

---

## When Nations Call How Wartime Military Service Matters for the Life Course and Aging

Richard A. Settersten, Jr.  
*Case Western Reserve University, Cleveland, Ohio*

Most scholarship on aging is based on cohorts born early in the 20th century, and these cohorts have had significant experience with war. Wartime experiences may therefore be critical but largely hidden variables underlying current scientific knowledge about aging. Evidence marshaled in this article illustrates the powerful insights gained when research on this topic is guided by life-course propositions and data. It reveals how wartime military service, especially during World War II, affected the short- and long-ranging development of recruits. It also highlights the need to better account for the potential legacies of service for physical, psychological, and social functioning in late life. These matters will become increasingly important as sizable World War II and Korean veteran populations move through advanced old age, and as the Vietnam veteran population moves into old age. Systematic attention to the effects of wartime service is necessary to determine the degree to which contemporary knowledge about aging can be generalized to future cohorts.

**Keywords:** *cohort; combat; historical events; veterans; war; World War II; Korean War; Vietnam War*

Most scientific knowledge about aging is based on cohorts born early in the 20th century, and the type and pace of historical events in the last century were remarkable. Military service during wartime in particular was a prevalent experience for members of these cohorts, with rates of military involvement being especially high during World War II (Elder and Chan 1999). In the United States, for example, 15 million men, drawn widely across age and socioeconomic classes, were called to arms during World War II; 60% of these men were born between 1918 and 1927 (now between the ages of 78 and 87), and within this bracket, fully three out of four men served (Modell and Steffey 1988). Peak strength numbers were staggering for most

axis and allied powers, especially when considered as a proportion of the adult population (for cross-national data, see Elting 2001), and by the end of the war, over 110 million men worldwide had been mobilized (Prokhrov 1974). Of the many dramatic historical events of the 20th century, World War II is consistently mentioned by most cohorts of American adults as the event in the last century that had the greatest effects on the course of nations and the world (Schuman and Scott 1989) and on the lives of individuals and families (Settersten and Martin 2002). Similar perceptions exist in Britain (Scott and Zac 1993) and Germany (Maas, Borchelt, and Mayer 1999).

This article points to the important need for gerontologists to systematically evaluate how wartime military experiences 50 years or more ago may matter for functioning of elders and their families. Gerontologists now face a unique and important opportunity, if not a pressing obligation, to understand the legacies of military service for functioning in advanced old age. Attention to these legacies is also necessary for assessing the degree to which contemporary knowledge about aging can be extended to future cohorts. Because gerontology is a relatively young field, most research has been based on cohorts of individuals whose lives were marked by World War II and the Korean War or, for the earliest studies, World War I. The prevalence of wartime experiences for these cohorts, coupled with the absence of attention to historical matters more generally in research on aging, leads to the question of whether wartime experiences are critical but to date “hidden” variables (Spiro, Schnurr, and Aldwin 1997) beneath much scientific knowledge about aging, especially for men. As Davies (2001) suggested, war poses perhaps the single “greatest threat to the physical and mental health of individuals and societies” (p. 99). As we will see, military service during wartime brings significant negative outcomes for veterans and, in some cases, times, and ways, positive outcomes as well.

The effects of wartime military service are considered in three central domains: social, psychological, and physical. A few caveats are important to note. The primary focus of this article is a select but international body of

---

**Author's Note:** An early version of this article was given as an invited address to the Canadian Association on Gerontology, and portions were presented in a colloquium at the Institute on Gerontology at Wayne State University. Special thanks are due to Tanetta Andersson, Alexandra Bohne, Bill Bytheway, Glen Elder, Rick Levenson, Victor Marshall, Robin Patterson, and David Pedlar, as well as the members of the Intergenerational Studies Team of the Institute on Human Development at University of California, Berkeley (Carolyn Aldwin, Pamela Bradley, Philip Cowan, Carolyn Cowan, Connie Jones, Jack McArdle, and Keith Widaman). Correspondence concerning this article should be addressed to Richard A. Settersten, Jr., Professor of Sociology, Case Western Reserve University, 10900 Euclid Avenue, Cleveland, OH 44106-7124; e-mail: richard.settersten@case.edu.

research that illustrates the powerful insights that result when life-course propositions and data guide inquiry on this topic. It especially draws on lessons learned from a handful of precious longitudinal and/or retrospective life history studies in America and Germany: the Terman-Stanford Longitudinal Study of the Gifted; the Berkeley Guidance Study, the Berkeley Growth Study, and the Oakland Growth Study; the Normative Aging Study; the German Life History Study; and the Berlin Aging Study. These insights are offered with an acknowledgment that the perspective they provide is limited within the larger global context. Some literature from Western Europe, Australia, and Asia is, however, represented here. These insights are put forward as a call for research on aging in the United States and abroad to consider how phenomena under study may be driven by life-course dynamics that stem from military service.

These emphases are not meant to dismiss the sizable international literatures that are more clinical or epidemiological in orientation (see also Spiro et al. 1997). These bodies of research offer important perspectives on the effects of military service, particularly with respect to psychological and physical outcomes. Clinical studies, however, are often based on small convenience samples of patients receiving or seeking medical or psychiatric treatment. These studies begin with current pathology and search backward for a wide range of possible origins, some of which may relate to earlier military service. Epidemiological studies, in contrast, are often based on representative samples, but they are generally population based and cross-sectional and therefore reveal little about how military service has shaped short- and long-range outcomes for individuals and families. Of course, there are also many historical accounts of war and its consequences for nations and the world and many biographical or autobiographical accounts of the personal experiences of individuals. These reveal little or nothing about experiences and outcomes that are shared within or across larger social groups.

In targeting a connection between history and aging, I hope in this article to advocate greater sensitivity in empirical research to two widely acknowledged and interrelated theoretical propositions: first, that aging is framed by historical time and shaped by the unique social and cultural conditions that exist at any given point in history and second, that aging is a lifelong process, not one that suddenly begins in the last few decades (Baltes, Lindenberger, and Staudinger 1998; Elder and Johnson 2003; Settersten 1999, 2003). Individuals move into late life with many decades behind them, and experiences in late life are directly and indirectly tied to those in the past. These histories are also not purely individual, for the lives of individuals, families, and cohorts are joined with events in the nation and world, such as times of war, that leave their mark on individual and collective biographies. Complete

understandings of aging patterns and processes require attention to historical matters, yet aging has largely been theorized and researched as if exists in a historical vacuum. The case of wartime military service points to the need for gerontologists to develop their historical imaginations, for the linkages between aging and history are significant and challenging new avenues for scholarship.

In contrast to the clinical and epidemiological approaches described above, the approach advocated here, consistent with the framework of Elder (1999), instead makes military service the explicit focus of investigation and works forward in time, tracing its effects on and through a wide range of life-course outcomes. Social outcomes are considered first: marriage and family, friendships, occupation, education, and income. These experiences directly involve relationships with other people or social institutions, and they often moderate or mediate the effects of historical conditions on internal psychological and physical states, which are discussed in turn. The article concludes by emphasizing why attention to military service deserves a central rather than peripheral role in mainstream research on aging.

