

“THERE IS NOTHING THAT PROMOTES
LONGEVITY LIKE A PENSION”:
DISABILITY POLICY AND MORTALITY OF
CIVIL WAR UNION ARMY VETERANS

*Larry M. Logue**
*Peter Blanck***

This Article investigates the effects of the federal government's policies on postwar mortality of Union Army (“UA”) Civil War veterans. Decisions to raise a mass army, commission some soldiers as officers, and reject prisoner exchanges, among other policies, shaped the men's wartime experience and influenced their postwar lives; the decision to provide pensions for the war's survivors is another potential determinant of veterans' longevity. Using military, pension, and census records, the risk of dying was analyzed for a sample of roughly 19,000 UA veterans who were observed until pensions became universal in 1907. Among wartime variables, only the time spent in an army hospital consistently affected veterans' mortality; among postwar variables, the amount of a veteran's pension reduced his chances of dying, even when circumstances such as homeownership and place of residence are held constant. The findings illustrate the expansive and profound life and death effects of laws and policies affecting persons with disabilities, both historically and today.

* Professor of History and Political Science, Mississippi College; Ph.D., University of Pennsylvania.

** Charles M. and Marion Kierscht Professor of Law, and Professor of Public Health (by courtesy) and Psychology at the University of Iowa, and Director of the Law, Health Policy, and Disability Center; Ph.D., Harvard University; J.D., Stanford Law School. The research on the lives of the Civil War veterans would not have been possible without the generous assistance of Dr. Robert Fogel and his colleagues at the University of Chicago. Chen Song and William Myhill provided most helpful comments on earlier versions of this Article. The program of research described herein is supported, in part, by grants to the second author from The University of Iowa College of Law Foundation; the National Institute on Disability and Rehabilitation Research, U.S. Department of Education; the National Institutes on Health, National Institute on Aging; the Nellie Ball Trust Fund; and the Gail and Stan Richards Endowment. For related studies, see LAW, HEALTH POLY, & DISABILITY CTR. (2003), at <http://disability.law.uiowa.edu>.

If pension laws are potent in the making of diseases, pensions themselves have the opposite effect—they cure them. There is nothing that promotes longevity like a pension.

-General M. M. Trumbull¹

I. INTRODUCTION

The Gilded Age does not spring to mind when researchers seek to understand the effects of governmental aid to individuals with disabilities. Grover Cleveland captured the era's reigning philosophy: "Though the people support the Government, the Government should not support the people. Federal aid in such cases encourages the expectation of paternal care on the part of the Government and weakens the sturdiness of our national character."²

Nonetheless, the federal government maintained a remarkably generous entitlement program for Civil War Union Army ("UA") veterans, granting pensions that consumed, at their peak, nearly half the federal budget.³ Numerous studies have analyzed the origins, provisions, and politics of the federal pension system.⁴ The

1. Gen. M. M. Trumbull, *Pensions for All*, 35 POPULAR SCI. MONTHLY 721, 724 (1889) ("Veteran diseases' are those miraculous ailments which rage unsuspected in the bodies of old soldiers until seductive pension laws bring them to the notice of the sufferers.").

2. SEAN DENNIS CASHMAN, *AMERICA IN THE GILDED AGE: FROM THE DEATH OF LINCOLN TO THE RISE OF THEODORE ROOSEVELT* 215 (2d ed. 1988).

3. See THEDA SKOCPOL, *PROTECTING SOLDIERS AND MOTHERS: THE POLITICAL ORIGINS OF SOCIAL POLICY IN THE UNITED STATES* 114 (1992) (discussing pensions' share of federal revenues).

4. See generally WILLIAM H. GLASSON, *FEDERAL MILITARY PENSIONS IN THE UNITED STATES* (1918); ANN SHOLA ORLOFF, *THE POLITICS OF PENSIONS: A COMPARATIVE ANALYSIS OF BRITAIN, CANADA, AND THE UNITED STATES 1880-1940* (1993); SKOCPOL, *supra* note 3; Peter Blanck, *Civil War Pensions and Disability*, 62 OHIO ST. L.J. 109 (2001); Peter Blanck & Michael Millender, *Before Disability Civil Rights: Civil War Pensions and the Politics of Disability in America*, 52 ALA. L. REV. 1 (2000); Peter Blanck & Chen Song, *Civil War Pension Attorneys and Disability Politics*, 35 U. MICH. J.L. REFORM 137 (2001-2002) [hereinafter Blanck & Song, *Pension Attorneys*]; Peter Blanck & Chen Song, "Never Forget What They Did Here": *Civil War Pensions for Gettysburg Union Army Veterans and Disability in Nineteenth-Century America*, 44 WM. & MARY L. REV. 1109 (2003); Peter Blanck & Chen Song, "With Malice Toward None, With Charity Toward All": *Civil War Pensions for Native and Foreign-Born Union Army Veterans*, 11 TRANSNAT'L L. & CONTEMP. PROBS. 1 (2001); Larry M. Logue, *Union Veterans and Their Government: The Effects of Public Policies on Private Lives*, 22 J. INTERDISC. HIST. 411 (1992); John William Oliver, *History of Civil War Military Pensions, 1861-1885*, 4 BULL. U. WIS.

effects of the pensions on recipients, however, have received far less attention.⁵ This Article focuses on a public policy effect of the most elemental kind—investigating whether UA pensions influenced veterans' longevity.

