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AJS. 2004 November ; 110(3): 761–793. doi:10.1086/422662.**World War II Mobilization in Men's Work Lives: Continuity or Disruption for the Middle Class?¹****Aimée R. Dechter** and

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Abstract

The labor needs of World War II fueled a growing demand for both military and war industry personnel. This longitudinal study investigates mobilization into these competing activities and their work life effects among men from the middle class. Hazard estimates show significant differences in wartime activities across occupations, apart from other deferment criteria. By war's end, critical employment, in contrast to military service, is positively associated with supervisory responsibility for younger men and with occupation change. This employment does not predict postwar career advancement up to the 1970s. By comparison, men who were officers had a "pipeline" to advancement after the war, whereas other service men fared worse than nonveterans.

INTRODUCTION

During World War II, labor mobilization under state directive reached a new high for Americans in response to the urgent need for military personnel and the soaring demand for greater war production on the home front. In this competition for scarce human resources, the government designed policies (Selective Service System 1947*a*, 1947*b*) to address the multiple and conflicting manpower needs of the armed forces and the economy. These policies were guided by the twin goals of rapidly expanding military personnel and generating a sufficient civilian workforce with expertise necessary for war production on the home front. All of this occurred with an eye to maintaining a basic standard of living on the domestic front.

Research on wartime mobilization has focused on the implications of either military service or, to a much lesser degree, work-related activities on the home front. However, the two processes are interrelated. The overlapping manpower needs of industry, government

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agencies, and the armed forces were played out in the War Manpower Commission and the Selective Service System. The commission, incorporated into the Department of Labor in 1945, was responsible for planning and supervising the recruitment, training, and distribution of workers in the face of the essential domestic labor shortage. The Selective Service System was responsible for administering the draft and determining liability for military service through the coordination of Selective Service boards.

Both the War Manpower Commission and the Selective Service System used occupation, along with other considerations (e.g., age, family/dependency status, health), as a criterion for role assignment (Flynn 1979, pp. 1–55; Selective Service System 1947*b*). Occupation-based skills varied in how they could be used by the armed forces and on the home front, and thus they were defined by war manpower policies in ways that could lead to different fields of service (Fairchild and Grossman 1959). Given the state's disparate goals, the inevitable gaps between policy ideas and their implementation, and the informal processes of recruitment at the local level, the relevance of prewar occupation for wartime experiences has remained largely unknown.

The scope of mobilization left few households untouched by military service or by home front needs. Military recruitment clearly disrupted the ordinary flow of lives and community activities, as did the mobilization of workers into essential war industries, such as shipyards, aircraft factories, and munitions plants. Whether through voluntary action, the military draft, or war-industry employment, mass mobilization pulled men and women out of conventional pursuits of all kinds. Most in-depth studies of World War II mobilization have explored the impact of military service on the lives of disadvantaged men (e.g., Sampson and Laub 1996) and the process by which manpower mobilization channeled women, the no-nemployed, and minorities into war roles (Modell, Goulden, and Magnusson 1989; Modell and Haggerty 1991; Campbell 1984; Kesselman 1990).

By contrast, the focus of this study is on the wartime mobilization of men with professional and other white-collar occupations. Men who occupied these occupations in 1940–41 represented one-fourth of the adult male population (U.S. Department of Commerce 1943, p. 7). They provided essential expertise to both war production and military operations. Further departing from previous research on World War II and work lives, we ask how important these occupations were in sorting men into the two competing sectors, the armed forces *and* war production on the home front. What was the relationship between war production work and the likelihood of induction (e.g., is there evidence that the former may have forestalled military service?), and what were the implications of these two kinds of wartime service for men's postwar work life? Did they depend on the experiences men had on the home front and in the military, such as combat exposure and serving as an officer?

To address these questions, we use theoretical writings that link state action and the life course (Mayer 1986; Mayer and Müller 1986). The competing demands of the armed forces and the home front are analyzed as competing risk hazard models of employment in essential war industries and military induction so that occupational differences in one risk are not confounded by occupational differences in the other. We also analyze how these wartime experiences, as well as combat and officer status, differ as to the odds of being a

supervisor after demobilization (taking into account supervisory status before the war), having a different occupation than the one before the war, and holding a late career job that represented a significant advancement over the postwar job, taking into account prewar work life and marital status.

Our data come from the Stanford-Terman Longitudinal Study, a long-term panel of men with high ability, most of whom either held professional and other white-collar jobs or were in school at the start of the war. The vast majority were born between January 1, 1900, and December 31, 1920, and first interviewed in 1922, when most were in school in California. They were followed over 12 additional waves spanning 70 years (Holahan and Sears 1995). This design enables us to study how war mobilization influenced men who occupied different life stages at the time. The archive provides a rare opportunity to investigate war mobilization on the home front because it is based on a sample in California, where there was a high concentration of army bases and ports, shipyards, and munitions plants. Despite a tidal wave of new workers from other parts of the country (Nash 1990; Foster 1989; and Johnson 1993), competition for manpower was most acute in California.

Linking Manpower Mobilization and Men's Work Lives

In ordinary times, the long hand of the state regulates life course events and activities of the individual by legalizing, defining, and standardizing points of entry and exit for education, work, family, and health. "In doing so the state turns these transitions into strongly demarcated public events and acts as gatekeeper and sorter" (Mayer 1986, p. 167). Of course, state regulation over the life course varies across contexts and circumstances. The advent of socialism in Eastern Europe, for example, brought greater state regulation of the allocation of individuals to occupations.

Wartime circumstances also accentuate state regulation of the life course: a process that Sorokin (1942) called one of the strongest "inductive generalizations in history." During World War II this occurred through diverse agencies and mechanisms, such as the nationwide rationing of foodstuffs and essential commodities that was set in motion and managed by the Office of Price Administration. Apart from the tragic internment of Japanese-Americans, the superordinate power of the state in wartime was especially evident through the manpower policies and deferments of the Selective Service System and the decisions of local draft boards.

Under the direction of the president, a civilian agency administered the Selective Service System. Although it operated at the national level, its manpower policies were enacted through the decisions of local draft boards, which prescribed lines of service in addition to carrying out the registration and delivery of draftees. Selective Service policies and deferments established priorities for draft board assignments to the armed forces and war industries. The actions of these local draft boards presumably shaped the wartime experiences and work lives of men, though, as Mayer and Schoepflin (1989, p. 190) have concluded, "almost no direct empirical link exists between state organization and activities on the one hand and the trajectories of individual lives on the other hand."

The Competing Demands of War

The role of the national state during World War II expanded dramatically through an insatiable demand for military technologies, from new aircraft and ships to munitions and medical innovations. With higher priorities for accelerated task completion, relying solely upon civilian oversight and market forces was not sufficient. State management was needed to allocate scarce human and material resources in an optimal way. Dozens of agencies stepped in, coordinated mainly by the Office for Emergency Management. The government placed greater emphasis on control over research and development (Baron, Dobbin, and Jennings 1986) and in 1941 established the Office of Scientific Research and Development. The mission of this office was to develop new equipment and see that it came into usage by various means, such as contracting for the development of new weapons, most notably the atomic bomb. As the technical needs of the military increased, state managers began to exert even greater power, dominating the production process as a whole (Mann 1988; Hooks and McLauchlan 1992, p. 762; McLauchlan 1997; Feagin and Riddell 1990). The pursuit of military technology had become a significant component of state making.

As orders for war goods soared, signs of the Great Depression faded away. The large sector of unemployment had virtually ended, and the economy was booming. An economist observed that the economy's increasing vitality resembled blood flowing "back into the blanched face of a person who had fainted" (Mitchell 1947, p. 37). Cajoled and coerced by government, business expanded production to meet the ever-greater need for war supplies. Nevertheless, as in other wars, mobilization involved "complex and contingent social processes" (McLauchlan 1997, p. 3), including the 1941 Lend Lease Act that allowed the president to make defense-related supplies available to the Allies. Alongside the old industries of aircraft, oil, and chemicals that were operating on a much larger scale than before, new industries emerged, such as synthetic rubber (Polenberg 1972, pp. 5–18). Production levels reached new heights in 1942 as the shock of government contracts hit the economy, and they continued to rise until the end of the war, although the rate of gain declined up to 1945 (U.S. Temporary Controls Office 1947, pp. 540–41, 963). By war's end, the gross national product had nearly doubled.

Government efforts to build and consolidate the armed forces after the fall of France in 1940 were accelerated following the Japanese assault on Pearl Harbor on December 7, 1941. From less than 30,000 recruits in December 1941, the number rose to nearly 90,000 in January and just under 160,000 in February (Selective Service System 1948). The implications of this growth, which continued until early spring 1943, were especially important in the state of California, the home of most of the men followed by the Stanford-Terman study.