## **Social Outcomes**

### **Marriage, Family, and Friendships**

Although World War II posed challenges to marriage, marriage rates did not slow during the war. In fact, the war had the effect of promoting rather than slowing family formation. As Modell and Steffey (1988) illustrated, World War II created a readiness to marry and prompted a quickened schedule of marriage that would become the hallmark of the 1950s and not begin to reverse until the mid-1960s. These patterns are nicely reflected in my own analyses of men from the Oakland Growth Study, 90% of whom served in World War II, and men from the Berkeley Growth Study and the Berkeley Guidance Study, 73% of whom served near the close of World War II or in Korea. Very few of these men were engaged, married, or had first-born children by the year of entry into service (12%, 19%, and 4%, respectively), yet by the year of exit, these proportions had skyrocketed (to 60%, 52%, and 31%). Those men who experienced these transitions later did so almost immediately. Within five years, 74% were engaged, 76% were married, and 42% had first children. These shifts were especially pronounced for Oakland men, who were older at mobilization. These analyses demonstrate that the impact of service will vary depending on where it fits within a sequence of other early-life transitions, making it important to examine dynamics related to entry and exit from service.

Interestingly, the divorce rate just after the war was also high, and this has also been traced to the war. This may have been due to the special circumstances of wartime marriages, which often happened without significant periods of courtship, and because marriages had to endure disruption caused by the dynamics of separation and reunion. Divorce rates for these cohorts are obviously much lower than those for recent cohorts, but studies have suggested that veterans were around 1.5 times more likely to divorce than comparable nonveterans (e.g., Elder and Chan 1999; Elder, Shanahan, and Clipp 1994; Pavalko and Elder 1990). Reasons for divorce, however, may vary as a function of the timing of service. American men between 20 and 26 years of age were most likely to be inducted, but the ages of recruits spanned over 20 years, from as young as 18 to as old as 38 (Modell and Steffey 1988). Older men were more likely to be husbands or fathers before they entered, and service within the context of an existing marriage created significant stress and uncertainty. In contrast, those who met and married during the war were aware of these risks. Wives in existing marriages had not expected to see long periods of separation and loneliness or to feel such sexual pressure and family burden.<sup>1</sup> The war interfered with well-established patterns of relating to one another and reduced abilities to meet financial obligations. Children were also more likely to be present in these marriages, and duty often took fathers away from their sons and daughters.

Combat experience in particular as much as tripled the odds of divorce (Elder and Chan 1999; Pavalko and Elder 1990; see also Kulka et al. 1990; Weiseth and Eitinger 1991). It increased a cluster of symptoms that threatened the degree to which veterans could be nurturing and emotionally available or stable in family roles. These symptoms included difficulty in feeling emotion and close to others, anxiety, depression, hyperalertness, intrusive memories, disturbed sleep due to nightmares, and “explosiveness” in work and family settings when faced with stressful conditions. Depending on the presence and severity of these symptoms, they might constitute post-traumatic stress disorder (PTSD), which is discussed later.

The research cited above also shows that men often felt estranged by their families, for they had lost significant amounts of time with wives or children, and wives had become more independent and central decision makers in the family while the men were away. For the first time in history, of course, women entered the workforce en masse, and many were not only reluctant to return to the lives they had once known but refused to do so. These shifts, which are significant and positive markers in the social history of women, were a direct result of the war and set the stage for family strain and tension as men returned home. In light of these challenges, marriages that were troubled before the war were often more troubled afterward, a pattern consistent

with Elder's (1998) "accentuation principle," in which periods of strain accentuate already prominent characteristics of individuals and dynamics in social environments.

At the same time, there is some evidence that wartime experiences may actually have strengthened some marriages, especially newer unions in which relationship patterns were not yet firmly established (Pavalko and Elder 1990). Relative to long-standing marriages, these marriages were characterized by patterns of greater independence and maturity. Yet even for long-standing marriages, data suggest that the hard times created by service carried the potential to create stronger marriages, if couples managed to make it through an early critical period of adjustment. Couples who remained intact in the immediate postwar years were actually less prone to divorce or separation, reminiscent of the adage "That which does not kill us makes us stronger."

There is much to learn about how early military service may have played important roles in family relationships thereafter. Analyses of Berkeley and Oakland veterans at midlife (in 1985, when Berkeley subjects were 55 and Oakland subjects were 63) revealed some interesting patterns worthy of greater exploration. Consider, for example, the polarized degree to which spouses knew and talked about their partners' military experiences. Over a third (38%) of veterans indicated that their spouses knew little or nothing about their experiences, and about two thirds (62%) indicated that their spouses knew a great deal. Yet fully two thirds (63%) said that they seldom or never talked about those experiences, and only 37% said that they did so often. Even more interesting is that half (49%) of the relationships in which spouses knew a great deal were relationships in which there was little or no talk about these experiences, suggesting a kind of difficult and unspoken acknowledgment of their spouses' service. Where children are concerned, there was generally little or no knowledge (71%), and little or no discussion (84%), of their fathers' military experiences. Differences such as these, which set limits on what family members know or are willing or need to talk about, enter into family dynamics and functioning. These may also be carried forward in life and affect (and be affected by) the psychological and physical functioning of veterans in old age.

For many veterans, military service resulted in lifelong friendships and prompted the formation of relationships with new kinds of people, as the importance of dimensions such as social class, race, and geographical region, which often restrict relationships in civilian life, diminished (Elder and Clipp 1988a, 1988b). The training of American men in World War II, and the larger positive ethos of war in the United States, may have strengthened these ties. Men were trained and went to war in the same groups, and there

was popular support for troops. These factors strengthened the sense of personal obligation to others and may have benefited the development of younger soldiers in particular.

These conditions seemingly made the friendships formed during service both increasingly precious and fragile. As Elder and Clipp (1988a, 1988b) showed, close bonds helped individuals get through the hardships of war, especially for those who saw combat, and the loss of those friendships is connected to the emergence of emotional problems after the war. Younger soldiers may have been especially vulnerable because they more often served in combat and had longer terms of service. At the same time, those who lost close friends during the war are also more likely, at least in the early part of old age, to keep and value other friendships from service.

It is important to note that recent years have brought a proliferation of veterans' social groups. These resources now provide opportunities to maintain relationships, track lost friends, and develop a community of peers with whom veterans can share experiences and exchange support. Increased opportunities for contact are also made possible through the wealth of information and resources now available to veterans on the Internet, including government-sponsored sites (for a recent inventory, see Schneider 2001). Members of these networks often schedule reunions on veteran holidays and anniversaries, visit memorials, and travel to sites of service. These support groups are especially important to many aging veterans who saw heavy combat or were imprisoned and who tend not to discuss traumatic memories with their spouses or children (Hunt and Robbins 2001b), thereby creating an important expressive outlet for these veterans. This seems consistent with theories of "socioemotional selectivity" in old age, which suggest that individuals who nurture fewer but more meaningful social relationships in old age have higher psychological well-being (Isaacowitz, Smith, and Carstensen 2003). Yet for these veterans, one also wonders whether more restricted but intimate networks populated by individuals in distress may also place their socioemotional lives at risk.

### **Occupation and Education**

Most evidence on the social outcomes of military service relates to educational and occupational attainment and in turn income. In the United States, the G.I. Bill implemented after World War II was a landmark event. The educational and housing provisions it offered changed the life chances of many veterans, especially those from disadvantaged backgrounds (Sampson and Laub 1996; Teachman and Call 1996; Wilson 1995; Xie 1992).<sup>2</sup> Large numbers of World War II veterans grew up during the Great Depression, and ser-

vice represented a significant turning point in life. In-service training and postwar training through the G.I. Bill increased job stability, occupational status, and financial standing. Many of these veterans, however, did not use G.I. Bill benefits to acquire college degrees but instead completed high school diplomas, pursued degrees related to crafts or trades, or enrolled in a few college courses. Contrary to popular belief, the educational and occupational patterns of veterans did not, in the end, approach those of middle- or upper-class men. But military service and the benefits it accrued did improve technical skills, which significantly increased market chances and gave these men a “remedial boost,” allowing them to “knife off” troubled pasts (Modell 1995:141).