Such an investigation must address two fundamental concerns about the study of mortality and the assessment of public policy. Patterns of mortality are complex phenomena, subject to a host of variables. This Article does not attempt a comprehensive explanation of veterans' mortality; in any case, extant historical data rarely account for more than a small portion of mortality patterns.⁶ Instead, we concentrate on the influence of a massive federal program on veterans' lives.

It also is true, however, that the federal government's determination to pension UA veterans was intertwined with the earlier decision to mobilize a mass army. Pensions were based on Civil War experience, and it would be a mistake to study their long-term effects without assessing the long-term impact of the federal government's decision to prosecute the war. Soldiers were sickened, shot, malnourished, imprisoned, pushed beyond exhaustion, and subjected to countless hardships that surely influenced their life-chances. This Article will therefore compare the importance of two momentous nineteenth-century policies, asking one central empirical question: How much, and for how long, did these policies shorten or lengthen veterans' lives?

In the next part of this Article, we describe the underpinnings for our analysis, which begins in mid-1865 and follows a sample of UA veterans into the early twentieth century. We discuss our approach of combining the empirical investigation of the pension system's effects with an assessment of the enduring impact of the decision to mobilize a mass army for total war.

We then turn to a description of our preliminary findings. We

(History Series No. 844, 1917); Donald R. Shaffer, *"I Do Not Suppose That Uncle Sam Looks at the Skin": African Americans and the Civil War Pension System, 1865–1934*, 46 CIV. WAR HIST. 132 (2000).

5. See generally DORA L. COSTA, *THE EVOLUTION OF RETIREMENT: AN AMERICAN ECONOMIC HISTORY, 1880–1990* (1998); Tayatat Kanjanapipatkul, *Pensions and Labor Force Participation of Civil War Veterans*, in *HEALTH AND LABOR FORCE PARTICIPATION OVER THE LIFE CYCLE: EVIDENCE FROM THE PAST 231–52* (Dora L. Costa ed., 2003) [hereinafter *HEALTH AND LABOR FORCE PARTICIPATION*]; Logue, *supra* note 4; Chulhee Lee, *A Hedonic Index of Wartime Stress and Older Age Mortality* (1994) (unpublished manuscript on file with authors).

6. See SAMUEL H. PRESTON & MICHAEL R. HAINES, *FATAL YEARS: CHILD MORTALITY IN LATE NINETEENTH-CENTURY AMERICA* 141 (1991) (discussing explanatory power of mortality analyses).

illustrate the powerful influences of the pension scheme on postwar mortality. The final part of this Article reviews the complex legacy the Civil War left for its veterans and sketches implications of this analysis for present-day assessment of disability laws and policies.

II. INVESTIGATING THE CIVIL WAR EXPERIENCE

The data for this investigation are from the Early Indicators Project of the Center for Population Economics at the University of Chicago.⁷ The project's researchers recorded all extant military and pension information for 303 randomly selected companies of the Union army. Excluding men who died during the war and those with missing birth or death dates, the records of 19,215 survivors are available for analysis. These records will be referred to as the "postwar subsample." Union Army service records provide the majority of the variables examined in this Article. For example, for purposes of our statistical analysis we create a "dummy variable" (i.e., a variable coded 1 for presence and 0 for absence of a characteristic) to distinguish officers from enlisted men. The Early Indicators sample excluded officers above the company level. Yet, some sample members eventually were promoted beyond captain. Officers make up about four percent of the postwar subsample, with the predominant sample members being privates in the UA.

Officers were not a superior class among volunteer soldiers. Civil War officers (often men of higher education, economic class, or political figures of the day) had to earn authority rather than command it.⁸ Nonetheless, their experiences differed from those of enlisted men. Officers' food and quarters were better, especially in camp and in transit. Even allowing for embellishment, when one soldier reported seeing officers "feasting on . . . splendid fare" and sleeping in "warm and cozy berths," while he ate "hardtack and raw sow-belly, with river water for a beverage" and slept "on a blanket which a military necessity had compelled me to steal," he had a point.⁹

7. See generally Robert W. Fogel et al., *Aging of Veterans of the Union Army: Military, Pension, and Medical Records, 1820-1940*, at <http://www.icpsr.umich.edu/cgi/archive.prl?study=6837>.

