shocks were inherent in serving overseas in the American Expeditionary Forces during World War I, it seems they were insufficient to dislodge the apparent effects of prewar conditions on the measured outcome. In terms of statistical if not rhetorical significance, other factors including the context of one’s registration county—that is, exposure to civilian places—superseded service location’s importance for these military men. Although the idea of the Great War as a watershed has recently been productively

reinvigorated in studies examining cultural revolutions and demographic upheavals (Rohrbasser 2014; Ekbladh 2017), the results here suggest that the warning of a previous scholarly generation (e.g., Hynes 1991; Winter 2006) against an overemphasis on breaks and binaries is still valid. Bulmer and Jackson (2016, 29) argued that critical military studies have persistently and problematically tended to “pathologize [and] fragment” veterans’ experiences. Examining these linked veterans over the *longue durée*, considering both the civilian and military aspects of their life courses, instead suggests continuity.

In working at the level of individuals and measuring relationships between individual and place characteristics, it is easier to appreciate differences among soldiers. As Table 9 and the exercise with sample probabilities show, overseas service opened up a wider (albeit statistically insignificant) gap among farmers than it did among white-collar workers, and increasing urbanity of origin place had opposite effects on these two occupational groups.

Table 8. Occupational change as predicted by civilian and military characteristics among formerly farming rank and file draftees

	(1)	(2)	(3)	(4)	(5)	(6)
Foreign born	0.00360 (0.147)	0.0147 (0.147)	0.00685 (0.160)	0.00492 (0.161)	0.0219 (0.159)	0.0140 (0.161)
Third generation	0.501*** (0.104)	0.501*** (0.105)	0.503*** (0.118)	0.505*** (0.119)	0.500*** (0.116)	0.502*** (0.116)
Married prewar	0.487 (0.336)	0.515 (0.336)	0.497 (0.351)	0.500 (0.351)	0.522 (0.356)	0.512 (0.356)
Moved state, birth to registration	0.315** (0.103)	0.311** (0.103)	0.388*** (0.090)	0.395*** (0.097)	0.332*** (0.077)	0.392*** (0.096)
Moved county, registration to entry	0.205 (0.186)	0.202 (0.187)	0.220 (0.159)	0.214 (0.159)	0.158 (0.154)	0.170 (0.155)
Months in service		0.0705 [†] (0.040)	0.0714 (0.048)	0.0723 (0.049)	0.0680 (0.049)	0.0697 (0.049)
Duration squared		-0.00286* (0.001)	-0.00289 [†] (0.002)	-0.00291 [†] (0.002)	-0.00280 [†] (0.002)	-0.00285 [†] (0.002)
Overseas		0.148 (0.125)	0.145 (0.156)	0.146 (0.157)	0.157 (0.156)	0.155 (0.158)
Reg. county average farm value (\$ in thousands)			0.0235 [†] (0.012)			-0.00676 (0.031)
Reg. county % farms tenant operated				0.0123 [†] (0.007)		0.0122 (0.017)
Reg. county % urban					0.0106*** (0.003)	0.00958** (0.003)
Constant	-0.515 (0.831)	-0.939 (0.868)	-1.291 (0.901)	-1.248 (0.895)	-1.119 (0.881)	-1.307 (0.925)
Observations	2,100	2,100	2,100	2,100	2,100	2,100
AIC	2,870.6	2,868.3	2,864.3	2,863.3	2,857.8	2,857.8

Note: Reference categories: For nativity, second generation. Fixed effect is age. AIC = Akaike's information criterion. Standard errors in parentheses, clustered by county in Models 3 through 6.

[†] $p < 0.10$.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

Examining veterans of other U.S. wars, scholars have suggested that military service could leverage spatial and social mobility, the exposure to foreign locales, domestic metropolises, and individuals of other backgrounds providing an eye-opening experience for naive, young recruits (MacLean and Elder 2007; Lee 2012; Gabriel 2016). A similar mechanism might have already been in play for those farming individuals who came from counties that were already more urbanized in 1910. The apparent influence of place was not strictly deterministic: Not only did different types of men have different responses—if they responded at all—but there was also room in the system for individual agency. Although inducted soldiers might not have been able to get off of D. Gregory's (2015) wartime conveyor belt, North Dakotans were, to some degree, able to decide when and how to get on and this was

predictive of later economic decisions: There was a significant positive relationship between volunteering to start a military occupation and choosing to start a nonfarming one.