California had a rapidly expanding war industry, and military recruitment ran headlong into competition with its personnel needs. The options for young men in California were clear enough, either "fight or work" in the home front effort. The entire San Francisco Bay area was under the jurisdiction of the Fifth Army Command, headquartered at the Presidio, San Francisco. We examine whether military induction was lower for men employed in essential war industries.

Occupation-Based Deferment Policy

To strike a balance between these competing demands, government policy increasingly prescribed social roles by assigning men to military service or war production on the home front according to their occupational skills. Age and family status were also factors. How these competing demands balanced out is the focus of the first part of our analysis.

The implementation of deferment policies may have differed from the original intent of the policy makers and bureaucrats. The Selective Service System employed other criteria as well as occupation, including health, family status, and age. Congress never established laws that specified who should work in war industries or on the home front and *which* people in essential occupations should receive deferments, overruling other deferment criteria. The federal government's policies were implemented unevenly by local draft boards, composed of local residents that had almost complete autonomy in filling quotas. No profession or social category received a blanket deferment—the case had to be made to the local draft board on an individual basis. Voluntary enlistment was another source of wartime service that weakened control over decision making at the federal level and local draft board level, at least during the early part of the war.²

A review of the historical documents dealing with deferment policies at the time suggests that occupation may have played a more important role than family status and other considerations. As the war progressed, skill and expertise gained prominence in recruitment policy (Fairchild and Grossman 1959). Though Congress never approved laws stating that occupation prevailed over dependency status, in January 1943 draft boards were notified that “greater emphasis must be laid on occupation than on dependency as a basis for deferment” (Fairchild and Grossman 1959, p. 159). By the end of 1942, more than 70% of deferment appeals were on occupational grounds (Selective Service System 1947*b*, p. 44).

According to manpower priorities, some prewar occupations offered skills that were more critical to the military than to war industries (Fairchild and Grossman 1959), whereas others entailed skills that closely matched the needs of war production. With this in mind, we expect that occupations with skills most needed by the armed forces (especially medical and intelligence expertise) will have had the highest rates of military induction. Likewise, occupations with skills most needed by war production are likely to have ranked highest on rates of employment in essential jobs and lowest on rates of military induction. However, it is difficult to predict how the process played out for occupation-based skills that were heavily needed in both spheres (e.g., medical and engineering) and whether essential war work employment mediated the relationship between occupation and military service.

Implications for Postwar Work Life

Military service and essential war work pulled men out of their conventional careers and closed off many opportunities, at the same time exposing them to new ones. The potential both for growth and decline in human capital and for strengthening or weakening social/professional ties was great. The broadening experiences of war (e.g., people management

²This option ended in December 1942, one year after Japan's attack on Pearl Harbor. From this date on, local draft boards assigned men to military branches according to personnel needs.

and overseas duty) and exposure to work opportunities and new technology in war industries most likely had implications for both job knowledge and advancement options (Lane 1951).

Research on post–World War II work life that is not limited to disadvantaged populations has focused on the implications of veteran status for earnings a decade or more after the war (e.g., Martindale and Poston 1979, De Tray 1982). Most of these studies find that the earnings of surviving World War II veterans are greater than those of nonveterans in contrast to the Korean and Vietnam wars. Angrist and Krueger (1994) use census microdata and find that the veteran premium on earnings disappears when they add an instrumental variable. They conclude that the earnings difference results from “nonrandom selection into the military.”

The work life consequences of manpower mobilization were likely to be contingent on whether and how men contributed to the war effort and on their career stage at the time. The home front exposed men to the expanding opportunities of a labor market of scarcity, with its new incentives and pressures. Manpower shortages drew some men into war production jobs and may have forced them to learn advanced skills to keep up with their requirements. Presumably these skills were also useful in the postwar labor market and thus advanced careers.

Overall, skills learned in the military may not have been as useful for postwar employment as those obtained in the labor force, especially when compared with skills acquired through war production. Moreover, service men are pulled out of the labor force for a time, thereby accruing less work experience and job tenure along with the possible loss of job skills. On the other hand, they may have received preferential treatment in the postwar workforce because of employers’ gratitude and veteran status’s signaling to employers valued traits such as discipline, maturity, and a stronger work ethic, which may accurately reflect traits needed for completing a tour of duty. As one writer observed (Ehrenhalt 1995, p. 219), the veterans “were glad to be back and they felt any challenge could be overcome if they put their minds to it.”

The attractiveness and success of veterans in the labor market likely depended on the nature of their service, such as rank and combat exposure. For example, becoming an officer with its command responsibilities is likely to have enhanced career advancement and led to managerial roles during the rapid growth of the postwar organizational society (Manor 1963; Modell 1995). By contrast, combat experience may have stagnated or impaired work life progress through its physical and emotional toll (Lee et al. 1995). Studies report adverse effects of combat on emotional health and work life accomplishments, but the data are concentrated among men of lower socioeconomic status than the men in this study (Elder and Clipp 1989). Education and other resources may have protected the men in our study from the most damaging effects of combat.

Men’s Career Stage and Postwar Work Life

Career stage and birth cohort likely influenced the consequences of war mobilization, whether on the home front or in military service. Life course theory (Elder 1998) assumes that rapid change differentiates the options and life patterns of successive cohorts, in part as

they experience the same events at different points in the life span. When each cohort encounters an historical event, such as World War II, it is “distinctively marked by the career stage it occupies” (Ryder 1965, p. 846).

For very young men, mobilization is disruptive of normative transitions to adulthood such as completing school and entering the labor force. Among the younger men in the Stanford-Terman Longitudinal Study, who were in their 20s at the start of the war, mobilization occurred during the formative stage of family and career development. The older men were in their 30s and were more likely to be married, have children, and be established in their jobs. Levinson (1978, p. 12) calls this time the career-building phase of a man’s life. Table 1 helps us to locate the two cohorts with respect to World War II and other historical events that shaped their life course.

DATA, MEASUREMENTS, AND MODELS

The Data Archive

An investigation into how manpower mobilization in World War II influenced middle-class men’s work lives requires detailed longitudinal information from the prewar years into the postwar era. This is an especially demanding requirement in view of the absence of large-scale studies of this type at the time. The Stanford-Terman longitudinal data archive is well suited for this task. We are aware of no other study of reasonable size where we could obtain prospective information about work and family over a period of 50 years that includes World War II and its manpower mobilization.

The data collection began in 1922 when Lewis Terman launched a study of talented children with IQ scores above 135 (Minton 1988; Holahan and Sears 1995). He recruited 1,528 study members (856 males and 672 females) from public schools in California, including a small number of children who were in preschool at the time. The middle-class background of the study men is documented by a comparison of the full male sample (mostly born 1900–1920) with the National Longitudinal Survey (NLS) of American men with birth dates from 1907 to 1921. A third of the Terman study members’ fathers had completed 16 or more years of education, compared with 6% of the fathers of men in the NLS.

Twelve follow-ups were conducted: 1928, 1936, 1940, and thereafter every five years through 1960. After a 12-year hiatus, follow-ups were carried out in 1972, 1977, 1982, 1986, and 1991–92. However, our study extends only up to 1972, a time when the youngest men were in their late 50s. The 1945–46 survey included a series of questions on military service, including the serviceman’s branch of the armed forces, his date of entry, overseas duty, medals received, and theater of service. The archive also includes data relevant to employment in war production on the home front. Approximately 85% of the 856 men in the study were in school or held a job with an identifiable occupation in 1940. We selected the 647 study members who were either students or white-collar workers.³ We include in our hazard models an additional 131 men who are missing occupation codes and a variable to

³The occupational distribution of these men was as follows: 14% engineers and scientists, 6% physicians, 11% lawyers, 24% faculty members in universities or colleges (excluding engineers, scientists, and physicians) or writers and social scientists employed in other organizations, 27% sales or clerical workers, and 16% students.

indicate missing occupation. Approximately 35% of the older men (born 1900–10) and 45% of the younger men (1911–20) served in the military between 1940 and 1945, and almost 25% in each cohort were employed in war work.

The original study was not designed to investigate wartime experience and so we “recast” the data by recoding (Elder, Pavalko, and Clipp 1993). In the first research operation we constructed life record files from a long series of cross-sectional surveys and the assembly of essential information (beyond statistical files) for the codes. Staff members made five trips to the Stanford data archive in the late 1980s and early 1990s. Relevant data were assembled on structured forms, and these were used as the basis for a coding operation on work life and wartime experience. To maximize accuracy and completeness, the coders also drew on letters, open-ended questions, and newspaper clippings (see Elder et al. 1993, esp. chap. 4).⁴ Coders periodically discussed disparities and resolved them. Out of this operation emerged new codes for occupation before war mobilization and a time-differentiated event history of jobs from 1940 to 1948. Codes were also devised to identify jobs on the home front that were devoted to activities necessary for war production and jobs that were devoted to activities that the federal government deemed essential to support the war effort but that were not directly involved in war production.