8. See GERALD F. LINDERMAN, *EMBATTLED COURAGE: THE EXPERIENCE OF COMBAT IN THE AMERICAN CIVIL WAR* 43-56 (1987); JAMES M. MCPHERSON, *FOR CAUSE AND COMRADES: WHY MEN FOUGHT IN THE CIVIL WAR* 47-61 (1997); see Chulhee Lee, *Selective Assignment of Military Positions in the Union Army: Implications for the Impact of the Civil War*, 23 *SOC. SCI. HIST.* 67, 70-72 (1999) (discussing officer characteristics).

9. LEANDER STILLWELL, *THE STORY OF A COMMON SOLDIER OF ARMY LIFE IN THE CIVIL WAR: 1861-1865*, at 32 (1920); see FRED ALBERT SHANNON, *THE ORGANIZATION AND ADMINISTRATION OF THE UNION ARMY, 1861-1865*, at 199, 231

On the other hand, part of the process of earning authority included taking chances under fire to demonstrate bravery.¹⁰ One question we examine is whether, all else equal, the privileges and risks of a wartime commission translated into different survival chances afterward.

Other military-service variables reflect the hardships of army life. One obvious sign of poor health was time spent in a military hospital. Hospitalization was a common experience among UA soldiers. Indeed, sixty percent of men in the postwar subsample were hospitalized at one time or another, and two-fifths of these men were confined three or more times.¹¹

Since the reason for a hospital stay varied from chronic diarrhea to multiple gunshot wounds,¹² in this investigation we derive a measure or variable that totals each survivor's hospital time as one indicator of the variety and severity of health and disability conditions of the soldiers. Within this variety, however, the consequences of battlefield wounds merit special consideration. Service records indicate that approximately one in five of the men in the postwar subsample suffered wounds from minié balls, artillery fire, or hand-to-hand combat. Army officials kept careful records of mortality from wounds during the war.¹³ However, much less is known about the postwar toll of these wounds.

Accounts from individual veterans frequently report the lingering effects of battle wounds, from the Wisconsin soldier whose shoulder wound produced pus after a year, to the Indiana veteran whose wound made him cough up blood for the rest of his life.¹⁴ Another dummy variable is developed to assess the influence of a battle wound on each veteran's mortality. Soldiers fell victim to another kind of hardship when they were taken prisoner. Caught between governments that refused to exchange prisoners—

(1928) (contrasting officers' and enlisted men's shelter and transportation); BELL IRVIN WILEY, *THE LIFE OF BILLY YANK: THE COMMON SOLDIER OF THE UNION* 230–31 (1952) (comparing officers' and enlisted men's rations); *see also* MCPHERSON, *supra* note 8, at 55–56 (discussing the wide disparity in the living conditions of officers and enlisted men).

10. LINDERMAN, *supra* note 8, at 43–56; *see* Lee, *supra* note 8, at 72 (finding a higher death rate from injuries for officers than for privates, though the study includes corporals and above as officers; the present article refers to commissioned officers only).

11. Fogel et al., *supra* note 7.

12. Blanck, *supra* note 4, at 121 fig. 2.

13. J. K. BARNES, *1 MEDICAL AND SURGICAL HISTORY OF THE WAR OF THE REBELLION (1861–1865)* (1875) (reporting statistics on wounds).

14. ERIC T. DEAN, JR., *SHOOK OVER HELL: POST-TRAUMATIC STRESS, VIETNAM, AND THE CIVIL WAR* 112 (1997); FRANK R. FREEMAN, *GANGRENE AND GLORY: MEDICAL CARE DURING THE AMERICAN CIVIL WAR 184–86* (1998).

ostensibly because of the UA's use of black troops—and at the mercy of a Confederate administration that could not adequately supply its soldiers, UA prisoners found themselves pushed to starvation in overcrowded stockades.¹⁵

Only some six percent of the men in the postwar subsample spent time as a prisoner of war, but the experience took an extraordinary physical toll. One Indiana soldier lost nearly half his 160 pounds in captivity; his sister declared that “his health was all shattered and he would never be able to do anything.”¹⁶ There also was a devastating psychological toll, described by one prisoner who “felt as if I were being pushed on by some unseen force in the direction of insanity.”¹⁷ In this investigation, each postwar subsample member's total recorded time of captivity serves as an additional measure of wartime trauma.