As the cross-tabulations in Tables 3 and 4 show, North Dakota's roster data capture and conform to some broadly known patterns of occupation, volunteerism, and World War I service characteristics, but the regression models built on these data demonstrate the importance of understanding these characteristics not only in relationship with each other but also as "situated in historical processes within particular places" (Tyner 2009, 7). The rural studied here is not the timeless pastoral idyll described by the exhaustively cited British war poets and still mobilized in British recruitment symbology (Woodward 2000; D. Gregory 2016). It is not even the rural described by U.S., largely urban, contemporaries,

Table 9. Occupational change as predicted by civilian and military characteristics among formerly farming, blue-collar, or white-collar rank and file draftees

	(1)	(2)	(3)	(4)
Foreign born	0.00766 (0.111)	0.00427 (0.111)	0.0106 (0.111)	0.0138 (0.110)
Third generation	0.249** (0.078)	0.246** (0.077)	0.246** (0.077)	0.245** (0.077)
Married prewar	0.181 (0.216)	0.211 (0.217)	0.217 (0.220)	0.205 (0.224)
Blue collar	-0.257* (0.113)	-0.271* (0.111)	-0.278* (0.111)	-0.0892 (0.147)
White collar	-1.211*** (0.131)	-1.212*** (0.129)	-1.217*** (0.129)	-0.986*** (0.133)
Moved state, birth to registration	0.272** (0.084)	0.268** (0.084)	0.268** (0.083)	0.273*** (0.083)
Moved county, registration to entry	0.166 (0.109)	0.174 (0.112)	0.167 (0.111)	0.155 (0.111)
Reg. county % urban	0.00151 (0.002)	0.00152 (0.002)	0.00159 (0.002)	0.0101** (0.003)
Months in service		0.0576 [†] (0.034)	0.0307 (0.039)	0.0286 (0.039)
Duration squared		-0.00178 (0.001)	-0.00116 (0.001)	-0.00110 (0.001)
Overseas			0.182 [†] (0.105)	0.184 [†] (0.105)
Blue-collar # reg. county % urban				-0.0157** (0.005)
White-collar # reg. county % urban				-0.0201*** (0.006)
Constant	0.266 (0.483)	0.158 (0.492)	0.217 (0.492)	0.223 (0.525)
Observations	3,723	3,723	3,723	3,723
AIC	4,810.2	4,808.4	4,806.9	4,793.8

Note: Reference categories: For nativity, second generation; for prewar occupation, farming. Fixed effect is age. AIC = Akaike's information criterion. Standard errors in parentheses, clustered by county.

[†] $p < 0.10$.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

who romanticized the agrarian heartland and the western frontier as the forge of the true national character and who looked on nostalgically at their supposedly inexorable decline (Trout 1999; Stock 2014; J. G. Casey 2017). The northern Great Plains in the era of the Great War was rather “a post-industrial commercial frontier,” a rural region grappling with the leading edge of agricultural modernization, accelerated by the conditions of the war itself (Danbom 2017, 135). North Dakota was a place where farm leaving could result in personal prosperity rather than declension (Kaye 2011) and where, as evidenced by this article's models, that occupational shift might have been shaped more definitively by localized urban opportunities than by more

agricultural markers of the region's rural volatility like high farm values and tenancy rates.

Critical military and Great War scholarship have been marked by unease with if not aversion to (particularly government-produced) statistical data and quantitative methods, with such resources often being seen as tainted by their association with instruments of state or military power or as incapable of conveying the richness of personal embodied experience (Wilson 2012; Kinder 2015; Dyvik and Greenwood 2016; Rech et al. 2016). These criticisms are not without merit (Association of American Geographers Geography and Military Study Committee 2017). Forsyth (2019, 5) contended, however, that turning away from quantitative