Measurements

Three sets of variables were assembled for the proposed analysis: (1) individual characteristics before U.S. involvement in World War II, (2) military experience and essential work in World War II, and (3) work experience after hostilities ended and after demobilization.

Prewar variables—Congress enacted the Selective Service Act into law on September 16, 1940. In this study, the occupation of the job held nearest to January 1, 1940, represents the occupation held prior to U.S. involvement in the war.

We constructed two measures of men’s work life trajectories before World War II, a period that could extend to a decade or so among the older men. One indicates whether the individual experienced a period of floundering (1 = yes, 0 = no) in his career, which we define as a work pattern characterized by a rapid sequence of jobs and unemployment spells with no evidence of advancement in status. The second measure, work life progress (for more detail, see Pavalko et al. [1993]), indicates whether there is an improvement in status (as determined by coders) between the first full-time job and the job held as of January 1, 1940 (1 = yes, 0 = no).⁵ Unlike floundering, this two-period comparison indexes an upward movement in career and it *does not* describe the worker’s intermediate work life experience. These measures were assessed in terms of levels of responsibility, authority, skill required by the job, publications, and leadership roles in firms and professional organizations (e.g.,

⁴Elder et al. (1993) provide a detailed account of our approach in using archival data to address life course questions, with emphasis on the recasting of the data set. Coding manuals relevant to the measurements used in this study are stored at the Carolina Population Center, University of North Carolina at Chapel Hill.

⁵Originally, we sought to identify multiple levels of work life status, from strikingly upward to moderately upward, stable, and downward. However, available work life information would not enable us to distinguish levels of upward movement, and cases of downward mobility were too few to analyze.

partner in a senior law firm). An individual with evidence of work life progress between the first job and the job held before the war may have experienced an episode of floundering, especially in the earliest stage.

Military service and employment in war production—In this study, military induction refers to entry into the armed forces (voluntary or not), between January 1940 and December 1945 (1 = inducted, 0 = no). Men who were already serving in the armed forces before January 1940 were excluded from the analysis. Military histories enabled coders to identify men with evidence of exposure to combat (1 = yes, 0 = no) and those with the rank of an officer (1 = yes, 0 = no).

Each paid job on the home front during the war was coded according to whether it was essential to the war effort, following official interpretations of the Selective Service System and the War Manpower Commission. The measure applies the official definition of civilian mobilization for war production, as reported by the Selective Service System monograph *Industrial Deferment* (Selective Service System 1947*b*, pp. 13–14). We coded home front mobilization as civilian activities tied directly to the prosecution of the war, which we refer to as “essential” war work.⁶ Examples of essential war work include employment involving the production of goods such as munitions, ships, aircraft, metal, and uniforms. This includes the production of other goods and services that are needed for the production of these goods: for example, services such as research and development and civilian work for the armed forces, the War Department, the Selective Service System, the War Manpower Commission, and any federal emergency agency. About 60 U.S. government offices were designated as World War II emergency agencies, with purposes ranging from the protection of civilians on the home front to settling labor disputes to the coordination of national defense purchases, scientific research and development, and intelligence.

From wartime to postwar work—Hostilities ended with the Japanese surrender on August 14, 1945, though demobilization operations continued through 1947. Our investigation of the implications of wartime activities for work life focuses on three outcomes. One indicates being in an occupation at the end of demobilization (approximately January 1, 1948) different from the one pursued before the war (approximately January 1, 1940), with respect to the one-digit code of the 1980 Standard Occupational Classification System. This level of classification allows us to identify a substantial change in occupational skills and responsibility, for example, such as from an orthopedic specialist to a chief administrator of a hospital. Our interest is in the difference between the postwar and prewar occupation (i.e., *net* change/discontinuity), and not in “temporary” (i.e., gross) occupation changes that occurred during the war.

The second outcome tells us whether the 1948 job included supervisory responsibilities, other than in relation to a secretary. The third provides evidence of work life progress, an improvement in status between the first full-time job held after hostilities ended (i.e., around January 1, 1946) and the job held as of the last follow-up (up to the 1972 wave). The job characteristics used to assess status are the same as those described earlier for work life

⁶Elder et al. (1993, chap. 4) provide more detail on this coding operation.

progress before the war. The majority of the men improved their work life status across the postwar era. The remaining men, who were coded 0, had stable careers, except for five who were downwardly mobile. This work life measure enabled us to identify successful careers instead of relying upon standard quantitative measures of occupational prestige at a point in time.

Conceptual and Statistical Models

Event history analysis of military and war industry roles—Our methodological framework characterizes manpower mobilization as a competitive process between the armed forces and war industry by estimating competing risk Cox proportional hazard models of the first event of military induction and the first event of essential war work during World War II (Cox and Oakes 1984; Namboodiri 1991). These models take into account the impact that military service has on *exposure* to the risk of war work and the impact war work potentially has on the *rate* of induction. While serving in the armed forces, individuals are removed from the labor force. By censoring men on the date of first induction, our estimates of relative rates of essential war work are not biased by group differences in induction that affect the length of exposure to war work. In contrast, employment in essential work is specified as a time-varying covariate in the military models.

The Cox proportional hazard model is semiparametric and does not impose distributional assumptions regarding survival times (i.e., the baseline hazard function is left unspecified); however, the hazard ratios are assumed to be proportional over time. We test the validity of the proportionality assumption for individual covariates and globally with the Stata program “stphtest” (StataCorp 2001).⁷ We also compare results of the Cox regressions to estimates from Weibull accelerated time failure models.

The risk of induction began in 1940 and ended December 1945, a duration of 72 months. We measure timing until first induction or employment in essential jobs in person months. Our models account for three possible transitions, as described in figure 1. Induction may occur while a person is employed in essential war industries on the home front, but employment in an essential job cannot occur while one serves in the armed forces.

All explanatory variables, besides the time-varying covariate employed in essential war industry, are measured as of January 1, 1940 (approximately), and are time invariant. These explanatory variables (i.e., age, occupation, and student, marriage, and fatherhood status) represent some of the most critical factors specified in the federal government’s deferment policy. They are fixed at a time before U.S. involvement in the war because they may be endogenous to induction. Age is measured as a continuous variable in the results presented because the data suggest an inverse linear relationship with induction.

Logistic regression models of work life—We examine the implications of military service and essential employment for work life by estimating logistic regression models of

⁷This test statistic is based on a scaled adjustment for the Schoenfeld residuals, which are independent of time when the hazard is proportional and are distributed asymptotically as chi-square. The rejection of the zero slope null hypothesis is equivalent to rejecting the null hypothesis that the log hazard ratio function is constant over time.

net occupation change, supervision of others in 1948, and work life progress from the end of the war to 1972. We further differentiate military service in order to explore the roles of combat exposure and service as an officer by including a dichotomous variable for combat and one for officer status. In addition to wartime experiences, a key explanatory variable is birth cohort. We take into account two aspects of work life before the war by including a dichotomous explanatory variable for whether the study member supervised others in 1940 (only for the models of supervisory responsibility in 1948), and one for whether there was career advancement as of 1940. Career advancement as of 1940 is used to conceptualize the expected trajectory prior to the war and is measured by the variable floundering in the occupation model and by prewar work life progress in the models of supervisory responsibility and work life progress. We also include a dichotomous variable to indicate whether the study member was married in 1940 because of the interrelationship of work and family. Indicator variables are included for missing information on marriage and prewar career advancement.

The baseline model for each of the three postwar work life outcomes includes only cohort, the prewar variables, and the dichotomous variables for essential war work and military induction. Three additional sets of models were estimated: (1) *cohort interaction* adds interactions of cohort with essential war work and military induction to the baseline model, (2) *officer-combat* adds both of these variables as covariates in the baseline model, and (3) *saturated* expands the officer-combat model by including interactions between birth cohort and essential war work, induction, officer status, and combat.

Essential war employment and military status are not mutually exclusive because 27 men experienced both. We reestimate our models without these men so that we can report the specific odds ratio of nonveterans who held an essential job over veterans who never held such a job.

FINDINGS

Univariate Statistics

Table 2 shows characteristics of the men inducted into the armed forces and the men mobilized into war-related employment on the home front. Consistent with manpower priorities, men who served in the armed forces were on average younger and had an additional year of education than those who did not serve. At the start of the war, those who served in the armed forces were less likely to be married and have children than those who did not serve. A greater proportion were physicians, lawyers, and managers. A greater proportion of those mobilized into war industries were engineers, scientists, managers, social scientists, teachers, and writers, compared with those who did not have essential jobs. Also, a greater proportion of these men held a different occupation after demobilization and had supervisory responsibility after the war. Work life progress after the war was comparable across groups.