Wartime service therefore represented a “structural intervention” of sorts, permitting large numbers of men to overcome disadvantaged backgrounds at a crucial time: as they negotiated the transition to adulthood (Sampson and Laub 1996). It provided the opportunity for more than 10 million American veterans to enter the middle class and to enter it early in life so that they and their families might reap the cumulative advantages of better employment and higher earnings. This “bridging hypothesis” (Browning, Lopreato, and Poston 1973; see also Gade, Lakhani, and Kimmel 1991) is also reflected in the degree to which American veterans view their service as a positive turning point in their lives (Elder 1986; Elder, Gimbel, and Ivie 1991).<sup>3</sup> These effects are likely specific to American veterans. Soldiers from other countries, such as Germany, did not receive these types of compensation for service. If anything, German soldiers generally felt pressure to forget about the war and their personal involvement in it (Maas and Settersten 1999). And even for American veterans, these positive effects are likely to be specific to veterans of World War II and Korea, rather than Vietnam, given its unique social climate and narrow range of recruitment (Wright, Carter, and Cullen 2005).

Several studies have pointed to the importance of examining the differential effects of military service within cohorts. For example, one study of American men (Elder 1987) focused on the effects of service in the Korean War on the occupational careers of those born in 1928 and 1929. Service affected the family lives and psychological competence of men, but it did not result in differential occupational achievement from early adulthood through midlife, especially once preservice educational achievement is taken into account. Similar patterns were exhibited by American veterans of these cohorts (Elder and Bailey 1988).

In contrast, a study of Japanese men born between 1918 and 1924 found World War II veterans more likely than nonveterans to encounter economic troubles after the war (e.g., housing shortages, financial crises; Elder and



Meguro 1987). Of course, the situation in Japan was more similar to that in Germany than that in the United States. The emotional climate in both Japan and Germany was one of defeat; both economies were in ruins; and the war left massive numbers of casualties, widows, and orphans. In contrast, the climate in the United States was one of victory, the postwar economy was flourishing, and the land and people on the home front remained intact and safe. These differences highlight the importance of cross-national research and of explicitly incorporating cultural and macro-level factors that condition the effects of military service on developmental outcomes. The long-term effects of military service, especially psychological ones, are likely to be mediated by societal responses to war as much as the characteristics, capacities, and resources of individuals (Davies 2001).

Several other studies have examined cohort differences in the effects of service on men's occupational careers, especially differences resulting from the timing of service (cohort position determined whether the war came relatively early or late; e.g., Elder and Pavalko 1993; Elder et al. 1994; Maas and Settersten 1999; Mayer 1988; Pavalko and Elder 1990). One hypothesis, supported by only a single German study thus far (Mayer 1988), is that service during World War II had its strongest and longest ranging effects on younger men in the formative years of jobs and careers. For these men, the war arrived as they were completing training and launching careers, which left them vulnerable as they negotiated the labor market after the war. Young men had to resume their careers in low positions, for they had little or no pre-war occupational experience to draw on as they competed for positions.<sup>4</sup> It is important to note, though, that this effect may have been created not by military service but by the economic chaos the war left in its path, which Mayer argued. The war created conditions that made finding employment difficult for those who were entering the labor market toward the end of the war or soon thereafter. Once the "economic miracle" began, the situation for most German men had significantly improved. (This was a period of extreme economic growth, with virtually no unemployment, from 1951 through the mid-1960s.)

Counter to this hypothesis is the view that has received most empirical support: that service during World War II had its strongest and longest ranging negative effects on older men who were already settled in jobs and careers. This is supported by a recent German study (Maas and Settersten 1999) and by the research of Elder and colleagues cited earlier. These studies suggest that older men not only left behind well-established work roles but found it more difficult to reenter the labor market when they returned home. For example, Maas and Settersten showed that immediately following the war, younger German men more often entered different occupations and

higher status positions than those they held before the war. Older men, on the other hand, more often entered occupations and positions similar to, and in many instances lower than, those they held before the war. Younger men had not made significant investments in occupation before the war, and this seems to have allowed greater flexibility in pursuing a wider array of occupations and positions after the war. Maas and Settersten showed, however, that the negative effect of service on the occupational achievements of older men diminished rapidly as these men eventually reclaimed the ground they lost to the war. Germany's economic miracle, noted earlier, played an important role in closing this gap.

### **Income**

Most cross-sectional comparisons of American veterans of World War II and nonveterans have suggested that veterans have, on average, higher earnings and lower unemployment rates (for a review, see Lakhani 1998). A few studies, however, have found veterans to have lower earnings and higher unemployment rates than nonveterans, with gaps being greatest for veterans of Vietnam, then Korea, and finally World War II (see Anderson and Mitchell 1992). One recent longitudinal study of the Vietnam era, however, showed that advantages for nonveterans vanish within 10 years of discharge because veterans have steeper earnings profiles (Teachman 2004).

Relative to American veterans of other wars, World War II veterans may have been more actively and fully integrated into the civilian labor force on their return. World War II was a popular war, and there is speculation that the rehiring of veterans might have been especially generous.<sup>5</sup> It is also possible that the skills that World War II veterans learned were more readily transferred to the market. Finally, because the socioeconomic distribution of men who were mobilized in World War II was broad and reflected greater earnings potential from the start, this may have translated into higher earnings and occupational statuses for veterans as a group after the war. These points highlight the need to more thoroughly account for the prewar individual differences of veterans and nonveterans, which few investigators have been able to do because data on prewar statuses have seldom been collected. In studies that controlled for prewar statuses, the positive effects of veteran status on postwar income disappear or even turn negative (e.g., Angrist 1990; Angrist and Krueger 1994).

Most studies have simply compared the incomes of nonveterans and veterans, ignoring important variability within the veteran population. The incomes of veterans surely must differ by factors such as how long and in what capacity veterans served or the wars in which they served. Differences

may also be created by the timing of service, which, as we have repeatedly seen, is an important factor in accounting for other types of effects. Consistent with the patterns described above on educational and occupational outcomes, some American research suggests that income loss was most prevalent among those who were mobilized at older ages (e.g., Elder and Chan 1999). Most men experience rapid growth in earnings during their 30s, and time out during this period significantly lowers lifetime earnings. Older men who returned to different lines of work after the war were doubly disadvantaged. In contrast, the earnings of younger veterans often surpassed those of their counterparts in the civilian population.

### Psychological Outcomes

Many studies have shown that the stresses associated with service often resulted in permanent psychological and physical damage (e.g., Aldwin, Levenson, and Spiro 1994; Beebe 1975; Breslau and Davis 1987; Card 1983; Guest and Venn 1992; Keehn 1980; Lieblich 1989; Page 1992; Schnurr and Aldwin 1993). These effects depend on factors such as the type of service, the severity of experiences (particularly whether a veteran fought in combat or was imprisoned), the timing and duration of service, characteristics and resources of individuals, and treatment strategies. Group-level factors, such as unit cohesion and morale, also moderate these effects. Of course, psychological and physical states are intimately connected and may jointly promote or inhibit successful reentry into the social roles and responsibilities discussed earlier. Most effects described thus far may therefore be interrelated, further complicating matters.

Some research has focused on the organization of military life and the toll it takes on the self and personality. Other research has addressed the negative effects of encounters with death, which may lead to anxiety, depression, or even rage. Again, let me report some findings on the Berkeley and Oakland veterans at midlife. Most veterans rated their service more heavily toward disadvantage than advantage (an average of 7.00 [ $SD = 2.18$ ] on a scale of 1 to 10, with 1 being *advantage* and 10 being *disadvantage*). Sizable percentages indicated negative outcomes such as disruption to life (47%), painful separation from loved ones (44%), and delayed careers (40%). Fewer reported negative effects such as death and destruction, the loss of friends, combat anxieties and apprehension, bad memories and nightmares, or economic problems, but those who reported these problems seemed to experience them acutely.