Useful as these variables are, they may not capture the full range of effects on soldiers' subsequent health or disability. Even when they were not hospitalized or imprisoned, soldiers suffered from poor nutrition. The War Department paid for ample food, but contractors were unreliable and distribution was inefficient. The result was sporadic supplies of food that were frequently inedible. An Illinois soldier wrote, “I never knew what it was to be hungry [until] I came into the service.”¹⁸ When food was available, it too often consisted of what another soldier described as “[r]otten meat, mouldy bread & parched beans for coffee.”¹⁹

Irregular supplies of tents, blankets, and clothing, particularly on campaigns that involved prolonged marches, likewise wore soldiers down. One Union soldier reported marching for more than three weeks “without a blanket or shelter, barefooted and half pint of flour a day to live on. I wore raw cow skin shoes for ten days.”²⁰

Such deprivation could, of course, send soldiers to the hospital, but the men were well aware of the appalling conditions to be found

15. JAMES M. MCPHERSON, *BATTLE CRY OF FREEDOM: THE CIVIL WAR ERA 796–802* (1988).

16. DEAN, *supra* note 14, at 85–86 (quoting Josephine Alexander, 1887, pension file of Erastus Holmes).

17. *See* LINDERMAN, *supra* note 8, at 260 (quoting prisoner Francis Amasa Walker, in JAMES P. MUNROE, *A LIFE OF FRANCIS AMASA WALKER 93–94* (1923)).

18. JAMES I. ROBERTSON, JR., *SOLDIERS BLUE AND GRAY 71* (1988) (quoting CHARLES E. CORT, “DEAR FRIENDS”: *THE CIVIL WAR LETTERS AND DIARY OF CHARLES EDWIN CORT 162* (1962)).

19. *See id.* at 65 (quoting E.H.C. Cavins, July 18, 1882, Cavins Collection, Indiana Historical Society); SHANNON, *supra* note 9, at 53–80 (discussing War Department procurement problems).

20. WILEY, *supra* note 9, at 62 (quoting William H. Lloyd, Dec. 21, 1863, manuscript, Western Reserve Historical Society).

there. Some men avoided hospitalization even when ordered to report. One Ohio soldier “insisted on takeing [sic] the field and prevailed—thinking that I had better die by rebel bullets than Union Quackery.”²¹

These hardships might be expected to produce an effect reminiscent of “seasoning.” This term refers to deaths, usually from disease, that peak soon after exposure to a new environment. Investigations of Civil War seasoning usually are confined to deaths during the war, but the self-selection implied by seasoning may have lasted beyond the war’s end.²² Simply surviving prolonged campaigning may have fitted veterans for survival after the war. An additional independent or predictor variable reflects each postwar subsample member’s total wartime service.

III. UNION ARMY PENSION SCHEME

The pension data set provides us with additional predictor or independent variables in this investigation. The pension data set information is subdivided to reflect three distinctive periods in the evolution of the pension system.

The first period originated in 1862, when Congress established a regular pension system (often referred to as the General Law) for UA veterans and their survivors.²³ These pensions were tied directly to war-related disabilities. To obtain such a rank-and-disability-based pension, a veteran had to establish that his condition, disease, or disability dated from his wartime service.²⁴ Amendments to the General Law, passed in 1873 to clarify amounts for various disabilities, marked the end of the initial period.²⁵ The revised 1873 legislation relaxed the disability rule. Thereafter, disabilities would be eligible for pension awards if their *cause* originated in the war, even if they had not fully *developed* then.²⁶

Though Congress continued to make periodic adjustments to

21. *Id.* at 132 (quoting M.F. Roberts, May 3, 1864, manuscript, Western Reserve Historical Society).

22. For studies of wartime seasoning, see generally Chulhee Lee, *Prior Exposure to Disease and Later Health and Mortality: Evidence from Union Army Medical Records*, in HEALTH AND LABOR FORCE PARTICIPATION, *supra* note 5, at 51–87; Daniel Scott Smith, *Seasoning, Disease Environment, and Conditions of Exposure: New York Union Army Regiments and Soldiers*, in HEALTH AND LABOR FORCE PARTICIPATION, *supra* note 5, at 89–112.

23. DIGEST OF PENSION LAWS, DECISIONS, RULINGS, ORDERS, ETC. 494 (Frank Curtis & William Webster eds., 1885) (referencing Act of July 14, 1862 as General Law System).

24. Blanck, *supra* note 4, at 118–20.

25. *Id.* at 119–20.

26. *Id.* at 120.

application procedures and rates, the next fundamental alteration in the basis of pensions came in 1890. The Disability Pension Act authorized pensions for veterans who had *any* disability, whether or not it originated in the war.²⁷ The 1890 law resulted in a dramatic increase in the number of pensioners. Thus, by 1900, nearly three-fourths of surviving UA veterans were on the pension rolls.²⁸

The last major change in the pension scheme began in 1904, with an executive order that classified old age itself as a disability.²⁹ Congress enacted the concept into law in 1907. Since most veterans were by then past the minimum “old age” of sixty-two, UA pensions became “service pensions” rather than disability compensation. After 1907, therefore, UA pensions were tied directly to longevity, with older veterans receiving higher pensions. Further assessment of pensions’ direct effect on mortality thus is not possible, and this Article’s empirical analysis ends at 1907.