Hazard Models of War Mobilization

Table 3 presents hazard ratios estimated by Cox proportional models of essential “war work” and induction into the armed forces (holding “constant” other covariates). The assumption of proportionality is not violated globally for either outcome, and we cannot reject the null hypothesis of nonproportionality for the individual covariates, with the exception of a few occupation contrasts.⁸ For the most part, even with a violation of the proportional hazard assumption, we may still interpret the coefficients as an average over the period 1940 through 1945. The estimates are robust in terms of other aspects of parameterization as well. Results from the Weibull accelerated time failure models are nearly identical to those from the Cox models.

The competing demands of war—We find that employment in essential war work is estimated to reduce the rate of induction by 64%, reflecting the competition for skilled workers between the military and war industries (table 3). Taking into account competition from war industries results in slightly lower occupation differentials in military induction and represents the preferred model ($P < .001$; table 3, col. 2b). Occupation differences in rates of war work are inflated when observations are not censored at induction. For example, the estimated ratio of rates of essential war work for physicians over engineers is .34; however, the estimate is 65% lower when observations are not censored (results not shown).

Occupation-based deferment policy—Consistent with our expectations, prewar occupations functioned as a “sorting mechanism” in the manpower mobilization of white-collar and professional men. There are large occupation differentials in rates of essential employment and in rates of military service, even after including other deferment criteria as covariates. For military induction, substantial occupation differences persist when “controlling” for employment in essential industries.

Wartime deferment policy defined engineering as one of the “most” essential occupation categories for home front industries. During the war, two of the talented engineers in our study were recruited to work on the Manhattan A-bomb project, and a third was involved in wind tunnel research. The hazard rate of essential war work is greatest for engineers and scientists. As shown in figure 2, their adjusted rate is about two to four times the rates of students and other occupations. The Selective Service System specified 21 branches within the engineering profession as “most” essential and instructed its local boards to give special consideration to the deferment of engineers who worked in these fields. Our findings suggest that local draft boards followed suit. Engineers and scientists had the lowest rates of induction into the armed forces, even when holding constant whether the current job was “essential” (table 3), suggesting that they remained on the home front in anticipation of the demands of war industry and other essential needs. Their adjusted rate of induction is only .2 to .6 times the rates of students and other occupations (the largest $P < .07$).

⁸In the case of induction, there is no significant ($P < .05$) violation of the proportionality assumption when critical war work is not included in the model. When it is included, the only violation is the contrast between students and the indicator of missing occupation. The only violations for our critical war work model are for the occupation group social scientists, teachers, and writers in relation to engineers and scientists, to managers, and to sales and clerical workers.

The rate of induction is highest for physicians, followed by lawyers who experienced the lowest rate of essential war work (table 3). The government's instructions on recruitment and war industry did not single out lawyers (Selective Service System 1947*b*, p. 87), but they were in demand for intelligence tasks in the military. They also had legal training for the military justice system and for officer roles in general. Physicians appear to have faced even stronger personnel pressures from both the home front and the armed forces. When mobilization began in 1940, the total pool of medical doctors (about 155,000) fell well short of wartime needs as projected by the Selective Service System (1947*b*, p. 80). The adjusted rate of military service for physicians is about two to six times the rates of other occupations and students (fig. 3). In our study, the need for physicians even overruled ethnic policies and discrimination in the case of a physician of Japanese ancestry. He was recruited to "train medical soldiers," despite the internment of his immediate family. The physician wrote to the project staff that his medical expertise was so vital that he was "respected by the enlisted men" and found the officers "willing to help." By the end of the mobilization period, three out of four physicians in our study had served in the armed forces.

Physicians also served on the home front to care for civilians as well as for injured veterans. Their rate of critical war work is greater than the rate for lawyers but lower than that for the other occupations in the study (see fig. 2). Initially, the Selective Service System advocated the deferment of medical students and their instructors, but this policy changed as military needs increased in 1943. At this time, the military charged the Selective Service System with the responsibility for recruiting more medical doctors. In turn, the Selective Service System (1947*c*, p. 34) called up medical doctors who were serving their residencies. Physicians in our study felt the tension between the competing demands of the home front and the military. Those who had to serve on the home front regretted that they could not be in active service where they felt their contributions to the war effort would be greatest. Nevertheless, the demands placed on them on the home front were enormous. In letters and surveys they spoke about the extraordinary pressures they faced at home, because of shortages in staff and materials.

War industries, the federal government, and the armed forces called upon the skills of social scientists, teachers, and writers, as well. Federal agencies and the military mobilized social scientists for data collection and analysis (Stouffer et al. 1949). The manpower needs of war industries and military service also called for writers and media specialists. On balance, social scientists, teachers, and writers show the highest rate of critical war employment after engineers and scientists (fig. 2), and a relatively low rate of induction (fig. 3). Managers, and social scientists, teachers, and writers had comparable rates of war work, but managers experienced a 60% higher rate of induction ($P = .019$). Manpower priorities did not uniformly specify home front or military functions for managers but they were drawn into essential employment when their companies or government agencies shifted over to war production. Sales and clerical workers are among the least skilled in the white-collar stratum, and their rate of essential home front employment is lowest, after physicians and lawyers (table 3). Deferments for sales and clerical workers, like managers, occurred at times when their companies or offices made the transition to war production.

Students are comparable to sales and clerical workers with respect to the rate of essential work. However, local draft boards appear to have protected students from the draft. Men enrolled in school at the start of the war were subject to a lower rate of induction into the armed forces than employed men, except for engineers and scientists (table 3 and fig. 3). The ratio of the rate for students over physicians, lawyers, and managers ($P = .014$) ranges from .3 to .5. The differences would likely have been even greater if we had measured enrollment as a time-varying covariate, since most of the men who were enrolled as of January 1, 1940 completed school during the war.

Overall, occupation and student status were more important determinants of employment in war industries than were marriage and parenthood status, and age (table 3). However, the importance of occupation and student status for induction relative to the importance of age and family status depends on which occupations are contrasted.

Implications for Postwar Work Life

About 70% of the men in our study were mobilized into either essential jobs on the home front or the armed forces. What were the implications of these wartime service roles for postwar careers? Did work lives change after the war because of these roles?

Occupation discontinuity—State mobilization is disruptive by its very nature. Labor scarcity on the home front and the demand for new technologies required training and new specializations. Men engaged in war work were probably the most likely to have gained expertise in new areas and been promoted to new positions with greater responsibilities. We find that civilians whose work was essential to the war effort were more likely than others to have an occupation in 1948 different from the one they held before the war, taking into account work life before 1940 and marriage (table 4). For men in war industries, the odds of being in a different occupation as predicted by the baseline model are about three times the odds for other men and nearly four times the odds for veterans specifically. Other civilians also appear to have been able to take advantage of labor shortages at home to move into new positions.

By comparison, we find that veterans are the least likely to have returned to their prewar occupations (table 4). Employers were instructed to “place on hold” the jobs once occupied by military recruits. The armed forces removed men from their families, communities, and jobs during their service and may have set them on different career trajectories than they would otherwise have had; however, military service was less likely to disconnect them from their premilitary occupations. Among veterans the adjusted odds of having a different occupation are 23% less than the odds for all other men. The odds for officers and combat veterans are somewhat lower than the odds for other veterans, but not to a statistically significant level (in the officer-combat or saturated models, which are not presented).

Given the differences in career stage during the war, critical employment may have provided the younger cohort with more opportunities for specialization and promotions that led to new occupations. Generally, the younger men would have found it easier to relocate (jobs and residence) and to take greater risks for potential longer-term benefits and the broadening experiences of essential war work. On average, they had less tenure and less firm-specific

capital, and a greater proportion had not yet started a family. Indeed, the implications of war work and military service for occupation discontinuity are greater for the younger men. The odds of change for younger veterans are less than half the odds for nonveterans, whereas there is no difference for the older men (cohort interaction model, $\chi^2_{.10}$), as shown in table 4.

These patterns may also partly reflect cohort differences in the work lives of those who were not mobilized, by either the armed forces or war industry. The older nonmobilized men were less likely to change their occupation than the younger nonmobilized men were, and less likely than the older veterans. The younger men who remained on the home front may have been able to take advantage of labor shortages and move into new positions even when they were not engaged in essential war work, whereas the older nonmobilized counterparts may have been more constrained.

Supervisory status—Work life changes during the war were likely to have been disruptive; although, they may also have led to occupations with more authority and autonomy. Essential war work is predictive of more occupation change, and among the younger men, it is also associated with a greater likelihood of supervising others. The results for military service turn out to be more complex. It seems to have fostered work life continuity for the younger men in terms of occupation but we find no impact on their chances for supervisory responsibility.