Yet the Berkeley and Oakland veterans at midlife also reported many positive aspects of earlier military experience. The majority indicated that their service provided a broader perspective on things (68%), promoted greater self-discipline (65%) and independence (64%), and taught them to cope with adversity and hardship (59%) and the importance of cooperation and teamwork (53%). The picture of self-reported service-related health problems due to service at midlife was also largely positive: only 10% of veterans linked any of a wide range of current health problems to service; only 19% had received formal treatment, and only 10% had been hospitalized, for such problems; and only 6% had received disability benefits. This portrait of Berkeley and Oakland veterans is, of course, anchored in judgments made at the end of midlife. It remains to be seen how these veterans might evaluate the legacies of service in old age.

Combat experience in particular increases the likelihood of later emotional and behavioral problems that may even persist for decades. Greater exposure to combat generally results in greater risk for PTSD, even after 50 years or more. Additionally, those who enter service vulnerable to stress because of limited psychological or social resources are more likely to experience psychological difficulties during and after service. This again highlights the fact that to understand the postwar status of veterans, it is important to know about prewar status. Large proportions of veterans with PTSD symptoms also often meet diagnostic criteria for at least one other disorder (Bollinger et al. 2000; Wagner et al. 2000). (For a historical review of clinical PTSD diagnostic criteria, see Shalev and Rogel-Fuchs 1993, and for current criteria, see the *Diagnostic and Statistical Manual of Mental Disorders* of the American Psychiatric Association [2000]. For an international review of PTSD literature relating specifically to soldiers and combat, see Weiseth and Eitinger 1991.)

What is surprising is that combat exposure, even at moderate and heavy levels, may be associated with positive personality and mental health outcomes (e.g., Elder and Clipp 1988a; Lieblich 1989; Schnurr, Rosenberg, and Friedman 1993; Spiro, Schnurr, and Aldwin 1994). In fact, there is evidence that both positive and negative appraisals of military experience, such as those highlighted above, are linearly related to combat exposure (Aldwin et al. 1994). Findings such as these date back to the classic *The American Soldier* (Stouffer et al. 1949). Veterans may develop a greater sense of mastery, competence, and responsibility to others, and they may build leadership, organizational skills, and coping skills. Personal boundaries may widen through exposure to new situations, places, people, and cultures. These experiences may prompt positive changes in values, as individuals become more

tolerant of differences, speculate more about what is right and just, and gain new appreciation for life and peace.

One could argue that men mobilized at later ages may have been less adaptive or resilient because they were more fully settled into work and family roles and responsibilities (e.g., Hastings 1991). One could also argue that older men may have had more developed coping strategies, leaving them better equipped to manage the extreme stress of combat or imprisonment. Most evidence suggests, however, that men mobilized at later ages for World War II suffered greater psychological hardships, even though younger men, at least from America, were more likely to be sent overseas and serve in combat (Elder and Chan 1999).

Most of what is known about the long-term effects of service relates specifically to combat or imprisonment and resulting psychological distress, PTSD symptom clusters, or mortality rates. There is evidence of persistent, and even intensified, effects of service during World War II on veterans after 5 years (e.g., Futterman and Pumpian-Mindlin 1951), 15 years (e.g., Archibald et al. 1962), 20 years (e.g., Archibald and Tuddenham 1965), 30 years (e.g., Klonoff et al. 1976), 40 years (e.g., Kluznick et al. 1986; Schrueder, Kleijn, and Rooijmans 2000; Spiro et al. 1994; Zeiss and Dickman 1989), and 50 years (e.g., Dirkzwager, Bramser, and Van Der Ploeg 2001; Hunt and Robbins 2001a; Port, Engdahl, and Frazier 2001). The incidences of these effects and the processes and mechanisms that drive them, however, have not been clearly explicated.

What is more surprising is that war-related psychiatric symptoms may suddenly emerge in late life, as many as 50 years or more after service. Such “*sleepers*” have been suggested in an increasing number of clinical case studies (for examples see Spiro et al. 1997). These case studies pose the important question of whether (a) the onset of problems is genuinely delayed, and the stresses associated with normative aging, such as losses in physical and cognitive capacities, trigger them (see also Davies 2001), or (b) symptoms have long existed but veterans and medical personnel have failed to recognize them. At least two important shifts in recent decades provide evidence for the latter possibility. First, more definitive and sensitive diagnostic criteria and treatments strategies for psychological and psychiatric problems have been developed, and second, it has become more socially acceptable to acknowledge and seek help for these problems. The recent surge in clinical case studies, however, also provides evidence suggestive of the former hypothesis: that the strains and challenges of aging reactivate earlier trauma, resulting in a greater incidence of new elderly patients who need care for war-related stress. These important hypotheses now need to be examined more thoroughly.

## Physical Outcomes

As with psychological health, negative physical health effects have been shown to be strongest for those who saw heavy combat or were held as prisoners of war (e.g., Aldwin et al. 1994; Beebe 1975; Breslau and Davis 1987; Card 1983; Guest and Venn 1992; Keehn 1980; Lieblich 1989; Page 1992; Schnurr and Aldwin 1993). Relative to social and psychological effects, most attention has been aimed at understanding effects on physical health, though physical health is routinely considered in conjunction with PTSD symptom clusters, with PTSD clusters generally taken to moderate effects on physical health.

Military service during World War II has been linked to many long-term health outcomes. These include tuberculosis, chronic bronchitis and emphysema; cardiovascular disorders; arteriosclerosis; digestive disorders; chronic rheumatism, arthritis, and musculoskeletal and skin diseases; lesions of the central and peripheral nervous systems; and premature aging through deficits in memory and attention and through chronic fatigue (e.g., Beebe 1975; Hunter 1988; Klonoff et al. 1976; Spiro et al. 1997; Schnurr, Spiro, and Paris 2000). Military service has also been tied to mortality, most often with significantly higher mortality rates in the years immediately following combat or imprisonment (e.g., Centers for Disease Control and Prevention 1987; Williams et al. 1993). The negative effects of service on physical health are consistently strongest for those who were stationed in the Pacific theater, which was characterized by extremely high levels of ambiguity and threat (e.g., Hunter 1988). Similarly, those called to serve at later ages seem to experience more negative health consequences than those mobilized at earlier ages (Elder and Chan 1999). Of course, younger entrants were generally in better health when they entered. But the picture of evidence thus far leads one to wonder whether the stresses associated with greater life disruption for older men increase the risk of long-term physical decline.

To understand the effects of military service on physical health outcomes, psychological states must also be taken into account. A good case in point is the relationship between psychological repression and physical health. As veterans tried to get on with life, many tried to bury the war deep in their minds and forget about the past. As noted earlier, this may have been especially true of veterans from countries defeated in World War II. Women, too, were often counseled in government leaflets and women's magazines of many nations to privately shoulder the emotional strains associated with often short-tempered or depressed veteran husbands (Sokoloff 1999). Repression and the intentional withholding of emotional responses take psy-

chological and physical tolls (Roemer et al. 2001). Inhibition, even at low levels, may cumulate over time and result in disease and negative health conditions in late life (Clipp and Elder 1996). These effects have largely been tied to immune functioning, with inhibition viewed as suppressing immune functioning, which in turn affects physical statuses. Hypotheses related to both the positive and negative consequences of inhibition and other coping strategies deserve greater attention. These points serve as reminders of the need to explore the multilevel processes and mechanisms through which social disruption, loss, and exposure to stressful conditions are linked to various types of outcomes.