methods was an important factor in leaving traditional military geographies “unscrutinised” in the first place, and I. N. Gregory (2008) argued that application of appropriate statistical methods to appropriately detailed data can highlight rather than homogenize nuances and contingencies arising from historical difference. The analyses presented here, enabled by spatiotemporally located big historical microdata, showcase the diversity of individuals. They highlight the usefulness of historical case studies to investigate the interplay of structure and agent in the formation of military geographies and to examine the particularity of networked places shaped by the residues of past connections (Bernazzoli and Flint 2009; Forsyth 2019). Inspired by work in phenomenology and social theory, these analyses advance critical military geographies objectives, interrogating the individual agent who is constituted through his disruption of the dichotomy of military and civilian space. This article’s findings do not erase the rhetorical resonance of the home–front, domestic–overseas, or indeed urban–rural divides, nor do they prove that these dualities were not influential in other, nonquantitative but still important ways. Rather, such statistical work complements critical cultural studies’ interest in the embodied, emplaced individual, demonstrating that discourse can obscure material differences among subpopulations even as it identifies them as a locus of popular concern. Especially as the entanglement of (particular manifestations of) the rural and the military continue to have measurable effects on living veterans, it is all the more important for critical military geographies to adopt a “methodological pluralism” in studying the recursive individual–place relationships that create them (Woodward 2019, 3; Holder 2017).

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Notes

1. *Doughboy* was a nickname given to U.S. soldiers who served in World War I, akin to the British *Tommy* or French *poilu*.
2. Although some other nations’ armies made similarly long journeys, much higher percentages of those forces reached the battlefields, landscapes that, due to three years of co-constitutive interaction with soldiers from Europe and its far-flung empires, had become very different places by the time the Americans arrived (Zieger 2000).
3. Derived from the census on the basis of age, age of marriage, and current marital status.
4. This paragraph’s population figures are calculated from IPUMS-provided anonymized census data (Ruggles et al. 2020). South and Midwest are as defined by the U.S. Census Bureau.
5. The roster does not record race, and less than 1 percent of linked doughboys were enumerated by the census as non-White, preventing analysis of a factor that previous research has shown powerfully influenced Great War soldiers’ experiences and outcomes (Chambers 1987; Keene 2011; Doetsch 2012).
6. For the entire United States, the sex ratio for people twenty and older was 1.10, 30 percent of adult males had never been married, and the average age of adult men was 39.3.
7. These cross-tabulations are performed on the same linked rank and file soldiers used in the outcome models, but cross-tabulations run on all rank and file soldiers in the roster produce similar results.
8. In similar models run on just formerly farming volunteers no predictors were significant.

References

- Abramitzky, R., A. Delavande, and L. Vasconcelos. 2011. Marrying up: The role of sex ratio in assortative matching. *American Economic Journal: Applied Economics* 3 (3):124–57. doi: 10.1257/app.3.3.124.
- Arlington National Cemetery. n.d. Tomb of the unknown soldier. Accessed November 6, 2018. <https://www.arlingtoncemetery.mil/Explore/Tomb-of-the-Unknown-Soldier>.
- Association of American Geographers Geography and Military Study Committee. 2017. Final report on geography and engagement with the military: Issues, status, findings. Association of American Geographers, Washington, DC. <http://www.aag.org/>

