Warfare and Welfare: Military Service, Combat, and Marital Dissolution

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An often neglected question—by both those who wage war and those who study it—is what are the social costs of warfare and preparing for war?¹ Given the large-scale military conflicts that occurred over the last century, understanding the impact of military service on veterans' lives and welfare remains a critical social concern, particularly if military conflict has long-term impacts on the lives of those involved. This article attempts to increase our understanding by examining how military service and combat experience affect a vital societal institution: marriage. The link between warfare and marital health is also politically important, because the welfare of military veterans can affect a broad spectrum of political matters, ranging from military recruitment and retention to public support for the use of force abroad.

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The central feature of our analysis is a statistical examination of the relationship between military service and the duration of men's first marriages over the course of most of the past century using the National Survey of Families and Households (NSFH).² We exploit data on 3,800 men who were interviewed in the late 1980s and early 1990s about (among other things) their marital history and their military service. These data allow us to explore the impact of military service in the different wars, of being in combat situations during military service, and of an array of other demographic correlates associated with marriage. Duration analysis lets us incorporate the effects of these variables on the risk of marital duration/dissolution across the life course and test a set of hypotheses related to military service.

Background

The effects of war on soldiers and their communities have been the subject of concern since the first organized combat between political entities. As John Modell and Timothy Haggerty explain, "The warrior's image, his wounds, and the world he comes home to are a story that has been retold in Western culture at least from the time of Homer." Indeed, the struggle of veterans has been the source of great inspiration for creative artists in the oral tradition, in print, and on screen. The family life of the returned soldier has been an important part of this tradition as far back as *The Odyssey* and continuing up to the recent blockbuster, *The Patriot*. In much of the public discourse in America on the returned soldier, there is a popular notion that veterans, particularly Vietnam vets, struggle with their personal relationships upon returning from the battlefield. Is this cultural tale true? And is it more or less true depending on the particular war?

In this section we examine the academic literature relevant to such questions about the effects of military service and war on the personal relationships of veterans. One of the most obvious aspects of this corpus of work is that it is virtually fixated on Vietnam. Few studies focus on other wars or make cross-conflict comparisons.⁵ Examinations that do gaze elsewhere tend to look only at the general effect of war on divorce rates or are purely anecdotal or qualitative. Despite the emphasis on Vietnam, however, several interesting studies on veterans and marriage do exist.

World Wars I and II are examined in two of the earliest of those that comment on the effects of war on marital health. David Glass, examining divorce in England and Wales from 1858 to 1934, provides statistical evidence of much higher divorce rates in the post-World War I period. He then argues that these increases were due to particular wartime phenomena such as long-separations, "abnormal tension resulting, for some people, in a high degree of sexual recklessness," and the wartime rise in "unsuitable or purely 'war-time'" marriages.

Griselda Rowntree and Norman Carrier essentially update Glass's study to include the period up to 1957. They make similar claims (particularly concerning "hasty" marriages) to explain the postwar upswings in divorce, adding such factors as the higher wartime wages of workers of both sexes and the wartime transfer of younger adults to "areas and duties where traditional codes of behavior were sometimes no longer observed." Unfortunately, both of these works fail to examine the effect of combat experience as a cause of marital instability in the postwar environments.⁸

World War II is also the focus of an especially interesting piece by Eliza Pavalko and Glen Elder, Jr. that does look at the effect of combat experience and veteran status on marital stability. Examining the effects of WWII on divorce using a longitudinal sample, they conclude that "Military service destabilizes marriages" since "Men who served in the military were more likely than the nonveterans to have divorced by 1955." Furthermore, Pavalko and Elder find that older entry veterans and combat veterans who were married before their military service had a greater risk of divorce than younger and noncombat veterans.10 However, contrary to the claims of the earlier studies discussed above. they argue that "hasty" marriages occurring during the war were not a cause of the increased postwar divorce rate. Indeed, they find that these marriages were "actually less likely to end in divorce than marriages begun before 1940."11 Although this is certainly an intriguing article, Pavalko and Elder's results may be considerably biased, since their sample scored higher on standardized intelligence tests than the normal population, was nearly all white, and came from a higher than average socioeconomic background.

The Korean War's label as "the forgotten war" is truly deserved in the literature on war and marriage. No studies we found look specifically at the Korean War and most make only a passing reference to it in association with WWII. The reasons for this neglect are unclear, but probably stem from this conflict's temporal proximity to WWII. Results presented later suggest that this omission is unfortunate.

The Vietnam War, on the other hand, has been the subject of most studies on the effects of military service and combat on marriage. These offer widely diverging results, some claiming large differences between combat veterans, noncombat veterans, and nonveterans and others, finding no differences between these groups.

Josephina Card's work best exemplifies the no-difference school of thought. She argues that in the long term, there are no statistically significant differences in the marital stability of the three subject pools she examined: Vietnam veterans, non-Vietnam veterans, and nonveterans. One difference she does report is that her data surprisingly suggest that, "non-Vietnam veterans had the least-stable family lives." She also finds that Vietnam veterans married before their military service had a greater likelihood of divorce in their first year out of the service than other veterans. However, she argues that "after this first vulnerable year, Vietnam veterans' marriages were at least as stable as those of other veterans." 15

In two later studies, Vaughn Call and Jay Teachman obtained similar results. In their 1991 article, these authors argue, as Card does, that divorce rates over the long term are no different for vets and nonvets, except for those with very intense combat experiences. ¹⁶ In their later panel study, Call and Teachman found that wartime and prewartime marriages were not significantly affected in the long term by military service in Vietnam. ¹⁷ However, they do argue that marital instability actually decreased for those whose first marriages occurred after military service. ¹⁸