Much remains to be learned about how service is tied to the health care use of older veterans. In America, U.S. Department of Veterans Affairs (VA) patients constitute only 10% to 20% of all veterans, and those who use VA hospitals and services have higher combat exposure, greater injury and disability, lower income, and worse health insurance (Spiro et al. 1997). Of course, the health care use of veterans of different wars may be different, and the concerns of veterans of World War II or Korea will not be easily generalized to Vietnam or Persian Gulf veterans when they are old. Given the greater stigma attached to illness, especially mental illness for members of older cohorts, veterans of World War II and Korea may be less willing to report or seek medical attention for their problems than veterans of later wars (Fontana and Rosenheck 1994).

A central problem in tracing the long-term effects of service on health is that veterans most severely affected by war have already died. That is, there are important selection processes around making it through the war that directly relate to health and other outcomes of interest. In addition, important selection processes going into the war relate to health: The selection procedures of the military generally favor strong, healthy, young men. During World War II, however, selection criteria were not as stringent, especially as men were mobilized in massive numbers and from a wider spectrum of social classes (Fligstein, 1980; Klein 1993; Modell and Steffey 1988). Postwar mortality was probably highest among the weakest and least healthy men, men for whom the war accelerated physical decline and, ultimately, death (Brückner and Mayer 1987). Together, these two types of selection help explain the fact that many studies show that veterans are not in poorer health and may actually be in better health than nonveterans. These studies, however, often make simple comparisons between veterans and nonveterans without minding other important factors, including the selection processes just described.

## **Bringing Military Service Front and Center in Research on Aging**

Historical context is widely acknowledged as critical to understanding aging, yet historical matters have been neglected in gerontological theory and research. Wartime experiences offer important lenses for examining complex relationships between distal social forces and their consequences for aging, and veterans and their families provide a natural forum for probing dynamics related to stress, coping, and adaptation. The evidence marshaled here suggests that wartime experiences are likely significant but to date largely hidden variables underlying current scientific knowledge about aging. Wartime experiences are not the experiences of a select few but are shared by staggering numbers and proportions of individuals from contemporary cohorts of elders worldwide who were mobilized for war. Wide recruitment across age and social classes during World War II, coupled with differences in personal and familial characteristics and resources, prompts the need to fully explore variability in the nature of military experiences and subsequent outcomes for veterans and their families.

In line with the framework advocated by Elder (1999) there is significant need to conduct research and develop models that make wartime service the focal point of investigation, trace the full range of consequences of early military experiences into and through old age, and identify the processes and mechanisms through which these effects come about. Future research should explore the many plausible direct and indirect connections between wartime experiences (especially combat) and psychological well-being, physical health, abilities and cognition, and marital and family functioning. Although these connections bring many theoretical and empirical challenges, they are fertile grounds for new inquiry in gerontology. For contemporary cohorts of elders, wartime experiences may be especially important bridges between the early and later phases of adult life.

Greater attention to long-ranging trajectories also brings the need to become more sensitive to the complexities of change within and between individuals and groups. For example, early military experiences may lead to positive or negative outcomes, and these effects may cumulate over time, thereby accentuating individual differences in late life and generating inequality into old age. On the other hand, aging-related processes may diminish individual differences in late life if aging serves to “level” prior inequalities. Similarly, those exhibiting early disadvantage due to wartime service may “catch up” to others with time, just as those who seem unaffected by, or even to have benefited from, service in the short term may experience sleeper effects that do not emerge until late life. On the basis of evi-



dence from a number of clinical case studies, and given the large numbers of veterans now moving through their later years, sleeper effects are particularly important to probe. An exploration of pathways such as these will further the search for two great “silver bullets” in developmental science: to know how some people manage to make it through traumatic environments unharmed and others not and to know how some people manage to compensate for these experiences and keep their damaging effects at bay for long periods or even permanently.

Toward this end, prewar status must also be accounted for if postwar status is to be adequately understood. It is difficult to ascertain the social, psychological, and physical effects of service if nothing is known about the status of individuals before they served. Data on prewar status have seldom been available, and this problem plagues most research.

This discussion has highlighted the need to unearth and explain variability in wartime experiences. Simple comparisons between veterans and nonveterans are routinely made, though these reveal little about whether military service matters for aging and even less about how it matters. Although military service was common among contemporary cohorts of elders, this need not imply that service was commonly experienced or that its outcomes were uniformly shared. For these reasons, much will be learned from systematic comparisons across wars, nations, and cohorts; between men and women; and by the location, types, duration, and timing of service.

Little is known about the experiences and outcomes of servicewomen, though they too have served their nations in large numbers. For example, in the United States, 350,000 women served in World War II; in Britain, over 500,000 served; and in the former Soviet Union, over 800,000 women served, many on the front lines (Campbell 1990; U.S. Department of Veterans Affairs, Center for Women Veterans 2000). The veteran population worldwide will age rapidly in the next couple decades, and the female veteran population in particular will increase dramatically. Nations around the world are just now beginning to consider many gender-specific and gender-sensitive questions about the physical, emotional, mental, and social needs of female veterans (for illustrations, many of which also apply to women of other developed countries, see a recent summit of the U.S. Department of Veterans Affairs, Center for Women Veterans [2000]).

Research to date has largely produced a story of how service affected the lives of veterans themselves. Little research has been considered how the lives of children and spouses were affected by the wartime service of a parent (generally a father or husband). For them, the framework developed in Elder's (1999) *Children of the Great Depression* might naturally be extended as a way to understand how the absence of a parent or spouse altered the

household economy, shifted family relations, created strain, or affected the quality of parenting. In some countries, large portions of children were evacuated and separated from parents for extended periods, which disrupted the attachment process and created psychological vulnerabilities during adulthood, which may be further exacerbated in old age (Foster, Davies, and Steele 2003; McCarthy and Davies 2003). Studies are only now beginning to consider the psychosocial effects of wartime experiences on spouses and children (for international illustrations of the intergenerational transmission of trauma, see Danieli 1998). These and other works suggest that both temporary and permanent effects of lost or changed family relationships may produce stress syndromes—including “compassion fatigue” and “secondary traumatization”—in spouses and children that are similar to PTSD (see Dekel et al. 2005; Figley 1995; Figley and Kleber 1995; Mander 1999; Werner 2000).

Detailed data on military experiences are needed for research, policy, and practice. Indeed, most major studies of aging do not even ask whether respondents served in the military, despite the prevalence of service among contemporary cohorts of elders. At a minimum, veteran status should be gathered along with entry and exit dates, the capacity in which veterans served, and where they were stationed. Similarly, studies have also shown that few veterans report being asked about the extent and nature of service when they seek treatment (Spiro et al. 1997), and that veterans themselves rarely identify themselves as such in clinical settings if they are not asked (Sherwood et al. 2003). This information is necessary for understanding and responding to the current needs of veterans and their families worldwide and for projecting their future needs, which are expected to require considerable resources (Selim et al. 2004).

Because cohorts born in the first half of the 20th century have had direct experience with war, gerontologists must be more conscious of the degree to which current knowledge may be “historically specific” (Caspi 1998). That is, how much have we mistaken the effects of specific historical conditions for generalized patterns of aging? In addition to wartime military service, contemporary cohorts of elders have experienced many significant historical events and periods of social change, including times of great economic hardship and prosperity; major health epidemics; controversies over civil rights; women’s liberation; acts of terrorism; and landmark shifts in medicine, communication, and transportation. Gerontology will also profit from deliberate attention to the influence of these events and changes on the life course and aging. The effects of military service on late life in particular will become increasingly important as millions of veterans worldwide move through advanced old age and as younger veteran populations move into old age.