Union Army pensions themselves had multiple characteristics that lead to competing expectations for their effects on mortality. Insofar as pensions were tied to disabilities, particularly under the General Law, they were indicators of health conditions that should have been connected with earlier death. Yet, a pension application required a medical examination and a physician’s attention.³⁰ When the application process itself led to follow-up medical treatment, it had the potential to improve a veteran’s life-chances.³¹ And, the cash value of pensions surely improved recipients’ quality of life and influenced retirement trends among veterans.

From 1874 to 1890, the average yearly award for pensioners in

27. Disability Pension Act of 1890, ch. 634, 26 Stat. 182 (1890). The Act did require that a pensionable work-disability not be “the result of [an applicant’s] own vicious habits.” GLASSON, *supra* note 4, at 234.

28. SKOCPOL, *supra* note 3, at 109.

29. Blanck, *supra* note 4, at 126–27 (discussing Executive Order No. 78); see also Blanck & Millender, *supra* note 4, at 14–27 (describing physicians’ role in the pension process).

30. Blanck, *supra* note 4, at 120.

31. Historians generally agree that physicians’ real gains against disease came after 1900, but it should be noted that most studies focus on gastrointestinal ailments and other diseases that primarily afflicted children. See generally PRESTON & HAINES, *supra* note 6, at 11–20; William G. Rothstein, *When Did a Random Patient Benefit from a Random Physician? Introduction and Historical Background*, 12 CADUCEUS 2–8 (1996) and the six essays that follow. On causes of death among elderly veterans, see generally Dora L. Costa, *Understanding Mid-Life and Older Age Mortality Declines: Evidence from Union Army Veterans*, 112 J. ECONOMETRICS 175 (2003); Dora L. Costa, *Understanding the Twentieth-Century Decline in Chronic Conditions Among Older Men*, 37 DEMOGRAPHY 53 (2000) [hereinafter Costa, *Twentieth-Century Decline*]. On mortality changes among American adults, see generally GERALD N. GROB, *THE DEADLY TRUTH: A HISTORY OF DISEASE IN AMERICA* 209–15 (2002).

the postwar subsample was \$108, constituting nearly one-third the yearly earnings of American workers.³² Since pension bases and amounts changed over time, in our analysis we assign each postwar subsample member a pension amount for each period; that is, from the beginning of observation under the General Law through 1873, from 1874 through 1890, and from 1891 through 1907. The dollar amount consists of a pensioner's average monthly award during each period.³³

We also create a variable to assess the effect of contact with physicians. Pension regulations required applicants to be examined by one or more physicians; examination did not guarantee medical treatment, and turn-of-the-century treatment did not guarantee better health,³⁴ but there is some evidence that medical attention itself could yield benefits. In the early twentieth century, several cities mounted campaigns against tuberculosis, a leading killer of adults. No remedy for the disease was found, but the results of concerted efforts to diagnose and isolate infected residents were encouraging.³⁵

Medical attention may be estimated for men in the postwar subsample by tabulating their pension applications, but the measure must be adjusted for longevity—the longer a veteran lived, the more opportunity he had to apply for a new or increased pension. Therefore, each veteran's number of applications in a period is divided by the number of years he survived in the period, producing a standardized application rate that reflects sample members' attention from physicians. Finally, the regression model recognizes that the obvious effect of age on mortality must be considered and statistically controlled. Postwar subsample members' age in mid-1865, when observation begins, therefore is used in each regression presented below.

32. See U.S. BUREAU OF THE CENSUS, 1 HISTORICAL STATISTICS OF THE UNITED STATES, COLONIAL TIMES TO 1970, at 164 (1975) (listing workers' earnings).

33. Applications were occasionally rejected, with the applicant given no pension (i.e., a "zero rating"). Since the purpose of this variable is to estimate the income of pensioners, zero ratings are ignored in calculating the average; for example, if a veteran's first application in 1875 was rejected but he was awarded eight dollars a month in 1880 and then twelve dollars in 1884, his average award from 1874 to 1890 would be ten dollars. If the veteran did not receive a pension in a period, either through a new award or one carried over from an earlier period, his average award for the period would be zero.

34. Blanck, *supra* note 4, at 120 (discussing medical diagnostic knowledge of the day); see also Rothstein, *supra* note 31, at 2–8 (discussing late nineteenth and early twentieth century medicine).

35. The campaigns also included efforts to improve sanitation. GROB, *supra* note 31, at 212–15.

The outcome or dependent variable we employ is each veteran's survival after mid-1865, separated into the three pension-law periods identified. This division produces three regression models that estimate and control for the influence of wartime experience and pension policies on UA veterans' mortality rates.