Several scholars find that Vietnam veteran status and combat experience do affect marital stability. For example, Robert Laufer and M. S. Gallops assert that Vietnam veterans were actually less likely to get divorced than nonveterans, but that those with combat exposure (particularly post-1967) had higher rates of divorce than other groups. 19 Ellen Frey-Wouters and Robert Laufer reach similar conclusions. They argue that their findings "indicate that, indeed, combat and witnessing of and participation in abusive violence are related to the formation and breakdown of intimate interpersonal relationships." 20 But this does not necessarily hold (unless post-1967 warfare was significantly worse for combatants) because it seems that more than just combat drove their results, since they found that pre-1968 Vietnam veterans had "significantly lower rates of divorce" while post-1967 Vietnam veterans had "alarmingly higher rates of divorce." This suggests that there was something crucial about the sociopolitical atmosphere of the post-1968 era that interacted with military service or combat experience rather than either of the latter in isolation. Lastly, Cynthia Gimbel and Alan Booth similarly find that "Combat...affects marital quality and stability" due to the increased stress and behavioral problems it leads to in the

postwar lives of veterans.²² However, contrary to Frey-Wouters and Laufer, they do not find evidence of a differential effect on marriage of post-1967 versus other periods of Vietnam service.²³

If the popular notion and the difference school's view concerning veterans' difficulties in love and marriage are true, why might this be the case? Some argue that the explanation lies in the particular nature of combat and the trauma caused by especially intense combat experience. Others contend that it is due to the physical separation of marriage partners.²⁴ Still others emphasize the dilemmas of hasty marriages and marrying during the admittedly "unusual times of war."²⁵ Another group stresses the disruption of the "normal life course" or of patterns of behavior developed in families during the absence of the father.²⁶ Finally, others focus on the indirect effect combat has on marriage as a cause of veterans' marital destabilizing behavior.²⁷

Hypotheses

More than anything, the foregoing works point out the unresolved nature of our understanding of the relationship between military service and marriage duration. In this section we briefly outline some hypotheses that can be tested using NSFH data, and identify the results that would be consistent with each hypothesis. Our hypotheses flow both from the literature just discussed and from the nature of data that can be used to answer our questions. Note that these hypotheses are *not* mutually exclusive, nor are they intended to be comprehensive. Our analysis is primarily a way to inform future theory-building, not a resolution of the complicated questions posed.

The first hypothesis is that military combat creates long-term psychological and emotional problems that increase the risk of marital dissolution, which we will refer to as the "combat stress hypothesis." Obviously this hypothesis is confirmed if indicators of combat experience raise the probability of marital failure after controlling for other military and demographic covariates. If combat were the sole determining factor, its effect would possibly vary across wars, but noncombatants would not differ from nonveterans.

The next two hypotheses concern the relationship between the time of marriage and time of military service. It is reasonable to believe that time away from a spouse will weaken marriage bonds and increase the probability of dissolution, which we call the "separation hypothesis."²⁹ Following it, marriage that occurs before the start of the husband's time of service should be associated with a higher probability of marital

dissolution than marriages occurring after service commences. A related notion is the "hasty marriage hypothesis," which implies that a draft notice causes couples to form marriages hastily and, therefore, sometimes unwisely. Thus marriages that are induced by a draft notice or by a patriotic call to volunteer may end up raising the probability that they will dissolve prematurely.³⁰

Fourth, a returning soldier comes home to a social milieu that may affect the durability of his marriage, which we label the "social interaction hypothesis." Although we can neither sharply identify how this can be investigated nor even suggest the nature of the hypothesized social interactions, we can identify changes in the impact of military service across time periods and different military conflicts, which may give us clues about how the veteran's interaction with his social context affects the durability of his marriage. For instance, the identity formation of veterans following their experience depends on changing social attitudes towards military service and towards different wars. Probably the most important interaction results from the trend in divorce rates in society at large. It is a quite possible that the stability of veterans' marriages changed over time at a different rate (and possibly for different reasons) than marriages in general.³¹

Data

The NSFH is a national random sample of the noninstitutionalized adult (19 years of age or older or married) population in the contiguous United States. Wave I of the survey was conducted from March 1987 through May 1988. During this period, one adult in each household was randomly selected as the primary respondent for a total of 13,008 subjects. Wave II constitutes re-interviews of the original sample, including ex-spouses and surviving widows, conducted from July of 1992 through August of 1994. The sample included the 3,800 respondents who were male and who had been married at least once. Those whose first marriage had ended prior to the onset of military service were not included. Military personnel living on base were also not included in the sampling frame; our sample is, therefore, likely to underrepresent active duty military personnel at the time of the survey.³²

The NSFH is designed to provide extensive data on the family experience in the United States, which, fortunately, include a considerable amount of retrospective life-history information. Of particular interest for our purposes are the detailed marital histories, from which we were able

to identify not only information about the respondent's current marriage, but previous marriages as well. We thus learned when each marriage began and ended, including when the couple stopped living together.

The dependent variable in the following analysis is the duration of the first marriage, or the amount of time (measured in months) between the date of marriage and the date of first separation (or divorce date if separation date is not observed). The marriage is considered dissolved from then on, regardless of whether or not the couple reunites. For those whose first marriages had already dissolved by the time of Wave I or Wave II interviews, we were able to identify the exact duration of those marriages. Veterans who were still in their first marriage at the time of their last interview were effectively censored (see discussion in the next section). Other first marriages are effectively censored by the death of one of the partners, since we cannot determine how long the marriage would have survived had it stayed intact. We caution the reader that since we wanted to have a cleanly defined dependent variable (duration of first marriage until the first separation or death), care must be taken in extrapolating the results to a discussion of marital stability in general. which includes transitions in and out of separation and even remarriages with the original spouse. The Cox model, discussed below, provides an appropriate method of estimation for data that contain both completed and censored duration times.