In 1948, almost half of the men who held essential jobs supervised others. The growth of war industries had the potential to put men in positions of greater responsibility and increase opportunities for promotions. This may have meant earlier access to supervisory roles, particularly for the younger men who made their initial transition into a career around the time of the war. The odds of having supervisory responsibility among younger men in war industry jobs are more than double the odds for their peers, controlling for prewar work factors and marriage (table 4). We expected a smaller difference among the older men but are struck by the absence of any.

Our results suggest that military service had the opposite effect of war industry employment. The odds of being a supervisor are almost 30% lower for veterans than for all others (baseline model in table 4). Also, in contrast to war work's effects on the younger men, military service only makes a difference for the older men, according to the cohort interaction model. While out of the labor force, the older veterans had more skills and promotion opportunities to lose and perhaps fewer new skills to learn that would have been useful for their careers. Contrary to expectations, the adjusted odds of supervising others in 1948 are no greater for officers than for other veterans when we differentiate veterans by whether they served as officers, and whether they experienced combat. The ratios associated with combat are also not statistically significant. These models that include officer and combat status are not preferred over the baseline and cohort models, based on likelihood-ratio tests. Among managers, clerks, and men in sales, the proportion of officers who were supervisors in 1948 is greater than the proportion of other veterans and nonveterans; however, other occupation groups do not show this pattern. The year 1948 may well have been too soon after reentering the labor force for these men to move into supervisory roles or their leadership potential may have been expressed in other ways. In the next section we find

that officers were the most likely to achieve work life progress between the war's end and the 1970s.

Work life progress between 1946 and 1972 jobs—Occupation discontinuity and supervisory responsibility at the end of demobilization offer a glimpse into the immediate postwar period. But a view of career advancement provides a longer-term characterization of the men's work trajectories in the postwar years. Sixty percent of the men achieved work life progress between the 1946 and 1972 jobs (or last job up until 1972). Examples include a veteran who was an orthopedic surgeon in 1948 and became a chief surgeon in his specialty at a metropolitan hospital by the end of his career and a young attorney on the home front who later became known as a well-respected district attorney.

The odds of advancement between the 1946 job and the later job are not significantly greater for men employed in war work (table 5). We believe this likely reflects the timing of the comparison. White collar men in critical jobs were in the labor force during the war, unlike veterans, and may have realized the full benefits from this work experience even before the war ended. Comparisons between the job in 1946 and a later position may have missed the shift in career trajectories that occurred earlier for men mobilized on the home front. Unfortunately, a comparable indicator of advancement between the prewar and the 1972 job is not available.

By the 1950s most veterans had returned to civilian life, filling college classrooms and pursuing jobs. How veterans in the Stanford-Terman study fared compared with men who remained on the home front depends on the nature of the military service. Officers' careers were the most likely to advance. Their odds of progress are 1.5 times greater than other veterans' odds, and 35% greater than nonveterans, regardless of whether they were exposed to combat. These findings are more pronounced among the older men, although the cohort differences are not statistically significant (the officer-combat model is preferred, according to the likelihood-ratio test). Officer status may have countervailed the otherwise negative impact of military service. Open-ended questions and other information from subsequent waves show that military command offered managerial challenges, as can be seen in the experience of a quartermaster veteran from another study of World War II: "I matured very quickly. At twenty-one I had thirty men to take care of; at twenty-three, I had six hundred to seven hundred to feed and supply" (quoted in Elder 1987, pp. 464–65). Of course, unmeasured differences between the men who became officers and those who did not may also contribute to the apparent advantage of officers, even when holding constant work life progress prior to the war. To our knowledge, studies have not assessed the relationship between officer rank in World War II and success in the postwar labor market.

Career implications of wartime experiences for different occupations—We described the role of occupation in how men were allocated into two general lines of service, essential war work and the military. These lines of service were predictive of selected work life outcomes. However, there is great variation within the experience of these two lines of service, and that variation may be related to occupation-based skills. Moreover, some skills were better matched to the needs of the military and war industry, with implications for the effects of induction and war work. Though sample size restricts us from assessing

interactions between occupation and mobilization pathways, individual experiences and reflections shed some light on what wartime roles may have meant for particular occupations.

Typically, engineers and physical scientists in our study were recruited for jobs in war industries with challenging work environments that enriched their career development. For example, a chemical engineer in our study noted late in life that his war work provided an “immensely accelerated learning process” in his business. A civil engineer described the challenge of his war work in an aircraft plant, claiming that it offered “rapid exposure to . . . accelerated ‘aerospace’ engineering development.” Clausen (1984) describes how the mobilization of social scientists into government service during the war made use of their research skills, with benefits for their academic careers. Social scientists in the research branch of the War Department carried out the influential American Soldier project directed by Sam Stouffer, and produced four volumes of research (e.g., Stouffer et al. 1949). They conducted field surveys in several countries during the war and demobilization to investigate the morale and adaptation of soldiers.

Lawyers and physicians who entered the service were assigned to roles they were trained to perform, whether surgery or legal representation and prosecution in military court, as well as services that may have stretched their expertise. However, there is strong evidence in our data that the medical expertise needed in the military exceeded available skills. Consequently, the military provided these men with unusual opportunities for further training. An anesthesiologist became, as he put it, a “very good” one in the army. Orthopedic surgeons were invariably placed in positions of high responsibility, near the front lines. One became the chief orthopedic surgeon at a 500-bed hospital in Manila, the Philippines. Another played a similar role in London. The younger physicians developed medical specialties through their military assignments. They were also frequently assigned to accelerated career tracks. Able doctors who were out of medical school only a year or so were assigned to posts with major responsibilities, such as a young physician who became the chief of one office of the Air Surgeon. Another became the deputy commandant of a medical training school for the army. Many of the inducted lawyers were also challenged by their assignments in military justice, police, and intelligence units.

All of these accounts focus on men who served in the military or were engaged in essential war work. Men who did not serve either way were faced with extraordinary demands owing to the loss of local professionals to the war and home front duty. The lawyers and physicians who remained on the home front often faced very long days and weeks, owing to the shortage of professionals. One of the lawyers reported “doing the work of two attorneys because of a shortage of attorneys.” Like physicians on the battlefield, the home front physicians were given responsibilities and had to provide services beyond their level of expertise.

DISCUSSION

The power of the state over individual lives tends to increase dramatically in times of war. Over two-thirds of all American men born from 1918 through 1928 served in the military,

typically in World War II. No period experience in the 20th century was more shared and profound in the biography of Americans. During World War II, the federal government exerted control in many agencies and mechanisms. We observe this control through manpower mobilization, the purview of the Selective Service System and the War Manpower Commission. Military service typically comes to mind when we think of this state-initiated process, though manpower policy during World War II addressed the competing needs of *both* the armed forces and war industry. Little research has been done on employment in essential war industries and its effects on people's lives. Most of what we know is based on the mobilization of women into war industry.

This study investigated manpower mobilization for the production of war "goods" on the home front as well as for meeting the needs of the armed forces. We explored how state actions through manpower policy largely shaped the allocation of men to these different lines of service: the military and war industry. This allocation was driven by the intersection of the needs of the state and the occupation-based skills the men had to offer. To a large degree, we found that such skills determined men's prescribed roles during the war, which, in turn, influenced their postwar work lives in terms of occupation discontinuity (1940–48), supervisory responsibility (1948), and career advancement (1946–72).

In the Stanford-Terman data archive, men from the middle class were a good match for this allocation process because they possessed occupational skills that could lead in both directions. The results of a series of event history analyses support our characterization of manpower mobilization during the war as the allocation of men between two competing spheres, based on the match between needs and occupation-related skills. There were large occupation differentials in the rate of essential employment. This mobilization, guided by recruitment priorities, served as a major barrier to military induction. However, even after taking war work into account, occupation differences in military service rates were large and significant. Whether or not differences in volunteering played a role, occupation was substantively more important than age, marital status, and parenthood. However, all of these factors were statistically significant criteria for military induction.

By its very nature, state-initiated military recruitment was disruptive of lives (Elder 1987), but little is known about the disruptive features of war-industry employment. The likelihood of occupation discontinuity turned out to be greatest for men who were employed in war industries, given prewar characteristics. Fast-moving war industries seemed to provide an optimum setting for rapid entry into supervisory positions among talented and experienced men. This proved to be the case for the younger men only. As veterans returned by the millions to communities, colleges, and workplaces, the advantage of war-industry workers diminished to insignificance, with respect to our measure of work life progress between the 1946 and 1972 jobs. Of course, men in essential work may have received the benefits of that work before the war ended.