- galleries/governance/Final_Geography_and_Engagement_with_the_Military_022719.pdf.
- Bailey, A. J. 2009. Population geography: Lifecourse matters. *Progress in Human Geography* 33 (3):407–18. doi: 10.1177/0309132508096355.
- Bailey, M., C. Cole, M. Henderson, and C. Massey. 2017. How well do automated linking methods perform? Lessons from U.S. historical data. No. w24019; p. w24019, National Bureau of Economic Research, Cambridge, MA. doi: 10.3386/w24019.
- Bailey, M., C. Cole, and C. Massey. 2020. Simple strategies for improving inference with linked data: A case study of the 1850–1930 IPUMS linked representative historical samples. *Historical Methods* 53 (2):80–93. doi: 10.1080/01615440.2019.1630343.
- Bernazzoli, R. M., and C. Flint. 2009. Power, place, and militarism: Toward a comparative geographic analysis of militarization. *Geography Compass* 3 (1):393–411. doi: 10.1111/j.1749-8198.2008.00194.x.
- Blanke, D. 2002. *The 1910s*. Westport, CT: Greenwood.
- Bulmer, S., and D. Jackson. 2016. “You do not live in my skin”: Embodiment, voice, and the veteran. *Critical Military Studies* 2 (1–2):25–40. doi: 10.1080/23337486.2015.1118799.
- Burchell, M. 2013. Skillful movements: The evolving commando. In *Bodies in conflict: Corporeality, materiality, and transformation*, ed. P. Cornish and N. J. Saunders, 208–18. London and New York: Routledge.
- Buzar, S., P. E. Ogden, and R. Hall. 2005. Households matter: The quiet demography of urban transformation. *Progress in Human Geography* 29 (4):413–36. doi: 10.1191/0309132505ph558oa.
- Capozzola, C. 2014. Legacies for citizenship: Pinpointing Americans during and after World War I. *Diplomatic History* 38 (4):713–26. doi: 10.1093/dh/dhu041.
- Capozzola, C., A. Huebner, J. Irwin, J. D. Keene, R. Kennedy, M. Neiberg, S. R. Ortiz, C. Williams, and J. Winter. 2015. Interchange: World War I. *Journal of American History* 102 (2):463–99. doi: 10.1093/jahist/jav474.
- Casey, E. S. 2001. Between geography and philosophy: What does it mean to be in the place-world? *Annals of the Association of American Geographers* 91 (4):683–93. doi: 10.1111/0004-5608.00266.
- Casey, J. G. 2017. The country: Myth and reality, affirmation and reform. In *American literature in transition, 1910–1920*, ed. M. W. V. Wienen, 31–43. Cambridge, UK: Cambridge University Press.
- Chambers, J. W. 1987. *To raise an army: The draft comes to modern America*. New York: The Free Press.
- Coffman, E. M. 1998. *The war to end all wars: The American military experience in World War I*. Lexington: University Press of Kentucky.
- Connor, D. S. 2019. The cream of the crop? Geography, networks, and Irish migrant selection in the age of mass migration. *The Journal of Economic History* 79 (1):139–75. doi: 10.1017/S0022050718000682.
- Cronier, E. 2004. Leave and schizophrenia: *Permissionaires* in Paris during the First World War. In *Uncovered fields: Perspectives in First World War studies*, ed. J. Macleod and P. Purseigle, 125–41. Leiden, The Netherlands: Brill.