Concerns about the effects of wartime service extend beyond contemporary groups of elders not only because the service of older generations carries trickle-down effects for subsequent generations but also because subsequent generations have been affected by the wars of their own times. For example, the children of the Berkeley and Oakland participants, themselves now middle-aged, were especially affected by the Vietnam War. Conflict over Vietnam was a significant source of tension in one out of five of these families, particularly those in which children protested the war or sons resisted or served with great resentment (25% of the Berkeley and Oakland participants had at least one child with military service). Members of older generations believed in the Vietnam War and in the obligation of young men to serve their country; their children did not. Tensions such as these, as well the ways military service leaves its mark on multiple generations in the family, are important directions for future research. Research aimed at the intersection between wartime service and aging will bring many significant pay-offs: in assisting veterans and their families, in furthering our understanding of aging among contemporary cohorts, and ultimately in evaluating the degree to which the current knowledge base will generalize to future cohorts of elders whose experiences with war and in history have been dramatically different.

## Notes

1. Military duty for men seemed to interfere little with courtship and marriage, and there was a double standard of sexual conduct for men and their girlfriends (or wives) back home (Modell and Steffy, 1988). Most men were sexually active (with other women) during duty, and they did not think that this made them less desirable partners. Yet most men were confident that their girlfriends (or wives) would remain faithful, and they and others saw their infidelity as understandable and forgivable. Indeed, both government policies and the opinions of the American public emphasized the need to protect and preserve families during and after the war.

2. There is some evidence that levels of formal education in America had begun to rise before the war and that this trend might have continued even in the absence of the war (e.g., Nam 1964). The crucial question is whether this trend would have risen to the level it did had the war not occurred, which seems unlikely.

3. It is important to note that there is a small body of evidence to the contrary (see Fredland and Little 1985; and Phillips et al. 1992).

4. Of course, extensive time away from the job market brought the risk of obsolescence for all who served, regardless of age. This may have been especially true for those who held positions for which skills needed to be actively developed and updated. These disruptions and displacements may have translated into sizable losses in lifetime earnings and opportunities for advancement.

5. The "screening hypothesis" (Lakhani 1998) suggests that employers use knowledge about veteran status in screening applications and hiring. For American veterans, this may have been positive for World War II but negative for Korea and especially Vietnam, given the different political and public sentiments surrounding these wars. For example, Elder and Clipp (1988b) found

that 70% of World War II veterans in the Berkeley Guidance Study and the Oakland Growth Study indicated that they felt appreciated by their fellow Americans when they returned home. In contrast, only a third of Korean veterans felt so. The composition of the veteran population is surely a factor here. Most men of military age served in World War II, whereas only a minority of men served in Korea or Vietnam.

## References

- Aldwin, C. M., M. R. Levenson, and A. Spiro III. 1994. "Vulnerability and Resilience to Combat Exposure: Can Stress Have Lifelong Effects?" *Psychology and Aging* 9:34-44.
- American Psychiatric Association. 2000. *Diagnostic and Statistical Manual of Mental Disorders*. 4th ed., text rev. Washington, DC: American Psychiatric Association.
- Anderson, K. H. and J. M. Mitchell. 1992. "Effects of Military Experience on Mental Health Problems and Work Behavior." *Medical Care* 30:554-63.
- Angrist, J. D. 1990. "Lifetime Earnings and the Vietnam Era Draft Lottery: Evidence From Social Security Administrative Records." *American Economic Review* 80:313-36.
- Angrist, J. and A. B. Krueger. 1994. "Why Do World War II Veterans Earn More Than Non-Veterans?" *Journal of Labor Economics* 12:74-97.
- Archibald, H. C., D. M. Long, C. Miller, and R. D. Tuddenham. 1962. "Gross Stress Reaction in Combat: 15 Year Follow-Up (World War II and Korean Veterans)." *American Journal of Psychiatry* 119:317-22.
- Archibald, H. C. and R. D. Tuddenham. 1965. "Persistent Stress Reaction After Combat." *Archives of General Psychiatry* 12:475-81.
- Baltes, P. B., U. Lindenberger, and U. Staudinger. 1998. "Life-Span Theory in Developmental Psychology." Pp. 1029-143 in *Handbook of Child Psychology, Vol. 1: Theoretical Models of Human Development*, edited by R. M. Lerner. New York: John Wiley.
- Beebe, G. W. 1975. "Follow-Up Studies of World War II and Korean War Prisoners. II. Morbidity, Disability, and Maladjustments." *American Journal of Epidemiology* 101:400-22.
- Bollinger, A. R., D. S. Riggs, D. D. Blake, and J. I. Ruzek. 2000. "Prevalence of Personality Disorders Among Combat Veterans With Posttraumatic Stress Disorder." *Journal of Traumatic Stress* 13 (2): 255-70.
- Breslau, N. and G. Davis. 1987. "Posttraumatic Stress Disorder: The Etiology of Specific War-time Stressors." *American Journal of Psychiatry* 144:578-83.
- Browning H. L., S. C. Lopreato, and D. L. Poston, Jr. 1973. "Income and Veteran Status: Variations Among Mexican American, Blacks, and Anglos." *American Sociological Review* 38:74-85.
- Brückner, E. and K. U. Mayer. 1987. "Lebensgeschichte und Austritt aus der Erwerbstätigkeit im Alter—Am Beispiel der Geburtsjahrgänge 1919-21." *Zeitschrift für Sozialisationsforschung und Erziehungssoziologie* 7:101-16.
- Campbell, D. 1990. "Servicewomen of World War II." *Armed Forces and Society* 16:251-70.
- Card, J. J. (1983). *Lives After Vietnam: The Personal Impact of Military Service*. Lexington, MA: Lexington Books.
- Caspi, A. 1998. "Personality Development Across the Life Course." Pp. 311-88 in *Handbook of Child Psychology, Vol. 3: Social, Emotional, and Personality Development*, edited by N. Eisenberg. New York: John Wiley.
- Centers for Disease Control and Prevention. 1987. "Postservice Mortality Among Vietnam Veterans." *Journal of the American Medical Association* 259:790-95.