Our primary focus was the impact of military service on marital duration, and we were able to determine from the NSFH three important pieces of information relevant to military service: the beginning date of service, the ending date, and whether or not the respondent was in combat. Unfortunately, we do not know *where* the respondent served, only the time period. Therefore we infer service in WWII, Korea, and Vietnam from the dates of service.³³ A veteran who reports a time of service that overlaps at all with the time period of the particular war is designated as serving in that war. Although the beginning and ending dates of each conflict are more complicated than they appear at first glance, we used the following time periods to designate each war:

WWII: 7 December 1941 – 2 September 1945

Korea: 27 June 1950 – 27 July 1953 Vietnam: 7 August 1964 – 27 January 1973

Furthermore, in some of the analysis to follow, we follow the lead of Laufer and Gallops and Frey-Wouters and Laufer, and differentiate Vietnam service by whether it occurred before or after 1968.³⁴

In estimating models of marital duration, controlling for age at marriage and marriage cohort is a critical empirical issue. Because the period of analysis spans most of the twentieth century, time of marriage proxies for several key social changes that may have led to large increases in the divorce rate at all age levels could. We also controlled for the socioeconomic and demographic variables that describe the veteran's status at the time of marriage. These include race (black, non-Hispanic whites, Hispanics, and other), religion during childhood (Catholic, non-Catholic, and "no religion"), as well as whether the respondent changed religious affiliation at marriage, and educational attainment (measured as the deviation from the cohort-specific average).35 We also included the educational attainment of the veteran's father and mother as well as an index of socioeconomic status constructed by the NSFH investigators that is based on the occupation of the veteran's father.³⁶ In addition, we were also able to include a limited set of variables for the veteran's first spouse, including age at marriage, education level, whether or not his wife had had a previous marriage, and whether she had a child prior to marriage. We are also able to identify whether the wife changed religions at the time of marriage.

These demographic variables are a fairly good match to the known predictors of separation and divorce in other empirical studies. The empirical literature has identified both micro-level and macro-level variables associated with marital dissolution.³⁷ On the macro level, the legal shift from fault to no-fault divorce, economic cycles, lessening dependence on the family institution, sex ratios, changing gender roles, lower levels of social integration, and changing cultural norms are all contributors, to some extent, to changes in divorce rates. Among microlevel variables, several demographic and life course factors have been shown to influence marital stability. Second marriages or marriages where stepchildren are present are more likely to run into problems than first marriages. Parental divorce increases the probability that the children of these broken unions will eventually divorce. Cohabitation before marriage, premarital pregnancy, and the bearing of children prior to marriage all lead to a higher risk of divorce. However, bearing children within a marriage can be a stabilizing influence, at least with the first child. Age is also a consideration. The younger partners are at marriage, the greater the likelihood that they will divorce. Race is another factor in marital stability; several researchers point to the consistently higher divorce rates among blacks than whites, although no definitive explanation for the disparity has been presented. Finally, it has been welldemonstrated that as people age they are less likely to divorce.

A central concern in using retrospective data in a prospective fashion is that people are systematically missing from the data set due to death or institutionalization. If mortality is significantly related to wartime service, then the data contain a bias that cannot easily be overcome.³⁸ Although we are sensitive to this concern, we fail to see a viable alternative for estimating the differential consequences of different wars than to proceed with the retrospective data that is available. In 1987 the WWII veterans were young enough that the large majority were still alive, and in 1993 the Vietnam veterans were old enough that they had had sufficient time since the war to develop a marital history that reasonably can be included in the analysis.

Notwithstanding these concerns, we think that the NSFH has great strengths for addressing the questions posed in this analysis. The sample is randomly drawn, representative of the noninstitutional U.S. population, very large (compared to most used in the existing literature), and covers the adult population at a point in time that allows reasonable comparisons across the different military conflicts. In attempting to be forthright about problems with the NSFH data, we have not, perhaps, sufficiently focused on the weaknesses of data sets used by other researchers to analyze similar questions. These include small, nonrepresentative samples, often constrained to narrow time intervals. Furthermore, existing studies focus either on WWII vets or Vietnam vets (but not both), and no one, to our knowledge, has concentrated their efforts on the forgotten veterans of Korea.

Methods

A key feature of marriage is that the probability of marital dissolution changes over the course of the marriage. Standard regression models such as ordinary least squares or logistic regression have difficulty in appropriately accounting for this "duration dependence." Duration analysis (sometimes referred to as survival analysis or hazard analysis) is the tool of choice for understanding the impact of covariates on the odds of marital dissolution. The following sections briefly outline the essential features of the Cox Proportional Hazard Model, which is the most frequently employed technique for estimating duration models.³⁹

The heart of a duration model is the "hazard function." The hazard of marital dissolution at time t is the probability of failing at t given that the marriage has survived until that time. If we define the hazard function as h(t), the Cox model assumes that h(t) is given by $h(t) = h_0(t)e_{X'B}$, where X is a vector of k covariates, B a vector of k coefficients (thus, $x = b_1x_1 + b_2x_2 + ... + b_kx_k$), and h_0 is the "baseline hazard." The

role of covariates is to shift the baseline hazard function according to the estimated coefficients. These can be converted easily into hazard ratios, which are reported here. A hazard ratio of 1.3, for instance, means that a unit change in the covariate results in a 30 percent increase in the conditional probability of dissolution. The baseline hazard function can take any form and need not be estimated, as opposed to parametric hazard functions that assume a particular functional form.

As described earlier, the duration times in this analysis are often "censored," which means that the statistician is able to tell only that the marriage survived up until the point of censoring, but knows nothing after that point. Marriages in our data are censored because the marriages were still intact at the time of the latest available interview (either Wave I or II). Furthermore, couples in the analysis face, in the Cox terminology, "competing risks"—the risk of dissolution, of death, and (from our perspective), of not appearing in the Wave II data. Under the standard assumption that these competing risks are independent, the hazard for each can be estimated separately. Incorporation of failures of other types is equivalent to a single-risk model with right-censoring of the data. In practice, this is accomplished by treating missing observations of the data as censored at the point where the observation drops out of the analysis (either through death or through failure to appear at the follow-up interview). The Cox framework allows us to incorporate the information we do have (for instance, that the marriage survived at least until the time of the Wave I interview) while not imposing any assumptions on what happens to the marriage (or what would happen) after the point of censoring.