The regression models use proportional hazards, a statistical technique useful for this Article's analysis because it compares the effects of explanatory or predictor variables on the risk of an event—in this case, mortality.³⁶ The procedure produces coefficients that represent statistically the influence of each independent variable on the risk of dying, with the other variables held constant. The technique allows us to compare the effects of the variables on sample members' likelihood of dying in each period. Proportional hazards also assumes that the effects of the predictors remained constant throughout each pension period, an assumption that makes necessary the separate models presented below.

IV. PRELIMINARY FINDINGS

Table 1 shows descriptive statistics for the independent variables for the 19,215 cases studied. The table reveals men who were relatively young in the postwar period (average age in mid-1865 was 27.4 years). As the sample aged and as pensions became liberalized, claimants responded with more applications—an average of 1.5, 2.7, and 3.1 applications per respective pension period; in the regression analysis, this figure is translated into an application rate as described above. Pensioners also received increasingly large average awards—\$6.84, \$9.00, and \$13.05 monthly, per respective pension period.

We observe in Table 1 a small proportion of officers in the sample (4.4%). We see that sixty percent of all sample members were hospitalized during the war, with an average hospital stay of 3.8 months. Approximately six percent of the sample was captured and served time as a prisoner of war ("POW"), with an average time as a POW of 4.6 months.

36. For good explanations of the technique and its application to historical data, see John G. Treble, *On Marrows: Evidence from the Victorian Household Panel Study*, 28 HIST. METHODS 183–93 (1995), and Dora L. Costa, *Height, Weight, Wartime Stress, and Older Age Mortality: Evidence from the Union Army Records*, 30 EXPLORATIONS IN ECON. HIST. 424–49 (1993). See generally TONY LANCASTER, *THE ECONOMETRIC ANALYSIS OF TRANSITION DATA* (1992) (providing a complete technical introduction to the technique).

TABLE 1: UNIVARIATE STATISTICS, POSTWAR SUBSAMPLE

<i>Variable</i>	
Percent commissioned officers	4.4
Percent hospitalized	60.0
Average hospital stay (months)	3.8
Percent captured	6.4
Average time as POW (months)	4.6
Average wartime service (years)	2.2
Average age in mid-1865	27.4
Number of cases	19,215

<i>Variable</i>	<i>1865–1873</i>	<i>1874–1890</i>	<i>1891–1907</i>
Percent applied for pensions	9.7	72.8	78.9
Average number applications by those applying	1.5	2.7	3.1
Average monthly award	\$ 6.84	\$ 9.00	\$ 13.05

Table 2 shows estimates of the applicable variables' effects on the risk of dying in each of the three pension periods (i.e., the dependent variable). The numbers in each variable's row are the coefficients described above, estimating the variable's influence on the risk of dying in each period. The coefficients themselves have no intrinsic meaning; they are expressed as the logarithm of each predictor variable's effect on the risk of death. Moreover, each coefficient represents units of its predictor variable (years of age, months in captivity, presence or absence of a wound, and so on), so coefficients are not directly comparable.

The magnitude and direction of the coefficients may be compared, however, through the principle of the "level of significance." Two asterisks following a coefficient indicate that there is less than a five percent likelihood that its effect is due to chance, and one asterisk means less than a ten percent likelihood. Where a coefficient lacks an asterisk, there is ample reason to suspect that the variable has no effect in the population of UA veterans from which the postwar subsample was taken (but, of course, the variable still may be of interest from a substantive point of view).

TABLE 2: INFLUENCES ON THE RISK OF DYING, POSTWAR
SUBSAMPLE

	(1)	(2)	(3)
<i>Variable</i>	<i>1865-1873</i>	<i>1874-1890</i>	<i>1891-1907</i>
Time in hospital	.237**	.297**	.163**
Total wartime service	-.071**	-.027	.001
Time as POW	-.413	.172	.095
Wounded in battle	-.480**	.270**	.085**
Amount of pension	.035**	-.117**	-.050**
Commissioned officer	.067	-.013	-.098
Age	.044**	.072**	.090**
Pension applications/year	4.303**	-.308	-.189*
Number of cases	19,215	18,425	15,947

Note: Figures in each variable's row are proportional hazards coefficients, which estimate the strength of each variable's effect on the risk of dying in the period shown. Figures with an asterisk are "significant" at .10, meaning that there is less than a ten percent likelihood that this effect is due to chance, and those with two asterisks are significant at .05.

We observe in Table 2 that hospital time was the lone wartime experience that, across the three pension periods, consistently shortened veterans' lives. From the immediate postwar years to the beginning of the twentieth century, the longer a soldier had been in an army hospital, the greater was his risk of dying. The magnitude of this effect is fairly consistent across the pension periods—that is, .237, .297, and .163, respectively.