- Cunningham, A. R. 2018. After “it’s over Over There”: Using record linkage to enable the reconstruction of World War I veterans’ demography from soldiers’ experiences to civilian populations. *Historical Methods: A Journal of Quantitative and Interdisciplinary History* 51 (4):203–29. doi: 10.1080/01615440.2018.1510351.
- Danbom, D. B. 2017. *Born in the country: A history of rural America*. 3rd ed. Baltimore, MD: Johns Hopkins University Press.
- Dickson, P., and T. B. Allen. 2004. *The bonus army: An American epic*. New York: Walker and Company.
- Doetsch, E. 2012. Veteran status, race, and labor mobility in the United States. PhD diss., University of Utah. <http://content.lib.utah.edu/cdm/ref/collection/etd3/id/641>.
- Dyvik, S. L., and L. Greenwood. 2016. Embodying militarism: Exploring the spaces and bodies in-between. *Critical Military Studies* 2 (1–2):1–6. doi: 10.1080/23337486.2016.1184469.
- Ekbladh, D. K. 2017. Introduction. In *Beyond 1917: The United States and the global legacies of the Great War*, ed. T. W. Zeiler, D. K. Ekbladh, and B. C. Montoya, 1–9. New York: Oxford University Press.
- Ellsworth, C. S. 1960. Theodore Roosevelt’s Country Life Commission. *Agricultural History* 34 (4):155–72.
- Eriksson, B. 2015. Dynamic decades: A micro perspective on late nineteenth century Sweden. PhD diss., Lund University. <http://lup.lub.lu.se/record/7851903>.
- Ermacora, M. 2015. Rural society. In *1914–1918-online: International Encyclopedia of the First World War*, ed. U. Daniel, P. Gatrell, O. Janz, H. Jones, J. Keene, A. Kramer, and B. Nasson. Berlin: Freie Universität Berlin. https://encyclopedia.1914-1918-online.net/article/rural_society.
- Ferrie, J. P. 1996. A new sample of males linked from the Public Use Microdata Sample of the 1850 U.S. federal census. *Historical Methods: A Journal of Quantitative and Interdisciplinary History* 29 (4):141–57. doi: 10.1080/01615440.1996.10112735.
- Fleming, T. J. 2003. *The illusion of victory: America in World War I*. New York: Basic Books.
- Ford, N. G. 2005. Labor. In *Americans at war*, ed. J. P. Resch, vol. 3, 91–93. Detroit, MI: Macmillan Reference.
- Forsyth, I. 2019. A genealogy of military geographies: Complicities, entanglements, and legacies. *Geography Compass* 13 (3):e12422. doi: 10.1111/gec3.12422.
- Fraser, A. 1931. *Roster of the men and women who served in the Army or Naval Service (including the Marine Corps) of the United States or its allies from the state of North Dakota in the World War, 1917–1918*. Vols. 1–4. Bismarck, ND: The Bismarck Tribune Company. <http://catalog.hathitrust.org/Record/008230948>.
- Gabriel, P. E. 2016. The doughboy premium: An empirical assessment of the relative wages of American veterans of World War I. *Applied Economics Letters* 23 (2):93–96. doi: 10.1080/13504851.2015.1051652.
- Gardner, B. L. 2006. *American agriculture in the twentieth century: How it flourished and what it cost*. Cambridge, MA: Harvard University Press.
- Gregory, D. 2015. Journeys from “No Man’s Land,” 1914–1918. Paper presented at the Association of