In sum, the Cox model allows a simple and natural way to incorporate both duration dependence and a loss of observations due to death or failure to locate the respondents. Discrete dependent variable models such as logit or probit (which would model the probability that a marital dissolution occurred within a fixed time period), on the other hand, typically necessitate the deletion of observations that do not last until the end of the survey period. Selection on completion of the survey period can introduce significant bias. Perhaps more importantly, logit or probit techniques cannot easily accommodate duration dependence. These important problems are avoided in the Cox framework.

Results

Before proceeding to the results of the duration analysis, it is illustrative to see how the experience of veterans and nonveterans varies across marriage cohorts. These results are given in Table 1 below, where time categories are divided to correspond roughly with the WWII, Korean, and Vietnam periods and the periods between the wars. Although these statistics do not account for other variables, such as age at marriage, they begin to tell a story about the relationship between military service and marital stability over the past several decades.

From Table 1 we can draw three quick lessons to be further developed. First, marital dissolution increased rapidly starting in the middle part of the century. Of course this is well-known, but it is worth keeping in mind that all the results estimated here need to be interpreted in light of overall trends in marriage stability. Second, WWII veterans seem had to face no adverse effects from service. Indeed, those who were married following the war a significantly lower rate of dissolution than those who did not serve. Third, veterans who married in the periods following the Korean and Vietnam wars had significantly higher dissolution rates than their nonveteran counterparts (though it should be noted that a portion of those married during the war were actually veterans of that war, especially during Vietnam, where the length of time in service was short relative to the length of the war).

The final point needs particular emphasis, which is the difference between the 1946-1953 and the 1954-1959 periods. The 10-year dissolution rate for nonveterans increased only slightly, from 11.6 percent to 12.9 percent, but the rate for veterans almost doubled, increasing from only 8.7 percent to 18.7 percent, with the primary difference that most of the marriages in the first group were WWII veterans, whereas those in the second period were primarily Korean war veterans. We see a similar jump in the post-Vietnam cohort of marriages, from 24.2 percent to 32.4 percent for nonveterans, as opposed to 21.4 percent to 41.6 percent for veterans. Although post-Vietnam differences are larger in absolute terms than the post-Korean War jump, they are smaller in

Trends in Marriage Dissolution Rates: Veterans and Nonveterans

Table 1

				10-year di	10-year dissolution rates						
Year of Marriage	N	% Veterans	All	Veterans	Nonvets	Ratio: Vets/					
1935-1945	402	47.1%	11.5%	11.5%	11.4%	Nonvet 1.01					
1946-1953	411	70.6%	9.6%	8.7%	11.6%	0.76					
1954-1959	314	64.4%	16.6%	18.7%	12.9%	1.45					
1960-1973 1974-1980	1023 749	49.1% 24.6%	22.8% 34.8%	21.4% 41.6%	24.2% 32.4%	0.88 1.28					

relative terms, since the overall divorce rate increased substantially over this period (note the ratios in the last column of Table 1). These results dramatically illustrate that a fundamental shift occurred between WWII and the Korean war in the association of military service with marital stability (these results are even more striking in light of the sharp increase in divorce immediately following WWII).

The estimates of the hazard model described in the previous section give a much more detailed view of the impact of military service, including combat, on the survival of the first marriages of men in this sample. Results are found in Table 2. The results are represented as conventional hazard ratios, and all estimates are performed with STATA 7.0 using robust (heteroskedasticity-consistent) standard errors. Sampling weights supplied by NSFH are also incorporated.⁴⁰

The demographic variables in Table 2 are largely consistent with our expectations. The first block of coefficients reveal that time of marriage is the dominant indicator of dissolution risk. Compared to the marriages performed before 1930, the hazard ratio rises sharply and consistently across time, reaching a peak in the late 1970s. Age at marriage also follows the expected pattern, with the hazard of dissolution decreasing with age (the reference category is 20-24). Education lowers the hazard, but, surprisingly, only slightly. Relative to whites, blacks and other races have a higher hazard of dissolution, while Hispanics have a lower risk. Veterans raised as Catholics actually have a slightly higher hazard rate (although it is not statistically significant), but those without religious affiliation experienced a 46 percent higher hazard rate. Interestingly, those who changed religions at marriage had a lower hazard of dissolution. Finally, the veteran's father's socioeconomic status had no significant impact on his dissolution risk, and the hazard of marriage increased marginally with the education level of the respondent's parents.

Characteristics of the recruit's spouse also significantly affect marital dissolution. Marriage in the teen years, previous marriages, and having a child at the time of marriage significantly increased the hazard ratio. Education lowers the hazard rate, but only slightly, and changing religion at the time of marriage (likely to match with that of the veteran) is significantly associated with a lower rate.

Turning to the military variables, we find two important characteristics of service. The first was mentioned earlier: a dramatic shift occurred between WWII and Korea in the impact of service on marital dissolution. After controlling for other variables, the Korean war veterans had a 26 percent higher hazard of dissolution than did nonveterans (though this is not statistically significant). However, the difference