We expected military service to be disruptive for careers because the war necessitated leaving jobs and the labor market, in general. However, the armed forces also provided structure and stability. This was most evident among the younger veterans who were the least likely in their cohort to be in a different occupation after the war. On the other hand,

military service is only associated with a lower likelihood of supervising others after the war among the older men. It appears to have impeded work life progress after the war for both cohorts. With the exception of officers, the odds of progress were lower for veterans, and a little lower if involved in combat. In subsequent wars, such as the Vietnam conflict (Card 1983; Egendorf et al. 1981), heavy combat resulted in the most damaging effects on work careers, frequently through impaired health. However, we are unable to distinguish between light and heavy combat or to assess the duration of exposure. We also lack systematic information on war stress symptoms (e.g., disturbed sleep) and physical wounds.

Notably, officers fared best in the long run. This may reflect the consequences of serving as an officer as well as processes of selection into the officer ranks. Moreover, the process of becoming an officer signals many unmeasured attributes that predict career success—prior expertise, maturity, good judgment, stamina under pressure, trustworthiness, a work ethic, and group leadership. Two surgeons, for example, were placed in command of field hospitals and were therefore well equipped for the managerial opportunities of civilian society. Several officers were successful in postwar managerial roles in large-scale businesses and organizations.

In Tom Brokaw's (1999) interviews of veterans, he describes a marine on the staff of the commandant of the Marine Corps who was appointed director of recruiting and training for a large private insurance agency after the war (p. 171). In personal reflections, the marine concluded that his wartime experience had a substantial effect on his career "after the war." There is much to be learned about this link between officer experience during the war and postwar career progress in the burgeoning world of large-scale businesses and organizations. When coupled with the G.I. Bill, World War II functioned as a "school" for personnel in the postwar economy, though we have only glimpses of this connection between war service and postwar employment. Moreover, becoming an officer may have led to friendships and professional contacts, a network that resembles a lifelong convoy of occupational information and personal support (Kahn and Antonucci 1980).

We note that postwar career differences associated with wartime experiences may reflect unmeasured heterogeneity within the population. For example, Angrist and Krueger (1994) found evidence of this in estimates of the effect of World War II military service on earnings. The unique longitudinal data archive used in our study enables us to include a rich set of covariates measured prior to and during the war. Our models take into account prewar information about work life progress and floundering, supervisory status, and marriage, and distinguish among wartime experiences. Moreover, the Stanford-Terman men are relatively homogenous with respect to measured ability, socioeconomic background, and location of residence.

This homogeneity may have advantages but it also limits the study's generalizability. Even in the context of highly skilled Americans, particular features of the Stanford-Terman sample warrant notice. Most of the study members came from middle- to upper-middle-class backgrounds. They were selected into the study on the basis of high test scores, after having been preselected from teacher reports of performance in California schools. A majority of them continued to reside in California as adults. After the war, the economy of the west was

more prosperous than that of other regions. Between 1950 and 1960 California's employment in the professional, technical, and kindred worker category increased by 83%, far above the national average of 47% (Manor 1963). And the prosperity of postwar America stands in contrast to the ruined economies of Europe and Asia. German veterans who survived the war lost as many as nine years from their occupational careers and faced joblessness upon their return to civilian life (Mayer 1988). In addition, America's experience in World War II differs from that in other wars, such as Vietnam and its lack of home front support (Hagan 2001). Clearly, more research is needed across different contexts.

The importance of military service in men's lives during World War II has increasingly gained recognition from research projects and their investigators. The age at which these men served in the armed forces, their theater of overseas duty, and the nature of their combat exposure all appear to have had significant implications for their subsequent economic status, health, and family stability (Lee et al. 1995; Sampson and Laub 1996; Clipp and Elder 1996; Elder and Chan 1999), though more research is needed that links essential employment and military service. Now in their late years (Brokaw 1999), half a century after the close of World War II, veterans' stories are just beginning to be told—including the impact of military service on their lives, spouses, and children (Tuttle 1993).⁹ Many of these children came of age during the unpopular Vietnam War, with its military draft and social protests. Intergenerational relationships in families may well have been influenced by this conflict and by the wartime roles of fathers.¹⁰

By investigating both military service and critical employment, we have taken a step toward broadening sociological knowledge of mobilization in World War II and its career implications for the postwar era. This more comprehensive perspective brings up a number of related issues, including the participation of those not directly mobilized into the armed forces or essential war industry. Countless men and women were engaged in the war effort through employment and volunteer activities. Many helped to meet the needs of the civilian population by serving as temporary staff for local facilities while their employees were in the service. What were the consequences of these activities for postwar lives? The scope of American involvement in World War II generated diverse mobilization roles that led to very different wartime experiences with both immediate and long term implications for work and family.

References

- Angrist, Joshua D.; Krueger, Alan B. Why Do World War II Veterans Earn More than Nonveterans? *Journal of Labor Economics*. 1994; 12(1):74–97.
- Baron, James N.; Dobbin, Frank R.; Devereaux Jennings, P. War and Peace: The Evolution of Modern Personnel Administration in U.S. Industry. *American Journal of Sociology*. 1986; 92:350–83.
- Brokaw, Tom. *The Greatest Generation Speaks: Letters and Reflections*. New York: Random House; 1999.

⁹The early pioneering studies of Hill (1949) and Stolz (1954) paved the way for this line of inquiry by revealing the vulnerability of families and children to the absence and return of veterans.

¹⁰In a thoughtful commentary on the study, John Hagan has identified the sequence of wars (World War I, World War II, Korean conflict, etc.) as a project deserving more study in terms of the evolving national system of deferment and the draft (personal communication, December 10, 1999).

- Campbell, D'Ann. *Women at War with America: Private Lives in a Patriotic Era*. Cambridge, Mass: Harvard University Press; 1984.
- Card, Josefina J. *Lives after Vietnam: The Personal Impact of Military Service*. Lexington, Mass: Lexington Books; 1983.
- Clausen, John A. Research on the American Soldier as a Career Contingency. *Social Psychology Quarterly*. 1984; 47(2):207–13.
- Clipp, Elizabeth Colerick; Elder, Glen H, Jr. The Aging Veteran of World War II: Psychiatric and Life Course Insights." Pp. 19–51 in: In: Ruskin, Paul E.; Talbott, John A., editors. *Aging and Post-traumatic Stress Disorder*. Washington, D.C: American Psychiatric Press; 1996.
- Cox, David R.; Oakes, D. *Analysis of Survival Data*. London: Chapman & Hall; 1984.
- De Tray, Dennis. Veteran Status as a Screening Device. *American Economic Review*. 1982; 72(1):133–42.
- Egendorf, Arthur; Kadushin, Charles; Laufer, Robert S.; Rothbart, George; Sloan, Lee. *Legacies of Vietnam, vol. 1: Summary of Findings*. Washington, D.C: Government Printing Office; 1981.
- Ehrenhalt, Alan. *The Lost City: The Forgotten Virtues of Community in America*. New York: Basic Books; 1995.
- Elder, Glen H, Jr. War Mobilization and the Life Course: A Cohort of World War II Veterans. *Sociological Forum*. 1987; 2(3):449–72.
- Elder, Glen H, Jr. The Life Course and Human Development. In: Lernerf, Richard M.; Damon, William, editors. *Handbook of Child Psychology, vol. 1: Theoretical Models of Human Development*. New York: Wiley; 1998. p. 939-91.
- Elder, Glen H., Jr; Chan, Christopher. War's Legacy in Men's Lives. In: Moen, Phyllis; Dempster-McClain, Donna, editors. *A Nation Divided: Diversity, Inequality and Community in American Society*. Ithaca, N.Y: Cornell University Press; 1999. p. 209-27.
- Elder, Glen H., Jr; Clipp, Elizabeth C. Combat Experience and Emotional Health: Impairment and Resilience in Later Life. *Journal of Personality*. 1989; 57:311–41. [PubMed: 2769559]
- Elder, Glen H., Jr; Pavalko, Eliza K.; Clipp, Elizabeth C. *Working with Archival Data: Studying Lives*. Newbury Park, Calif: Sage; 1993.
- Fairchild, Byron; Grossman, Jonathan. *The Army and Industrial Manpower*. Washington, D.C: Department of the Army, Office of the Chief of Military History; 1959.
- Feagin, Joe R.; Riddell, Kelly. *The State, Capitalism, and World War II: The U.S. Case*. *Armed Forces and Society*. 1990; 17:53–79.
- Flynn, George Q. *The Mess in Washington: Manpower Mobilization in World War II*. Westport, Conn: Greenwood Press; 1979.
- Foster, Mark S. *Henry J. Kaiser: Builder in the Modern American West*. Austin: University of Texas Press; 1989.
- Hagan, John. *Northern Passage: American Vietnam War Resisters in Canada*. Cambridge, Mass: Harvard University Press; 2001.
- Hill, Reuben. *Families under Stress: Adjustment to the Crises of War Separation and Reunion*. New York: Harper & Row; 1949.
- Holahan, Carole K.; Sears, Robert R. *The Gifted Group in Later Maturity*. Stanford, Calif: Stanford University Press; 1995.
- Hooks, Gregory; McLauchlan, Gregory. The Industrial Foundation of Warmaking: Three Eras of U.S. Warmaking, 1939–1989. *Theory and Society*. 1992; 21:757–88.
- Johnson, Marilyn S. *The Second Gold Rush: Oakland and the East Bay in World War II*. Berkeley and Los Angeles: University of California Press; 1993.
- Kahn, Robert L.; Antonucci, Toni C. Convoys over the Life Course: Attachment, Roles, and Social Support. In: Baltes, Paul B.; Brim, Orville G., Jr, editors. *Life-Span Development and Behavior*. Vol. 3. New York: Academic Press; 1980. p. 253-86.
- Kesselman, Amy. *Fleeting Opportunities: Women Shipyard Workers in Portland and Vancouver during World War II and Reconversion*. Albany: State University of New York Press; 1990.
- Lane, Frederick C. *Ships for Victory: A History of Shipbuilding under the U.S. Maritime Commission in World War II*. Baltimore: Johns Hopkins University Press; 1951.