- American Geographers Conference, Chicago, IL, April 23. <http://app.core-apps.com/aagam2015/event/b969a7dd7de761b66bad828d8d1134c8?>
- Gregory, D. 2016. The natures of war. *Antipode* 48 (1):3–56. doi: 10.1111/anti.12173.
- Gregory, I. N. 2008. "A map is just a bad graph": Why spatial statistics are important in historical GIS. In *Placing history: How maps, spatial data and GIS are changing historical scholarship*, ed. A. K. Knowles, 123–49. Redlands, CA: ESRI Press.
- Gutmann, M. P., S. M. Pullum-Piñón, K. Witkowski, G. D. Deane, and E. Merchant. 2012. Land use and family formation in the settlement of the U.S. Great Plains. *Social Science History* 36 (3):279–310. doi: 10.1017/S0145553200011834.
- Hachey, R. L. 1993. Dissent in the Upper Middle West during the First World War, 1917–1918. PhD diss., Marquette University.
- Haines, M. R., P. V. Fishback, and P. W. Rhode. 2016. *United States agricultural data, 1840–2012*. Ann Arbor, MI: Inter-University Consortium for Political and Social Research. doi: 10.3886/ICPSR35206.v4.
- Harris, B. 1993. The demographic impact of the First World War: An anthropometric perspective. *Social History of Medicine: The Journal of the Society for the Social History of Medicine* 6 (3):343–66. doi: 10.1093/shm/6.3.343.
- Herman, A., and R. Yarwood. 2014. From services to civilian: The geographies of veterans' post-military lives. *Geoforum* 53:41–50. doi: 10.1016/j.geoforum.2014.02.001.
- Higbie, T. 1997. Indispensable outcasts: Harvest laborers in the wheat belt of the Middle West, 1890–1925. *Labor History* 38 (4):393–412. doi: 10.1080/00236649712331387194.
- Holder, K. A. 2017. Veterans in rural America: 2011–2015. No. ACS-36, U.S. Census Bureau, Washington, DC. <https://www.census.gov/content/dam/Census/library/publications/2017/acs/acs-36.pdf>.
- Holsinger, M. P., ed. 1999. *War and American popular culture: A historical encyclopedia*. Westport, CT: Greenwood.
- Horne, J. 2019. End of a paradigm? The cultural history of the Great War. *Past & Present* 242 (1):155–92. doi: 10.1093/pastj/gty039.
- Hynes, S. 1991. *A war imagined: The First World War and English culture*. New York: Maxwell Macmillian International.
- In the Heart of the Great War. 2017. The individual at the crossroads between the civilian and military worlds. Accessed April 16, 2017. <https://intheheartofthegreatwar.wordpress.com/>.
- Inwood, K., and J. A. Ross. 2016. Big data and the military: First World War personnel records in Australia, Britain, Canada, New Zealand and British Africa. *Australian Historical Studies* 47 (3):430–42. doi: 10.1080/1031461X.2016.1205639.
- James, P. 2009. Introduction: Reading World War I posters. In *Picture this: World War I posters and visual culture*, ed. P. James, 1–36. Lincoln: University of Nebraska Press.
- Kaye, F. W. 2011. *Goodlands: A meditation and history on the Great Plains*. Edmonton, AB, Canada: Athabasca University Press.
- Keene, J. 2011. *World War I: The American soldier experience*. Lincoln: Bison Books.
- Keene, J. 2015. A "brutalizing" war? The USA after the First World War. *Journal of Contemporary History* 50 (1):78–99. doi: 10.1177/0022009414546506.
- Keith, J. 2004. *Rich man's war, poor man's fight: Race, class, and power in the rural south during the First World War*. Chapel Hill: The University of North Carolina Press.
- Kennedy, D. M. 2004. *Over here: The First World War and American society*. Oxford, UK: Oxford University Press.
- Kinder, J. M. 2015. *Paying with their bodies: American war and the problem of the disabled veteran*. Chicago: The University of Chicago Press.
- Kinkaid, E. 2020. Re-encountering Lefebvre: Toward a critical phenomenology of social space. *Environment and Planning D: Society and Space* 38 (1):167–86. doi: 10.1177/0263775819854765.
- Laschever, R. A. 2013. The doughboys network: Social interactions and the employment of World War I veterans. *SSRN Electronic Journal*. doi: 10.2139/ssrn.1205543.
- Lee, C. 2012. Military service and economic mobility: Evidence from the American Civil War. *Explorations in Economic History* 49 (3):367–79. doi: 10.1016/j.eeh.2012.03.001.
- MacLean, A., and G. H. Elder. 2007. Military service in the life course. *Annual Review of Sociology* 33 (1):175–96. doi: 10.1146/annurev.soc.33.040406.131710.
- Manson, S., J. Schroeder, D. Van Riper, and S. Ruggles. 2017. *IPUMS national historical geographic information system* [Database]. Version 12. Minneapolis: University of Minnesota. doi: 10.18128/D050.V12.0.
- McCalman, J., R. Kippen, J. McMeeken, J. Hopper, and M. Reade. 2019. Early results from the "Diggers to Veterans" longitudinal study of Australian men who served in the First World War: Short- and long-term mortality of early enlistees. *Historical Life Course Studies* 9:52–72.
- McGeachan, C. 2014. Historical geography: What remains? *Progress in Human Geography* 38 (6):824–37. doi: 10.1177/0309132514546449.
- Meigs, M. 1997. *Optimism at Armageddon: Voices of American participants in the First World War*. New York: New York University Press.
- Minnesota Population Center. n.d. IPUMS-USA: descr: URBAN. Accessed August 17, 2019. https://usa.ipums.org/usa-action/variables/URBAN#description_section.
- Newcomb, J. T. 2017. The city: Modern poetics and metropolitan life. In *American literature in transition, 1910–1920*, ed. M. W. V. Wienen, 16–30. Cambridge, UK: Cambridge University Press.
- Offer, A. 1989. *The First World War: An agrarian interpretation*. Oxford, UK: Oxford University Press.
- Pasternak, J., and A. Fields. 1919. *How ya gonna keep 'em down on the farm? (After they've seen Patee?)* [Phonograph]. Camden, NJ: Victor. Library of