Table 2

Proportional Hazard Estimates

Variable Hazard t-stat	Wife's characteristics	18.8 050 0 01.21 -900	1 1 061	1.031	1.045	0.758	0.994 -0.29	3.388 6.41	3.249	0.587 -4.07	Davind of Coming	0 600	0.309		1134	0.673	1050	1016	1.010	s: 0 = Noi 1620 4.03 ***	0.000	Variables	E (WWID 0 938 -0 17	1 873	1 363	0.00	0.855	1.174
	Wife's char	Age at Marriage: 15-19	Age of Marriage, 75-70	Age at Mail	Age at Marriage: 30-34	Age at Marriage: 35-		revious Marriage (1 = yes; 0 = no		Change of lengton at marriage (1 - yes; 0 = no	Doving			TH. 11		Vietnam (1964-1967	Vietnam (1968-1973			Combat (1 = Yes: 0 = No		Marriage/Service Variables	Marriage began before service (WWII	Marriage began during service (WWII	Marriage began before service (Korea	Marriage began during service (Korea	Marriage began before service (Vietnam	Marriage began during service (Vietnam
t-stat		0.12	1.09	1910	0.00	1 77	2.47 **	101	317 ***	4.25 ***	4.63 ***	4.74 ***	5.62 ***	3.71 ***	-2.46 **	-2.41 **	-3.55 ***	-1.28	4.58 ***	96.0-	4.09 ***	1.55	3.27 ***	1.61	0.56	* 89.1	* \$8.1	
Hazard		1.058	1.548	1 297	1471	1 052										0.638	0.250	0.982	1.483				1.456	- 797			1.027	
Variable	Demographic Variables	Marriage Date: 1930-34	Marriage Date: 1935-39	Marriage Date: 1940-44	Marriage Date: 1945-49	Marriage Date: 1950-54	Marriage Date: 1955-59	Marriage Date: 1960-64	Marriage Date: 1965-69	Маттаде Date: 1970-74	Marriage Date: 1975-79	Marriage Date: 1980-84	Marriage Date: 1985+	Age at Marriage: 15-19	Age at Marriage: 25-29	Age at Marriage: 30-34	Age at Marriage: 35+	Education (Years)	Race/Ethnicity: Black	Race/Ethnicity: Hispanic	Race/Ethnicity: Other	Religion: Catholic	Religion: No Religion	Change of religion at marriage $(1 = yes; 0 = no)$	Father's SES	Father's Education (years)	Mother's Education (years)	

Notes: Omitted variables are Mar, Date = Before 1930; Race = White; Religion = Non-Catholic; Age at Marriage = 20-24; Nonveterans. Education is measured as the deviation from cohort-specific means. Period of service is defined in text, and period of service variables are mutually exclusive. Marriage "during service" includes those married within six months of the beginning of the service. N = 3,800; P-values: *p < .1; **p < .05; *** p < .01 between the impacts of WWII and Korea are large and statistically significant, with Korean veterans having more than twice the dissolution rate of the WWII veterans (1.257/.589 = 2.134). The Korean war veterans were also worse off than those from Vietnam, especially those serving in the pre-1968 era. As posited earlier, there is a relatively sharp difference between the early years of the Vietnam War and the latter part.

It should also be emphasized that the marginal effect of service in WWII appears to be beneficial for marital duration. WWII service lowers the hazard of dissolution by 41 percent, although this effect disappears if the veteran saw combat or if the marriage occurred during his military service. It remains an open question whether the beneficial effects are real, in that serving in the war strengthened the marriages of the veterans, or simply reflect differences between the veterans and nonveterans along dimensions not captured in our data. A similar beneficial effect is found for the veterans of the early Vietnam War, though the magnitude is only marginally statistically significant. The differences between the soldiers' experiences in the early war years and those coming in 1968 and later deserve further exploration.

Differences across the wars are intriguing, but they are not statistically robust. The second important finding, however, is robust, which is that combat has a large and statistically significant impact on the veteran's marriage duration, with combat increasing the hazard rate by 62 percent. In other analyses (not shown here), we have found that combat veterans have higher hazard rates than noncombat veterans for each war. However, the sample size is not sufficient to allow us to estimate reliable differences in combat effects across the wars.

Finally, the results in Table 2 also provide only modest evidence that marrying before or during military service increases the probability of marital dissolution. The only case where a significant impact is found is in WWII (hazard ratio = 1.873). This refutes the highly nonintuitive result of Pavalko and Elder, who claim that hasty marriages actually lower the odds of dissolution. Similar effects are not found in other periods, and the differences are not statistically significant (because the number of marriages occurring before or during wartime is small, these effects cannot be estimated with a high degree of precision, a fact indicated by the very low t-statistics).

Discussion

How do the four hypotheses mentioned earlier stack up against the results of the previous section? First, we find convincing evidence that

combat has a significant negative effect across the wars. Second, the separation hypothesis is not supported, since veterans who were married before the war were no more likely to have their marriages fail than veterans who married after it. But given that we do not actually know from the data which couples were separated by military service and for how long, our negative finding here must be considered tentative. Third, the hasty marriage effect is powerful and clearly evident for WWII, but not for later wars. And finally, the differences we find across wars for both combatants and noncombatants suggest the importance of the social interaction hypothesis.

The central empirical finding of this study is that, after controlling for an extensive set of sociodemographic controls, combat significantly raises the probability of marital dissolution. Although this result seems unremarkable, it must be interpreted in light of the sharp conflict in the established literature on this question. Of course we still know little about why combat is detrimental, but the fact that the effect is empirically robust suggests that it is the nature of military service that matters, not necessarily its length. Clearly further work needs to be done to uncover the causal mechanisms.

Some of the most intriguing-yet hard to interpret-findings concern the variance in the effects of military service across the different wars. In particular, the sharp difference between WWII and the Korean War is very surprising, especially since these two wars are so often linked in people's minds. Holding combat and other variables constant, the Korean war veterans have marriages that dissolve at more than twice the rate of WWII veterans' marriages. We suggest that the social interaction hypothesis may play a role in explaining this finding, although it could play out in a number of ways. Perhaps Korean War veterans suffered much higher rates of dissolution because many of then experienced crucial midlife changes at the same time society was also experiencing rapid upheaval.42 This could have diminished the ability of combat veterans to cope with their combat experiences, and thus to be more susceptible to marital woes. This explanation is supported by research suggesting that the negative psychological symptoms of combat that we assume influence marital health can actually worsen with time, present for the first time due to significant life changes, or recur if "hard times...become more pronounced."43

Alternatively, the differential rates of dissolution between WWII and Korea might have been caused by the distinct nature of identity formation for veterans. Korean War veterans had to compare themselves to their very recent successful counterparts in the "great war" against

Nazi Germany and Imperial Japan, and may have felt a comparative sense of inferiority and failure that was only exacerbated by the different homecomings the two groups experienced. One might argue that this contributed to greater risk of "social stress reactions (i.e., feelings of isolation, alienation)" that could lead to less stable marriages.⁴⁴

Finally, some might argue that our results on Korea are simply an artifact of the data or the statistical methods. In our probing on this topic, the difference between WWII and Korea remains robust under all alternative specifications we have tried. Also, it is likely not the case that our Korean results are driven by a very small sample of Korean veterans. The sample consists of 217 veterans from Korea, 442 from WWII, and 471 from Vietnam (with some veterans in each category serving in more than one war). Furthermore, when we examine those marriages that occurred following the Korean War, those veterans were older, better educated, and more likely to be white than nonveterans. These characteristics should make this group *less* prone to divorce, so it is unlikely that the Korea effect is due to demographic differences between veterans and nonveterans.