- Lee, Kimberly A.; Vaillant, George E.; Torrey, William C.; Elder, Glen H, Jr. A 50-Year Prospective Study of the Psychological Sequelae of World War II in Combat. *American Journal of Psychiatry*. 1995; 152:516–22. [PubMed: 7900929]
- Levinson, Daniel J. *The Seasons of a Man's Life*. New York: Ballantine Books; 1978.
- Mann, Michael. *States, War and Capitalism: Studies in Political Sociology*. New York: Basil Blackwell; 1988.
- Manor, Stella P. Geographic Changes in U.S. Employment from 1950 to 1960. *Monthly Labor Review*. 1963; 86(1):1–10.
- Martindale, Melanie; Poston, Dudley, Jr. Variations in Veteran/Nonveteran Earnings Patterns among World War II, Korea, and Vietnam War Cohorts. *Armed Forces and Society*. 1979; 5(2):219–43.
- Mayer, Karl Ulrich. Structural Constraints on the Life Course. *Human Development*. 1986; 29(3):163–70.
- Mayer, Karl Ulrich. German Survivors of World War II: The Impact of the Life Course of the Collective Experience of Birth Cohorts. In: Riley, Matilda White; Huber, Bettina J.; Hess, Beth B., editors. *Social Structures and Human Lives*. Newbury Park, Calif: Sage; 1988. p. 229-46.
- Mayer, Karl Ulrich; Müller, Walter. The State and the Structure of the Life Course. In: Sorensen, Aage B.; Weinert, Franz WE.; Sherrod, Lonnie, editors. *Human Development and the Life Course: Multidisciplinary Perspectives*. Hillsdale, N.J: Erlbaum; 1986. p. 217-45.
- Mayer, Karl Ulrich; Schoepflin, Urs. The State and the Life Course. *Annual Review of Sociology*. 1989; 15:187–209.
- McLaughlan, Gregory. World War II and the Transformation of the U.S. State: The Wartime Foundations of U.S. Hegemony. *Sociological Inquiry*. 1997; 67:1–26.
- Minton, Henry L. Charting Life History: Lewis M Terman's Study of the Gifted. In: Morawsky, JG., editor. *The Rise of Experimentation in American Psychology*. New Haven, Conn: Yale University Press; 1988. p. 138-61.
- Mitchell, Broadus. *Depression Decade: From New Era through New Deal, 1929–1941*. New York: Rinehardt; 1947.
- Modell, John. Did the 'Good War' Make Good Workers?. In: O'Brien, Kenneth Paul; Parsons, Lynn Hudson, editors. *The Home-Front War: World War II and American Society*. Westport, Conn: Greenwood Press; 1995. p. 139-55.
- Modell, John; Goulden, M.; Magnusson, S. World War II in the Lives of Black Americans: Some Findings and an Interpretation. *Journal of American History*. 1989; 76:830–48.
- Modell, John; Haggerty, Timothy. The Social Impact of War. *Annual Review of Sociology*. 1991; 17:205–24.
- Nambodiri, Krishnan. *Demographic Analysis*. San Diego, Calif: Academic Press; 1991.
- Nash, Gerald D. *World War II and the West: Reestablishing the Economy*. Lincoln: University of Nebraska Press; 1990.
- Pavalko, Eliza K.; Elder, Glen H., Jr; Clipp, Elizabeth C. Worklives and Longevity: Insights from a Life Course Perspective. *Journal of Health and Social Behavior*. 1993; 34(December):363–80. [PubMed: 8034952]
- Polenberg, Richard. *War and Society: The United States, 1941–1945*. Philadelphia: Lippincott; 1972.
- Ryder, Norman B. The Cohort as a Concept in the Study of Social Change. *American Sociological Review*. 1965; 30:843–61. [PubMed: 5846306]
- Sampson, Robert J.; Laub, John. Socioeconomic Achievement in the Life Course of Disadvantaged Men: Military Service as a Turning Point, circa 1940–1965. *American Sociological Review*. 1996; 61:347–67.
- Selective Service System. Special Monograph. No. 6., vol. 1: Text. Washington, D.C: Government Printing Office; 1947a. Industrial Deferment.
- Selective Service System. Special Monograph. No. 8. Washington, D.C: Government Printing Office; 1947b. Dependency Deferment.
- Selective Service System. Special Monograph. No. 6, vol. 2: Appendices. Washington, D.C: Government Printing Office; 1947c. Industrial Deferment.

- Selective Service System. Special Monograph. No. 12, vol. 2: Appendices. Washington, D.C: Government Printing Office; 1948. Quotas, Calls and Inductions.
- Sorokin, Pitirim A. Man and Society in Calamity. New York: Dutton; 1942.
- StataCorp. Stata Statistical Software: Release 7.0. College Station, TX: Stata Corporation; 2001.
- Stolz, Lois Meek. Father Relations of War-born Children. Stanford, Conn: Stanford University Press; 1954.
- Stouffer, Samuel A.; Suchman, Edward A.; DeVinney, Leland C.; Star, Shirley A.; Williams, Robin A, Jr. The American Soldier, vol. 1: Adjustment during Army Life. Princeton, N.J: Princeton University Press; 1949.
- Tuttle, William M, Jr. Daddy's Gone to War: The Second World War in the Lives of America's Children. New York: Oxford University Press; 1993.
- U.S. Department of Commerce. Sixteenth Census of the United States: 1940—Population, the Labor Force, Usual Occupation. Washington, D.C: Government Printing Office; 1943.
- U.S. Temporary Controls Office, Historical Reports on War Administration, War Production Board. Industrial Mobilization for War: History of the War Production Board and Predecessor Agencies, 1940–1945. Washington, D.C: Government Printing Office; 1947.

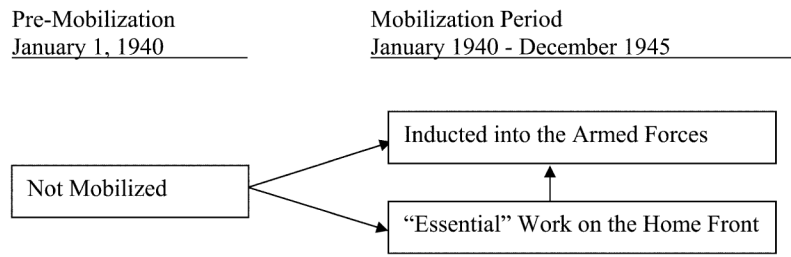


Fig. 1.
Transitions to military induction and essential work, 1940–45

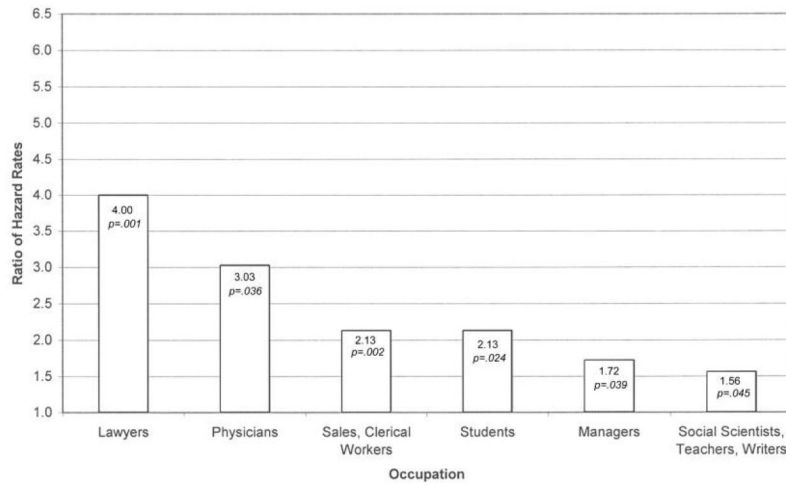


Fig. 2. Estimated ratios of hazard rates of essential war work: engineers and scientists over other occupations