The other variables in our model show less consistency across the pension periods, as the passage of time reshaped the population of survivors. Surviving a battle wound and enduring a prolonged enlistment did produce a temporary seasoning effect, and survivors were less likely to die before 1873. Thus, in Table 2, for the first pension period, the coefficient for wounded in battle is -.480, and for total wartime service is -.071.

On the other hand, since pensions in this first period were tied to serious disabilities that began during the war and continued thereafter, applying for and receiving a pension signaled chronic health problems that would lead to an early death. The coefficient for the pension application variable during the first period is 4.303 and for the pension amount is .035 (both indicating that an early

death was more likely).

The benefits of any wartime seasoning disappeared after 1873. Wounded veterans now died sooner than did their peers; we observe that during the second and third pension periods an early death for wounded veterans was more likely (coefficients of .270 and .085, respectively). Lengthy wartime service also lost its longevity advantage (statistically insignificant coefficients of -.007 and .001, during second and third periods respectively). When the other variables are held constant, neither extended time in captivity nor the wartime privilege that went with an officer's commission had discernible effects on mortality in any of the periods examined in this Article.

Two other variables reverse their influence on veterans' health from negative to positive. After being associated with early death from 1865 to 1873, the pension application rate disappears as an identifiable influence until 1890, and then emerges as a contributor to better health (a coefficient of -.189, indicating less risk of dying).

A substantial reversal occurs in the effect of pensions themselves. In particular, after being associated with worse mortality in the early postwar years, larger pension payments are linked with *lower* mortality afterward. The coefficients for the pension periods are .035, -.117, and -.050, suggesting that, after the severely disabled veterans died, pensions became contributors to better health among surviving ex-soldiers.

The performance of the pension variable also indicates that the Disability Pension Act of 1890, though it transformed the eligible population of pensioners, had little effect on mortality. The more inclusive law created a new and larger population of pensioners clustered at the lower end of the payment scale.

Depending on the severity of their current disability, pensioners under the 1890 law could qualify for six to twelve dollars a month, whereas pensioners under the older, General Law system received as much as \$125 monthly. Table 2 shows that the greater the pension amount received, the lower the claimant's chance of dying after 1873. This phenomenon suggests that, when controlling for the effects of the other variables in the regression model, General Law pensions drove the post-1873 reversal of pensions' impact on mortality. With their far greater range of payments, General Law pensions, rather than the later current-disability pensions, were most associated with longevity.³⁷

37. It must be noted, however, that the General Law's provisions themselves had little to do with mortality: A dummy variable for a General Law pension, added to the models in Table 2 (but not shown), has no discernible effect on mortality. It was the *amount* of a pension, not its basis, which

Discovering the reasons underlying the pension-related longevity effect requires further investigation; at a minimum, we must assess the veracity of our title, “There Is Nothing That Promotes Longevity Like a Pension.” We therefore introduce variables that are not directly related to government policies, but that have commonly been linked to historical mortality rates.

One obvious explanation for the pension-related longevity effect would be that pensions lowered mortality by providing the cash for better food, medical care, housing, work hours, and so on.³⁸ Table 3 shows our test of this supposition by examining those UA veterans in the subsample who could be linked to the 1900 federal census; these 9,587 men are followed to 1907. The census provides a measure of economic well-being—ownership of one’s dwelling—the effect of which may be compared to those of pension payments.³⁹

In Table 3, we again employ the proportional hazards technique to compare the effects of explanatory variables on mortality.

TABLE 3: INFLUENCE ON THE RISK OF DYING FROM 1900–1907, SUBSAMPLE MEMBERS LINKED TO 1900 CENSUS.

<i>Variable</i>	<i>Coefficient</i>
Time in hospital	.108
Total wartime service	.009
Time as POW	.009
Wounded in battle	.098
Amount of pension	-.042**
Commissioned officer	-.107
Age	.094**
Pension applications/year	-1.399**
Owned own dwelling	-.263**
Lived in a city of 10,000-49,999	-.044
Lived in a city 50,000 or larger	.109
Number of cases	9,587

Note: For an explanation of this table, *see supra* Table 2.

influenced mortality.

38. This suggestion, though it seems commonsensical, has been critically reexamined and is no longer taken for granted by historians. *See generally* S. Ryan Johansson, *Food for Thought: Rhetoric and Reality in Modern Mortality History*, 27 HIST. METHODS 101 (1994).

39. For a discussion of this use of census data, *see generally* Blanck & Song, *Pension Attorneys*, *supra* note 4 (linking 1900 census files to pension data).

Table 3 isolates the important effect of the indicator of UA pension claimant wealth. Specifically, we see that homeowners' risk of dying was nearly twenty-five percent lower than was the risk for those who did not own their own homes (coefficient of $-.263$).⁴⁰ Yet, even controlling for the effect of home ownership, the benefit of pensions remains significant (coefficient of $-.042$), and the pension application rate likewise contributes to longevity (coefficient of -1.399). All else equal, whether or not a veteran owned his home, more generous pensions meant improved survival chances, as did more appearances before medical examiners.