Almost as striking as the difference between the Korean War and Vietnam Wars is the non-impact of service in Vietnam, since Vietnam is surely the war that most people would assume had the most damaging effects on the lives of military veterans. We find, however, that Vietnam veterans serving during 1968 and later are no different than their nonveteran counterparts, and the pre-1968 veterans are notably better off than nonveterans (although only at the 10 percent significance level) in the hazard of marital dissolution. The cultural tale that Vietnam veterans came home a messed-up lot, unable to form successful marriages, simply is not supported by the data. Of course, those who were in combat have an increased hazard of marital dissolution, but the noncombatants were no worse off as a group than their peers who never served in the military. We suggest that case studies of Vietnam veterans, which are legion, need to account for the fact that all marriages of that generation were facing a much greater risk of dissolution than existed previously, which implies a need for carefully selected control groups.

Implications and Future Directions

Our findings have a number of implications for current public policy. First, given the large number of veterans in the United States, public officials need to understand the challenges posed by military service on the marital stability of our troops. In particular, we suggest that the military should make greater efforts to cushion soldiers as they re-enter society and marriages following combat. Our research is also potentially relevant to ideas currently circulating in the military community, specifically the Marine Corps, as to whether or not to admit married new recruits (though we want to be clear that we are not endorsing either side of the debate). 45 Second, the military needs to care what its impact on society is, because it will affect public support for the defense establishment. The lifestyle difficulties shown in this article may also affect the recruitment and retention of soldiers as the true costs of service affect public perceptions of the desirability of military life. 46 These social costs of war may also dampen public enthusiasm for military intervention abroad. Third, our study affirms the idea that decisions to initiate war and to raise large military forces must be made in light of the effects of combat and military service on society. Unfortunately, this part of the equation is often left unconsidered when policymakers consider the costs and benefits of proposed actions.

By examining a large, random, national sample, we have also been able to point future research in potentially fruitful directions. Combat stress is, indeed, detrimental to marital success, which implies that understanding the nature of military service is very important to understanding the impact of service on marriages and families, probably more than the length of service or the length of separation from one's spouse. Our indicator of combat was relatively crude, so the fact that it yields strong effects is that much more surprising. Studies that account for the type, length, and intensity of combat should find, we expect, even more profound effects.

Given the relative simplicity of our empirical approach, we certainly cannot extract a detailed social history of twentieth century America from a few hazard ratios. But it seems clear to us that a sea change, of sorts, occurred between WWII and Korea. Those men that went off to serve in Korea had a (statistically) significantly harder time keeping their marriages together than did the men who went just a few years earlier to fight in WWII. Was this something unique about the Korean experience, which was a particularly brutal war fought in harsh conditions? Was it because of the unpopularity of the Korean conflict at home that prevented Korean vets from getting the social support that they needed to deal with their experiences? Or was it because they were particularly hard-hit by the social upheavals of the 1960s, given that they were about 7-10 years younger than the WWII generation, who were well into middle-age by the time divorce rates started to skyrocket. We do not have answers to these questions, but paying more attention to the "forgotten war" may teach us more about both the impact of military service on family welfare, and also about the important social changes that this bridge generation faced.

Finally, marital dissolution is only one crude indicator of social cost. For instance, even if marriages do not dissolve, long-term separation is surely an undesirable consequence of military service, if for no other reason than married couples typically enjoy being together. Furthermore, separation from children certainly imposes significant emotional costs on both children and parents. The loss of time together should be valued in any social cost accounting.

Other related questions are also of interest. What is the quality of life within the veterans' marriages? What is the relationship between combat experience and domestic violence and does this contribute to the odds of dissolution? How are the children of veterans affected? Do those veterans who bring home emotional battle scars transfer this heartache to their children, possibly influencing their ability to form successful unions? Hopefully, scholars will consider these and other important questions in attempting to gauge the true cost of warfare.

Notes

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- Of course there are important exceptions. For a helpful review that discusses many of these studies, see John Modell and Timothy Haggerty, "The Social Impact of War," Annual Review of Sociology 17 (1991): 205-224. Other examples include Daniel Kryder, Divided Arsenal: Race and the American State during WWII (New York: Cambridge University Press, 2000); Philip A. Klinkner with Rogers M. Smith, The Unsteady March: The Rise and Decline of Racial Inequality in America (Chicago: University of Chicago Press, 1999); and the slightly older Peter Karsten, Soldiers and Society: The Effects of Military Service on American Life (Westport, CT: Greenwood, 1978).
- Larry L. Bumpass and James A. Sweet, National Survey of Families and House-holds: Wave I, 1987-1988, and Wave II, 1992-1994 [Computer file], ICPSR version (Madison, WI: University of Wisconsin, Center for Demography and Ecology, producer, 1997); Ann Arbor, MI: Inter-university Consortium for Political and Social Research, distributor, 1997).
- Modell and Haggerty, "Social Impact of War," 205. For a similar point, see Terence M. Keane, "Psychological Effects of Military Combat," in Adversity, Stress, and