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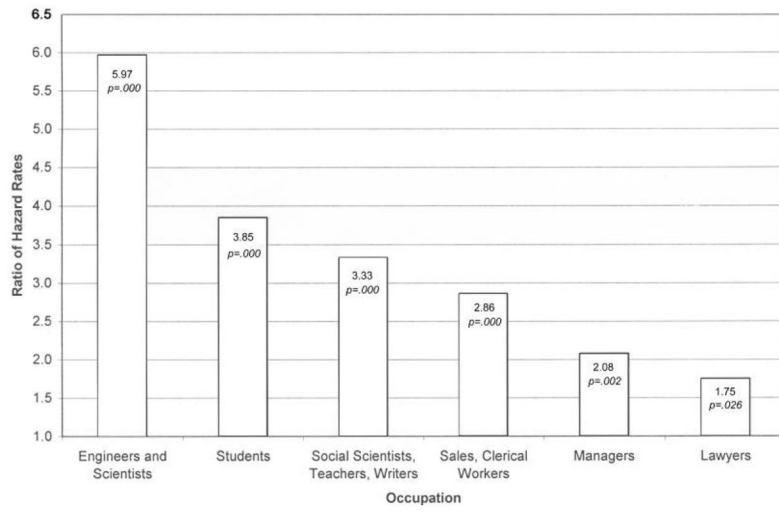


Fig. 3. Estimated ratios of hazard rates of military induction: physicians over other occupations

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TABLE 1

Age of Stanford Terman Men by Birth Cohort at Selected Historical Events

Date	Event	Age of Men	
		1900–1910	1911–20
1906	San Francisco earthquake	1–6	...
1914–18	World War I	4–18	0–7
1921–22	1920s depression	11–22	1–11
1923–29	General economic boom	13–29	3–18
1929–33	Great Depression, onset and depth	19–33	9–22
1933–36	Partial recovery, status	23–36	13–25
1937–38	Economic slump	27–38	17–27
1939–40	Incipient stage of war mobilization	29–40	19–29
1941–43	Major growth of war industries and military forces	31–43	22–32
1945	End of World War II	35–45	25–34
1950–53	Korean War	40–53	30–42
1957	Peak of baby boom	47–57	27–46
1963–73	Era of Vietnam War	53–73	43–62
1973	End of postwar affluence	63–73	53–62

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TABLE 2

Characteristics of the Terman Men by Mobilization Status

Social Factors	Essential War Work		Military Service	
	Yes	No	Yes	No
At start of war (1940):				
Age ^a	29.6	29.9	28.9	30.4 ***
1911–20 cohort	50.5	47.0	56.7	42.4 ***
Health ^b	4.4	4.4	4.5	4.4
Education ^a	12.9	12.7	13.3	12.4 ***
Ever married	65.0	63.1	48.3	74.8 ***
Has a child	60.3	65.6	49.3	73.6 ***
Prewar occupation:				
Engineer, scientist	18.5	7.8 ***	6.0	12.9 **
Physician	1.6	5.5 **	9.0	1.8 ***
Lawyer	3.8	9.4 **	12.0	5.7 **
Manager	13.0	11.6	15.0	10.0 **
Social scientist, teacher, writer	22.3	15.9 **	16.7	17.8
Sales, clerical worker	17.9	19.5	20.3	18.4
Student	22.8	30.3 *	21.0	33.2 ***
Career floundering	21.9	18.0	21.2	17.4
Supervisor	22.5	18.9	21.2	18.8
Work life progress	51.3	47.3	48.4	48.2
Postwar:				
Occupation different than in 1940	79.3	53.6 ***	60.3	59.2
Supervisor, 1948	47.2	38.0 **	35.3	43.7 **
Work life progress, 1946–72	60.4	59.9	61.3	59.1
No. of men ^d	156–184	464–604	256–300	362–488

NOTE.—The number of missing cases varies across variables. Values are percentages except where otherwise indicated.

^aValue is mean years.

^bFor health 1 = low, 5 = high; mean score is shown.

* $P < .10$.

** $P < .05$.

*** $P < .01$.

TABLE 3
 Estimated Ratios of Hazard Rates of Mobilization for Occupation and Other Prewar Characteristics

	Military Induction					
	Essential War Work (1)		Essential War Work Not Included (2a)		Essential War Work Included (2b) ^a	
	Ratio	P-Value	Ratio	P-Value	Ratio	P-Value
Prewar characteristics (1940):						
Age	.98	.273	.96**	.035	.96**	.020
Married	.95	.945	.45***	.000	.44***	.000
Has a child	.82	.251	.70***	.008	.68***	.004
Prewar occupations relative to lawyers:						
Engineers and scientists	4.00***	.001	.25***	.000	.30***	.000
Physicians	1.35	.638	1.64**	.049	1.75**	.026
Managers	2.37**	.044	.78	.253	.85	.455
Social scientists, teachers, writers	2.58**	.020	.50***	.001	.53***	.004
Sales, clerical workers	1.89	.127	.57***	.009	.61**	.020
Students	1.91	.178	.45***	.003	.46***	.003
Home front mobilization status:						
Essential war work						
Likelihood ratio χ^2		43.70***		153.07***		182.13***
df		11		11		12
No. of events		177		301		301

NOTE.— $N = 778$. Ratios and Wald chi-square P -values are from Cox proportional hazard models. Models include indicator for unknown marriage status.

^aThe likelihood ratio chi-square test statistic rejects model (2a) in favor of model (2b) ($P < .001$).

* $P < .10$.

** $P < .05$.

*** $P < .01$.

TABLE 4

Postwar Occupation Difference (1940–48) and Supervisory Status (1948): Adjusted Odds Ratios

	Occupation Different In 1948 ^a				Supervisor in 1948 ^b					
	Baseline	1911–20		Cohort Interaction		Baseline	1911–20		Cohort Interaction	
		1911–20	1900–1910	1900–1910	1911–20		1911–20	1900–1910	1900–1910	1911–20
Held essential war job relative to:										
All other men	2.89 *** (.000)	3.49 *** (.002)	2.52 *** (.002)	1.39 (.518)	1.34 (.156)	2.21 ** (.020)	.94 (.836)	2.36* (.066)		
Veterans only ^c	3.68 *** (.000)	6.98 *** (.000)	2.30 ** (.016)	3.04 *** (.045)	1.84 ** (.023)	2.11 ** (.049)	1.61 (.206)	1.31 (.609)		
Veterans relative to nonveterans	.77 (.185)	.48 ** (.019)	1.08 (.765)	.45 ** (.043)	.72 (.132)	.96 (.894)	.58* (.065)	1.66 (.244)		
Likelihood ratio χ^2	76.584 ***	82.461 ***			77.106 ***	80.902 ***				
<i>df</i>	7	9			9	11				
No. events/no. men	325/562				210/505					

NOTE.—Wald chi-square *P*-values are in parentheses. These logistic regression models include dichotomous variables for cohort, married in 1940 and prewar work life characteristics, indicators for unknown marital status and prewar work life characteristics, and the mobilization variables.

^aPrewar work characteristic is floundering prior to 1940

^bPrewar work characteristics are prewar supervisory status and work life progress by 1940.

^cThe 27 men who held essential jobs and were inducted into the armed forces are dropped from the model.

* *P* < .10.

** *P* < .05.

*** *P* < .01.

TABLE 5

Postwar Work Life Progress, 1946–72: Adjusted Odds Ratios

	Saturated		
	Baseline	Officer Combat	1911–20
Held essential war job relative to:			
All other men	1.09 (.703)	1.15 (.540)	1.11 (.753)
Veterans only ^a	1.20 (.478)		1.17 (.605)
Veteran groups relative to nonveterans:			
Veterans, no distinction	.93 (.711)		
Not officers, no combat		.55* (.079)	.66 (.324)
Officers, no combat		1.35 (.281)	1.09 (.849)
Not officers, combat		.51** (.034)	.68 (.350)
Within veteran contrasts:			
Officers relative to all other vets		2.44*** (.004)	1.65 (.215)
Combat relative to all other vets		.92 (.784)	1.03 (.948)
Likelihood ratio χ^2	24.753***	33.211***	35.871***
<i>df</i>	7	9	13

NOTE.—*N* = 508; no. of events = 303. The logistic regression models include dichotomous variables for cohort, married in 1940 and work life progress by 1940, and work life progress by 1940, and the mobilization variables. Wald chi-square *P*-values are in parentheses.

^aThis excludes 27 men who held essential jobs and were later inducted.

* *P* .10.

** *P* .05.

*** *P* .01.