- Clipp, E. C. and G. H. Elder, Jr. 1996. "The Aging Veteran of World War II: Psychiatric and Life Course Insights." Pp. 19-51 in *Aging and Post-Traumatic Stress Disorder*, edited by P. E. Ruskin and P. E. Talbott. Washington, DC: American Psychiatric Press.
- Danieli, Y., ed. 1998. *International Handbook of Multigenerational Legacies of Trauma*. New York: Plenum.
- Davies, S. 2001. "The Long-Term Psychological Effects of Traumatic Wartime Experiences on Older Adults." *Aging & Mental Health* 5 (2): 99-103.
- Dekel, R., H. Goldblatt, M. Keidar, Z. Solomon, and M. Polliack. 2005. "Being a Wife of a Veteran With Posttraumatic Stress Disorder." *Family Relations* 54 (1): 24-36.
- Dirkzwager, A.J.E., I. Bramsen, and M. H. Van Der Ploeg. 2001. "Longitudinal Course of Posttraumatic Stress Disorder Symptoms Among Aging Military Veterans." *Journal of Nervous and Mental Disease* 189 (12): 846-53.
- Elder, G. H., Jr. 1986. "Military Times and Turning Points in Men's Lives." *Developmental Psychology* 22:233-45.
- . 1987. "War Mobilization and the Life Course: A Cohort of World War II Veterans." *Sociological Forum* 2:449-72.
- . 1998. "The Life Course and Human Development." Pp. 939-91 in *Handbook of Child Psychology, Vol. 1: Theoretical Models of Human Development*, edited R. M. Lerner. New York: John Wiley.
- . 1999. *Children of the Great Depression: Social Change in Life Experience*. 25th anniv. ed. Boulder, CO: Westview.
- Elder, G. H., Jr. and S. L. Bailey. 1988. "The Timing of Military Service in Men's Lives." Pp. 157-74 in *Social Stress and Family Development*, edited by D. M. Klein and J. Aldous. New York: Guilford.
- Elder, G. H., Jr. and C. Chan. 1999. "War's Legacy in Men's Lives." Pp. 209-27 in *A Nation Divided: Diversity, Inequality, and Community in American Society*, edited by P. Moen, D. Dempster-McLain, and H. A. Walker. Ithaca, NY: Cornell University Press.
- Elder, G. H., Jr. and E. C. Clipp. 1988a. "Combat Experience, Comradeship, and Psychological Health." Pp. 131-56 in *Human Adaptation to Extreme Stress: From the Holocaust to Vietnam*, edited by J. P. Wilson, Z. Harel, and B. Kahana. New York: Plenum.
- . 1988b. "Wartime Losses and Social Bonding: Influences Across 40 Years in Men's Lives." *Psychiatry* 51:177-98.
- Elder, G. H., Jr., C. Gimbel, and R. Ivie. 1991. "Turning Points in Life: The Case of Military Service and War." *Military Psychology* 3:215-31.
- Elder, G. H., Jr. and M. Johnson. 2003. "The Life Course and Aging: Challenges, Lessons, and New Directions." Pp. 49-81 in *Invitation to the Life Course: Toward New Understandings of Later Life*, edited by R. A. Settersten, Jr. Amityville, NY: Baywood.
- Elder, G. H., Jr. and Y. Meguro. 1987. "Wartime in Men's Lives: A Comparative Study of American and Japanese Cohorts." *International Journal of Behavioral Development* 10:439-66.
- Elder, G. H., Jr. and E. Pavalko. 1993. "Work Careers in Men's Later Years: Transitions, Trajectories, and Historical Change." *Journals of Gerontology* 48:180-91.
- Elder, G. H., Jr., M. J. Shanahan, and E. C. Clipp. 1994. "When War Comes to Men's Lives: Life-Course Patterns in Family, Work, and Health." *Psychology and Aging* 9:5-16.
- Elting, R. 2001. "World War II: Costs, Casualties, and Other Data." Pp. 529-31 in *Encyclopedia Americana: International Edition, Vol. 29*. New York: Praeger.
- Figley, C. R., ed. 1995. *Compassion Fatigue: Coping With Secondary Traumatic Stress Disorder in Those Who Treat the Traumatized*. New York: Brunner/Mazel.

- Figley, C. R. and R. J. Kleber. 1995. "Beyond the 'Victim': Secondary Traumatic Stress." Pp. 75-98 in *Beyond Trauma: Cultural and Societal Dynamics*, edited by R. J. Kleber and C. R. Figley. New York: Plenum.
- Fligstein, N. D. 1980. "Who Served in the Military 1940-73." *Armed Forces and Society* 6:297-312.
- Fontana, A. and R. Rosenheck. 1994. "Traumatic War Stressors and Psychiatric Symptoms Among World War II, Korean, and Vietnam War Veterans." *Psychology and Aging* 9:27-33.
- Foster, D., S. Davies, and H. Steele. 2003. "Evacuation of British Children During World War II: A Preliminary Investigation Into the Long-Term Psychological Effects." *Aging and Mental Health* 5 (2): 398-408.
- Fredland, J. E. and R. D. Little. 1985. "Socioeconomic Status of World War II Veterans by Race: An Empirical Test of the Bridging Hypothesis." *Social Science Quarterly* September:533-51.
- Futterman, S. and E. Pumpian-Mindlin. 1951. "Traumatic War Neuroses Five Years Later." *American Journal of Psychiatry* 108:401-8.
- Gade, P., H. Lakhani, and M. Kimmel. 1991. "Military Service: A Good Place to Start?" *Military Psychology* 3:251-67.
- Guest, C. S. and A. J. Venn. 1992. "Mortality of Former Prisoners of War and Other Australian Veterans." *Medical Journal of Australia* 157:132-35.
- Hastings, T. J. 1991. "The Stanford-Terman Study Revisited: Postwar Emotional Health of World War II Veterans." *Military Psychology* 3:201-14.
- Hunt, N. and I. Robbins. 2001a. "Long-Term Consequences of War: The Experience of World War II." *Aging and Mental Health* 5 (2): 183-90.
- . 2001b. "World War II Veterans, Social Support, and Veterans' Associations." *Aging and Mental Health* 5 (2): 175-82.
- Hunter, E. J. 1988. "The Psychological Effects of Being a Prisoner of War." Pp. 157-70 in *Human Adaptation to Extreme Stress: From the Holocaust to Vietnam*, edited by J. P. Wilson, Z. Harel, and B. Kahana. New York: Plenum.
- Isaacowitz, D. M., T. B. Smith, and L. L. Carstensen. 2003. "Socioemotional Selectivity and Mental Health Among Trauma Survivors in Old Age." *Ageing International* 28 (2): 181-99.
- Keehn, R. 1980. "Follow-Up Studies of World War II and Korean Conflict Prisoners." *American Journal of Epidemiology* 111:194-211.
- Klein, T. 1993. "Soziale Position und Lebenserwartung: Eine Kohortenbezogene Analyse mit den Daten des Sozio-Ökonomischen Panels." *Zeitschrift für Gerontologie* 26:313-20.
- Klonoff, H., G. McDougall, C. Clark, P. Kramer, and J. Horgan. 1976. "The Neuropsychological, Psychiatric, and Physical Effects of Prolonged and Severe Stress: 30 Years Later." *Journal of Nervous and Mental Disease* 163:246-52.
- Kluznick, J. C., N. Speed, C. VanValkenburg, and R. Magraw. 1986. "Forty-Year Follow-Up of United States Prisoners of War." *American Journal of Psychiatry* 143:1443-46.
- Kulka, R., W. Schlenger, J. Fairbank, R. Hough, B. Jordan, C. Marmar, and D. Weiss. 1990. *Trauma and the Vietnam War Generation*. New York: Bruner/Mazel.
- Lakhani, H. 1998. "The Socioeconomic Benefits of Active Military Service." *Armed Forces and Society* 24:549-65.
- Lieblich, A. 1989. *Transition to Adulthood During Military Service: The Israeli Case*. Albany: State University of New York Press.
- Maas, I., M. Borchelt, and K. U. Mayer. 1999. "Generational Experiences of Old People in Berlin." Pp. 83-110 in *The Berlin Aging Study: Aging From 70 to 100*, edited by P. B. Baltes and K. U. Mayer. Cambridge, UK: Cambridge University Press.