- Psychopathology, ed. Bruce P. Dohrenwend (New York: Oxford University Press, 1998), 52.
- 4. The struggle of the returned Vietnam veteran has been the subject of much controversy lately, most recently prompting a front page article in USA Today. See Dave Moniz, "Dispelling Myths about Vietnam Vets," USA Today, 16 November 2000, p. 1A. Also see Mackubin Thomas Owens, "Vietnam Veterans Aren't Victims," Wall Street Journal, 13 July 2000, p. A26.
- One study by David Lester compares aggregate divorce rates with the aggregated military participation rate and finds no relationship, but he employs no data actually linking military status and divorce for individuals. David Lester, "The Effect of War on Marriage, Divorce, and Birth Rates," *Journal of Divorce and Remarriage* 19, 1/2 (1993): 230.
- David V. Glass, "Divorce in England and Wales," The Sociological Review 26, 3 (July 1934): 294.
- Griselda Rowntree and Norman H. Carrier, "The Resort to Divorce in England and Wales, 1858-1957," *Population Studies* 11, 3 (March 1958): 202-203.
- 8. Reinhard Seider, on the other hand, argues that soldiers in Vienna often brought back the trauma of World War I to the family. He argues that these "damaged patriarchs" made family life more difficult and hasty marriages in particular suffered greatly in this environment, often ending in divorce. Reinhard Seider, "Behind the Lines: Working-class Family Life in Wartime Vienna," in *The Upheaval of War: Family, Work, and Welfare in Europe, 1914-1918*, eds. Richard Wall and Jay Winter (New York: Cambridge University Press, 1988), 129.
- Eliza K. Pavalko and Glen H. Elder, Jr., "WWII and Divorce: A Life-Course Perspective," American Journal of Sociology 95, 5 (March 1990): 1222.
- 10. Pavalko and Elder, "WWII," 1224.
- 11. Pavalko and Elder, "WWII," 1222.
- 12. Although it does not examine the effects of combat on marital stability, there is one important study that does consider the effects of combat on the psychological welfare of Korean War veterans. See Glen H. Elder, Jr., and Elizabeth C. Clipp, "Combat Experience, Comradeship, and Psychological Health," in *Human Adaptation to Extreme Stress: From the Holocaust to Vietnam*, eds. John P. Wilson, Zev Harel, and Boaz Kahana (New York: Plenum, 1988), 131-156.
- Josephina J. Card, Lives after Vietnam: The Personal Impact of Military Service (Lexington, MA: Lexington Books, 1983), 120. This is true even when controlling for age at first marriage.
- Card, Lives after Vietnam. Concerning this comparison, it should be noted that she did not obtain differences that are statistically significant.
- 15. Card, Lives after Vietnam, 122.
- Vaughn R. A. Call and Jay D. Teachman, "Military Service and Stability in the Family Life Course," *Military Psychology* 3 (1991): 233-251.

- Vaughn R. A. Call and Jay D. Teachman, "Life-Course Timing and Sequencing of Marriage and Military Service and Their Effects on Marital Stability," *Journal of Marriage and Family* 58 (February 1996): 224.
- 18. Call and Teachman, "Life-Course Timing."
- Robert S. Laufer and M. S. Gallops, "Life-course Effects of Vietnam Combat and Abusive Violence: Marital Patterns," *Journal of Marriage and Family* 47 (November 1985): 846 and 848.
- Ellen Frey-Wouters and Robert S. Laufer, Legacy of a War: The American Soldier in Vietnam (Armonk, NY: M.E. Sharpe, 1986), 65.
- 21. Frey-Wouters and Laufer, Legacy of a War, 66.
- Cynthia Gimbel and Alan Booth, "Why Does Military Combat Experience Adversely
 Affect Marital Relations?" Journal of Marriage and Family 56, 3 (August 1994):
 691-703.
- 23. Gimbel and Booth, "Why," 697.
- 24. It should be noted that Jensen et al. actually suggest that separation, though it has some negative features, might defuse stressed marriages. It might be argued that this would decrease dissolution rates. Peter S. Jensen, Ronel L. Lewis, and Stephen Xenakis, "Review Article: The Military Family in Review: Context, Risk, and Prevention," Journal of the American Academy of Child Psychiatry 25, 2 (1986): 226.
- 25. Pavalko and Elder, "WWII," 1216.
- On the first, see Pavalko and Elder, "WWII"; and Call and Teachman, "Life Course Timing." On the second, see Pavalko and Elder, "WWII."
- 27. For example, Gimbel and Booth emphasize that "combat directly increases violent and unlawful (antisocial) behavior and stress, which then affects marital quality and stability." Gimbel and Booth, "Why," 702.
- 28. Note that we are not claiming that "combat stress" is the same as posttraumatic stress disorder (PTSD). Since we have no way of diagnosing PTSD, we cannot speak to the role that it plays in terms of marital duration.
- 29. There is a countervailing force, however, in that military service might actually lower the probability of dissolution, at least temporarily, if couples postpone divorce until after the veteran returns from service (or the inherent problems in the marriage do not appear until after he returns home). This effect is likely seen in the sharp spike in divorce rates immediately following WWII, for instance. This effect would cause our method to understate the impact of military service on marriage duration.
- 30. A very interesting analysis for future research is to explore the impact of the extensive and complex changes that occurred in draft policies across the past century. In general, it was easier for married men to avoid the draft, and easier still if they had dependent children. This was particularly true in periods of peacetime. Although it is hard to tell without information on the individual's draft experiences (as well as the policies of their local draft boards), the overall effect of draft avoidance through marriage is likely to cause a portion of the nonveterans in the sample to form lower