- Congress National Jukebox. <https://www.loc.gov/item/jukebox-31568/>.
- Peters, S. J., and P. A. Morgan. 2004. The Country Life Commission: Reconsidering a milestone in American agricultural history. *Agricultural History* 78 (3):289–316. doi: 10.1525/ah.2004.78.3.289.
- Rech, M., D. Bos, K. N. Jenkins, A. Williams, and R. Woodward. 2015. Geography, military geography, and critical military studies. *Critical Military Studies* 1 (1):47–60. doi: 10.1080/23337486.2014.963416.
- Rech, M., K. N. Jenkins, A. J. Williams, and R. Woodward. 2016. An introduction to military research methods. In *The Routledge companion to military research methods*, ed. A. J. Williams, N. Jenkins, R. Woodward, and M. F. Rech, 1–17. London and New York: Routledge.
- Rietzler, K. 2017. The war as history: Writing the economic and social history of the First World War. In *Beyond 1917: The United States and the global legacies of the Great War*, ed. T. W. Zeiler, D. K. Ekbladh, and B. C. Montoya, 36–53. New York: Oxford University Press.
- Rohrbasser, J.-M., ed. 2014. *Bouleversements démographiques de la grande guerre* [Demographic upheavals of the Great War]. Paris: INED.
- Ruggles, S. 2014. Big microdata for population research. *Demography* 51 (1):287–97. doi: 10.1007/s13524-013-0240-2.
- Ruggles, S., S. Flood, R. Goeken, J. Grover, E. Meyer, J. Pacas, and M. Sobek. 2020. *IPUMS USA* [Database]. Version 10. Minneapolis, MN: IPUMS. doi: 10.18128/D010.V10.0.
- Ruggles, S., S. Genadek, K. R. Goeken, J. Grover, and M. Sobek. 2013. *IPUMS restricted complete count data* [Database]. Version 1.0. Minneapolis: University of Minnesota.
- Saloutos, T., and J. D. Hicks. 1951. *Twentieth-century populism: Agricultural discontent in the Middle West 1900–1939*. Lincoln: University of Nebraska Press.
- Smith, K., A. Fraser, H. A. Hanson, and D. L. Reed. 2015. Life course epidemiology and linking historic records: The case of World War I records and the Utah population. Paper presented at the Social Science History Association Conference, Baltimore, MD, November 15.
- Stock, C. M. 2014. Making war their business: The short history of populist anti-militarism. *The Journal of the Gilded Age and Progressive Era* 13 (3):387–99. doi: 10.1017/S1537781414000255.
- Sylvester, K. M., and M. P. Gutmann. 2008. Changing agrarian landscapes across America a comparative perspective. In *Agrarian landscapes in transition: Comparisons of long-term ecological and cultural change*, ed. C. L. Redman and D. R. Foster, 16–43. Oxford, UK: Oxford University Press.
- Top songs of 1919. n.d. Music VF, US & UK hits charts. Accessed September 10, 2017. http://www.musicvf.com/top_songs_of_1919.
- Trout, S. 1999. Willa Cather's *One of Ours* and the iconography of remembrance. In *Cather studies: Willa Cather's Canadian and old world connections*, ed. R. Thacker and M. A. Peterman, Vol. 4, 187–204. Lincoln: University of Nebraska Press.
- Tweton, D. J., and T. B. Jelliff. 1976. *North Dakota: The heritage of a people*. Fargo: North Dakota Institute for Regional Studies.
- Tyner, J. A. 2009. *War, violence and population: Making the body count*. New York: Guilford.
- U.S. Census Bureau. 2017. 1930 Instructions. Accessed December 13, 2018. https://www.census.gov/history/www/through_the_decades/census_instructions/1930_instructions.html.
- U.S. National Archives and Records Administration. n.d. The 1973 fire. Accessed April 10, 2014. <http://www.archives.gov/st-louis/military-personnel/fire-1973.html>.
- Voth, H.-J. 1995. Civilian health during WWI and the causes of German defeat: A reexamination of the Winter hypothesis. *Annales de Démographie Historique* 1995 (1):291–307. doi: 10.3406/adh.1995.1903.
- Whalan, M. 2019. The culture of fear in World War One. *Reviews in American History* 47 (4):613–21. doi: 10.1353/rah.2019.0085.
- Wilson, R. J. 2012. *Landscapes of the Western Front: Materiality during the Great War*. London and New York: Routledge.
- Winter, J. 2006. *Remembering war: The great war between memory and history in the twentieth century*. New Haven, CT: Yale University Press.
- Woodward, R. 2000. Warrior heroes and little green men: Soldiers, military training, and the construction of rural masculinities. *Rural Sociology* 65 (4):640–57. doi: 10.1111/j.1549-0831.2000.tb00048.x.
- Woodward, R. 2014. Military landscapes agendas and approaches for future research. *Progress in Human Geography* 38 (1):40–61. doi: 10.1177/0309132513493219.
- Woodward, R. 2019. Introduction: A research agenda for military geography. In *A research agenda for military geography*, ed. R. Woodward, 1–9. Northampton, UK: Edward Elgar.
- Young, J., S. Lewis, and W. Donaldson. 1919. *How ya gonna keep 'em down on the farm? (After they've seen Patee?)* [Notated sheet music]. New York: Waterson, Bernstein & Snyder.
- Zieger, R. 2000. *America's Great War: World War I and the American experience*. New York: Rowman & Littlefield.

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