- Maas, I. and R. A. Settersten, Jr. 1999. "Military Service During Wartime: Its Effects on Men's Occupational Trajectories and Later Economic Well-Being." *European Sociological Review* 15:81-100.
- Mander, G. 1999. "The Absent Father and His Return: Echoes of War." *British Journal of Psychotherapy* 17 (1): 16-26.
- Mayer, K. U. 1988. "German Survivors of World War II: The Impact on the Life Course of the Collective Experience of Birth Cohorts." Pp. 229-46 in *Social Structures and Human Lives*, edited by M. W. Riley. Newbury Park, CA: Sage.
- McCarthy, G. and S. Davies. 2003. "Some Implications of Attachment Theory for Understanding Psychological Functioning in Old Age: An Illustration From the Long-Term Psychological Effects of World War Two." *Clinical Psychology and Psychotherapy* 10 (3): 144-55.
- Modell, J. 1995. "Did the 'Good War' Make Good Workers?" Pp. 139-55 in *The Home-Front War*, edited by K. P. O'Brien and L. H. Parsons. London: Greenwood.
- Modell, J. and D. Steffey. 1988. "Waging War and Marriage: Military Service and Family Formation 1940-1950." *Journal of Family History* 13:195-218.
- Nam, C. B. 1964. "Impact of the G.I. Bill on the Educational Level of the Male Population." *Social Forces* 43:26-32.
- Page, W. F. 1992. *The Health of Former Prisoners of War: Results From the Medical Examination Survey of Former POWs of World War II and the Korean Conflict*. Washington, DC: National Academy Press.
- Pavalko, E. K. and G. H. Elder, Jr. 1990. "World War II and Divorce: A Life-Course Perspective." *American Journal of Sociology* 5:1213-34.
- Phillips, R. L., P. J. Andrisani, T. N. Daymont, and C. L. Gilroy. 1992. "The Economic Returns to Military Service: Race-Ethnic Differences." *Social Science Quarterly* 73:340-59.
- Port, C. L., B. Engdahl, and P. Frazier. 2001. "Longitudinal and Retrospective Study of PTSD Among Older Prisoners of War." *American Journal of Psychiatry* 158 (9): 1474-79.
- Prokhorov, A. M., ed. 1974. *The Great Soviet Encyclopedia*. 3rd ed., trans. New York: Macmillan.
- Roemer, L., B. Litz, S. M. Orsillo, and A. W. Wagner. 2001. "A Preliminary Investigation of the Role of Strategic Withholding of Emotions in PTSD." *Journal of Traumatic Stress* 13 (1): 149-56.
- Sampson, R. J. and J. H. Laub. 1996. "Socioeconomic Achievement in the Life Course of Disadvantaged Men: Military Service as a Turning Point, Circa 1940-1965." *American Sociological Review* 61:347-67.
- Schneider, J. M. 2001. "Arming Themselves With Information: Veterans Using the Internet." *Health Care on the Net* 5 (1): 21-30.
- Schnurr, P. and C. Aldwin. 1993. "Military Service: Long-Term Effects on Adult Development." Pp. 351-56 in *Encyclopedia of Adult Development*, edited by R. Kastenbaum. Phoenix, AZ: Oryx.
- Schnurr, P., S. D. Rosenberg, and M. J. Friedman. 1993. "Change in MMPI Scores From College to Adulthood as a Function of Military Service." *Journal of Abnormal Psychology* 102:288-96.
- Schnurr, P. P., A. Spiro III, and A. H. Paris. 2000. "Physician-Diagnosed Medical Disorders in Relation to PTSD Symptoms in Older Male Military Veterans." *Health Psychology* 19 (1): 91-97.
- Schreuder, B.J.N., W. C. Kleijn, and G. M. Rooijmans. 2000. "Nocturnal Re-Experiencing More Than Forty Years After War Trauma." *Journal of Traumatic Stress* 13 (3): 453-63.
- Schuman, H. and J. Scott. 1989. "Generations and Collective Memories." *American Sociological Review* 54:359-81.

- Scott, J. and L. Zac. 1993. "Collective Memories in Britain and the United States." *Public Opinion Quarterly* 57 (3): 315-31.
- Selim, A., D. Berlowitz, G. Fincke, Z. Cong, W. Rogers, S. Haffer, S. Ren-Xinhua, A. Lee, S. X. Oian, and D. Miller. 2004. "Health Status of Elderly Veteran Enrollees in the Veterans Health Administration." *Journal of the American Geriatrics Society* 52 (8): 1271-76.
- Settersten, R. A., Jr. 1999. *Lives in Time and Place: The Problems and Promises of Developmental Science*. Amityville, NY: Baywood.
- . 2003. "Propositions and Controversies in Life-Course Scholarship." Pp. 15-48 in *Invitation to the Life Course: Toward New Understandings of Later Life*, edited by R. A. Settersten, Jr. Amityville, NY: Baywood.
- Settersten, R. A., Jr. and L. Martin. 2002. "The Imprint of Time: Historical Experiences in the Lives of Mature Adults." Pp. 471-97 in *Advances in Life Course Research: New Frontiers in Socialization*, edited by R. A. Settersten, Jr. and T. Owens. London: Elsevier.
- Shalev, A. Y. and Y. Rogel-Fuchs. 1993. "Psychophysiology of the Posttraumatic Stress Disorder: From Sulfur Fumes to Behavioral Genetics." *Psychosomatic Medicine* 55 (6): 413-23.
- Sherwood, R. J., H. Shimel, P. Stolz, and D. Sherwood. 2003. "Aging Veteran: Re-Emergence of Trauma Issues." *Journal of Gerontological Social Work* 40 (4): 73-86.
- Sokoloff, S. 1999. "How Are They at Home? Community, State, and Servicemen's Wives in England 1939-45." *Women's History Review* 8 (1): 27-51.
- Spiro, A., P. Schnurr, and C. M. Aldwin. 1994. "Combat-Related PTSD Symptoms in Older Men." *Psychology and Aging* 9:17-26.
- . 1997. "A Life-Span Perspective on the Effects of Military Service." *Journal of Geriatric Psychiatry* 30:91-128.
- Stouffer, S. A., E. A. Suchman, L. C. DeVinney, S. A. Star, and R. A. Williams. 1949. *The American Soldier, Vol. 2: Combat and Its Aftermath*. Princeton, NJ: Princeton University Press.
- Teachman, J. 2004. "Military Service During The Vietnam Era: Were There Consequences for Subsequent Civilian Earnings?" *Social Forces* 83 (2): 709-30.
- Teachman, J. D. and V. R. Call. 1996. "The Effect of Military Service on Educational, Occupational, and Income Attainment." *Social Science Research* 25:1-31.
- U.S. Department of Veteran Affairs, Center for Women Veterans. 2000. *Proceedings From a National Summit on Female Veterans Issues*. June 23-25, Washington, DC. Available at <http://www.va.gov/womenvet>
- Wagner, A. W., J. Wolfe, A. Rotnitsky, S. P. Proctor, and D. J. Erickson. 2000. "An Investigation of the Impact of Posttraumatic Stress Disorder on Physical Health." *Journal of Traumatic Stress* 13 (1): 41-55.
- Weiseth, L. and L. Eitinger. 1991. "Traumatic Reactions: European Literature (Part II)." *PTSD Research Quarterly* 2 (3). Available at <http://www.ncptsd.org/research/rq/rqhtml/v2n3.html>
- Werner, E. E. 2000. *Through the Eyes of Innocents: Children Witness World War II*. Boulder, CO: Westview.
- Williams, R., J. Medale, S. Zyzanski, S. Flocke, S. Yaari, and U. Goldbourt. 1993. "Long Term Mortality of Nazi Concentration Camp Survivors." *Journal of Clinical Epidemiology* 46:573-75.
- Wilson, R. 1995. "The G.I. Bill and the Transformation of America." *National Forum* 75:20-30.
- Wright, J. P., D. E. Carter, and F. T. Cullen. 2005. "A Life-Course Analysis of Military Service in Vietnam." *Journal of Research in Crime and Delinquency* 42 (1): 55-83.
- Xie, Y. 1992. "The Socioeconomic Status of Young Male Veterans 1964-1984." *Social Science Quarterly* 73:379-96.
- Zeiss, R. A. and H. R. Dickman. 1989. "PTSD 40 Years Later: Incidence and Person-Situation Correlates in Former POWs." *Journal of Clinical Psychology* 45:80-87.



**Richard A. Settersten, Jr.**, is a professor of sociology at Case Western Reserve University and a member of the MacArthur Research Network on Transitions to Adulthood and Public Policy. His research relates to the ways in which the life course is conditioned by age, time, and social contexts.