- quality marriages that dissolve more quickly. This means that the effect of military service (relative to the nonveterans) will be understated, though probably only slightly (since it is a hard to imagine that the draft fundamentally affected the types of marriages that men formed). An excellent history of this issue is George Q. Flynn, *The Draft, 1940-1973* (Lawrence, KS: University Press of Kansas, 1993).
- 31. In addition to the impact of military service on identity formation we mentioned above, military culture, with its emphasis on traditional masculine roles, may affect the way that the veteran copes with changing social norms, particularly relating to gender roles within a marriage.
- 32. We do not expect this to significantly affect our results since the large majority of the population who have served have either left the service or live off-base. The most serious potential problem is underrepresenting the post-Vietnam personnel, so some caution is warranted in considering that group.
- 33. This is most problematic when inferring noncombat service in Vietnam. The percentage of all active duty military servicemen who served in the Vietnamese theater of operations is approximately 32 percent. The percentages for WWII and the Korean War are 73 percent and 56 percent respectively. The figures on WWII and Korea come from the U.S. Census Bureau, Statistical Abstract of the United States (1999), 377. The figure for Vietnam was derived from data on the total number serving from the U.S. Census Bureau and the number of personnel serving in the Vietnam theatre of operations from Michael Clodfelter, Vietnam in Military Statistics: A History of the Indochina Wars, 1772-1991 (Jefferson, NC: McFarland, 1995), 245. It is important to note that inferring service in these wars from time of service in the military does not affect our analysis of the influence of combat on marital health. Those reporting combat experience are not likely to have been falsely categorized as combat veterans of these major wars considering the lack of simultaneous large-scale combat operations that would cause us to falsely attribute war-related divorces to any of these wars.
- 34. This distinction is made in order to bring our data to bear on the issue of whether the social context for returned soldiers affected their marriages. There is significant disagreement in the literature concerning this issue. Frey-Wouters and Laufer and Laufer and Gallops argue that those who saw service in the post-1967 period were significantly affected compared to those with pre-1968 service. Gimbel and Booth, on the other hand, find no significant difference between those who served in Vietnam before and after the start of 1968. See Frey-Wouters and Laufer, Legacy of a War, 66; Laufer and Gallops, "Combat and Abusive Violence," 847-849; and Gimbel and Booth, "Why," 697-698.
- This is done to account for the significant changes in average educational attainment in time over the century.
- 36. Bumpass and Sweet, National Survey.
- This paragraph summarizes the review of empirical studies found in Lynn K. White, "Determinants of Divorce: A Review of Research in the Eighties," *Journal of Marriage and the Family* 52 (November, 1990): 904-912.
- Obviously, military service is correlated with mortality in that soldiers die more frequently than do their contemporaries in the civilian population, but this effect is

- unlikely to bias the results here, because even with a prospective study, we would not be able to determine the effect of military service upon those who die while serving. It is war-related mortality (or institutionalization) that occurs after returning home from war that is the potential problem.
- D. R. Cox and D. Oakes, Analysis of Survival Data (London: Chapman and Hall, 1984), provide an extensive summary of Proportional Hazard modeling as well as other duration models.
- 40. We include observations across all time periods. This implicitly assumes that the dramatic changes in marital duration that have occurred over the twentieth century are captured in the time of marriage dummies, which Table 2 shows to be highly significant. It is important to see if the general results hold when estimating the model across narrower time intervals. We have estimated the models by dividing the time period into pre-1960 and post-1960 time periods and find that the general results remain essentially the same.
- 41. Pavalko and Elder, "WWII," 1222-1224.
- 42. We are obviously making an assumption that most WWII veterans had made the transition through these midlife changes before the upheavals of the late 1960s and early 1970s.
- 43. Elder and Clipp, "Combat Experience," in *Human Adaptation*, 136. Elder and Clipp discuss several important studies that make these points, and provide fresh evidence of their own. They find "strong support" for the hypothesis that there is a "significant interaction affect of combat and post-war problems on long-term symptoms." Elder and Clipp, "Combat Experience," in *Human Adaptation*, 142-143.
- 44. Elder and Clipp, "Combat Experience," in Human Adaptation, 134.
- 45. Indeed, the Marine Corps attempted such a move in 1993, but quickly shelved this controversial plan. See Barton Gellman, "Marines Sound Taps for Marriage Ban," Washington Post, 21 December 1993, p. A8; John Lancaster, "Gen. Mundy Apologizes for Order; Marriage Ban Issue Cools Down," Washington Post, 13 August 1993, p. A1; and Len Hall and Eric Lichtblau, "The Issue of Marriage and the Marines; Military: Leathernecks, Spouses Admit to Stresses Created by Dual Loyalty," Los Angeles Times, 13 August 1993, p. A1. According to Thomas Ricks, the ban is likely to be successfully revisited in the near future. Thomas E. Ricks, Making the Corps (New York: Scribner, 1997), 247.

The problems that were at the root of the Commandant's plan and the furor over it prompted the Department of Defense to conduct a significant study of how family status affects first-term enlistees. See U.S. Department of Defense, Office of the Assistant Secretary of Defense for Personnel and Readiness, Family Status and Initial Term of Service (Washington, D.C.: U.S. Department of Defense, Office of the Assistant Secretary of Defense for Personnel and Readiness, December 1993). According to a Defense article based on the report, the study concludes that despite the difficulty in measuring the link between family status and readiness, "family status influences readiness, but the effects are mixed and small and tend to be swamped by factors other than family status." See "Marriage and the First Term Family," Defense 3, 1 (1994): 6-17. Nonetheless, the study does suggest that there

- are some serious issues regarding the married military members' availability for duty, deployments, and assignments relative to single servicemen and women. Also see Department of Defense and HQMC Public Affairs, "Family Status Study Findings Released," *Marines* 23, 1 (January 1994): 31-32.
- 46. Recruitment and retention problems have been significant recently. The Army failed to meet its recruiting targets during the 1997-1998 and 1998-1999 fiscal years, although it improved in the first quarter of the 1999-2000 fiscal year. Indeed, the Army was reported to have had its "worst shortfall since 1979" during the 1998-1999 year, while the Air Force and Navy also had difficulties meeting their goals. Steven Lee Myers, "Drop in Recruits Pushes Pentagon to New Strategy," New York Times, 27 September 1999, p. A1 and A14. Also see Andrea Stone, "Air Force Misses Its Recruiting Aim; Army, Marines, Navy Meet or Exceed Quarter's Goals," USA Today, 14 January 2000, 5A. The National Guard and Reserve forces have also encountered problems in recruitment and retention. See Steven Lee Myers, "New Role of Guard Transforming Military," New York Times, 24 January 2000, p. A1 and A22.

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