At the same time, we consider another powerful influence on nineteenth-century mortality. Since cities were especially dangerous places to contract infectious diseases, it is conceivable that the longevity of men with larger pensions may have been due to their residential or work location.⁴¹ Yet, the final variables of Table 3, which identify veterans who lived in medium-size and large cities, had no clear effect on mortality. Thus, whether a veteran lived in a city or a rural area, and whether or not he owned his home, large pensions and frequent physician visits were associated with a greater likelihood of living to 1907.

V. CONCLUSION

The Civil War left a complex legacy for its disabled veterans, both Union and Confederate ex-soldiers. The wartime variables examined in this investigation illustrate the lingering toll of soldier life. However, only the hospitalization variable had an unvarying effect until the early twentieth century.

Did UA pensions promote longevity, as our title would suggest? After the immediate postwar years, Civil War UA pensions actually reversed their influence and began to be linked to lower mortality. The war thus continued to take casualties long after the close of fighting, while governmental policies arising from the war eventually went with improved chances of survival.

40. This percent-reduction figure is the result of exponentiating the coefficient shown for homeowners in Table 3; reversing the log transformation of coefficients for dummy variables shows the percentage reduction (or percentage increase, in the case of positive signs) associated with presence of the characteristic.

41. See PRESTON & HAINES, *supra* note 6, at 36–39 (discussing mortality in nineteenth-century cities); see also GROB, *supra* note 31, at 121–24 (comparing urban and rural mortality in the United States); Michael R. Haines, *The Urban Mortality Transition in the United States, 1800–1940*, 1 ANNALES DE DÉMOGRAPHIE HISTORIQUE, 33–64 (2001) (describing urban mortality changes in the United States); Johansson, *supra* note 38, at 114 (discussing urban/rural mortality differences generally).

The latter finding may be explored further in light of recent research on the mortality transition. Generally, it is accepted that twentieth-century disease-prevention efforts, such as water treatment and public sanitation, were responsible for reduced mortality, especially among infants and children, whereas, economic changes for individuals, such as rising incomes, are suggested to have had less effect on mortality rates.⁴²

Yet, the findings in this investigation regarding the benefits of higher federal pensions from the 1870s to the early twentieth century present evidence to the contrary (or at least suggest pause). Regardless of whether they lived in a city or owned their homes, veterans with more generous pensions were less likely to die than were their peers in the final periods investigated in this Article.

Our suggestion is not a direct challenge to the germ theory of historical mortality. This is because the population examined in this investigation admittedly is narrowly defined—UA veterans (mostly privates) entering their sixties at the end of the nineteenth century. Moreover, we cannot rule out with certainty the possibility that UA veterans receiving large pensions were self-selected through long-term survival with serious disabilities.

Dora Costa's earlier studies of UA veterans from the same population investigated self-selection as it related to retirement. Costa controlled for health status as reported by examining surgeons, and reached a different conclusion from that of this Article; that is, a UA veteran's pension income did not substantially affect his risk of dying.⁴³

Although it is clear that a UA veteran's health was tied closely to his pension eligibility and life expectancy, there are differences between Costa's important work and the present investigation. Costa's sample of veterans was smaller than our sample, and

42. See PRESTON & HAINES, *supra* note 6, at 20–26, 36–39, 208–10; Gretchen A. Condran, *Declining Mortality in the United States in the Late Nineteenth and Early Twentieth Centuries*, ANNALES DE DÉMOGRAPHIE HISTORIQUE 119–41 (1986–1987); Johansson, *supra* note 38, at 111–18 (comparing income and public health policies as causes of mortality declines). For a recent finding that suggests limited public-health benefits to some residents, see Werner Troesken & Patricia E. Beeson, *The Significance of Lead Water Mains in American Cities: Some Historical Evidence*, in HEALTH AND LABOR FORCE PARTICIPATION, *supra* note 5, at 181–201. For a contention that economic changes worsened mortality, see Dora L. Costa & Richard H. Steckel, *Long-Term Trends in Health, Welfare, and Economic Growth in the United States*, in HEALTH AND WELFARE DURING INDUSTRIALIZATION 47, 47–89 (Roderick Floud & Richard H. Steckel eds., 1997). For arguments pointing to multiple causes of mortality changes, see GROB, *supra* note 31, at 209–16; Costa, *Twentieth-Century Decline*, *supra* note 31.

43. COSTA, *supra* note 5, at 45–47.

variable definitions and time periods differ.⁴⁴ Indeed, when we create a dummy variable for men whose health was described as “poor” by an examining surgeon (1 for poor health, 0 otherwise), and the regression in Table 3 is recalculated, the health control slightly reduces the impact of pension payments. However, even in this analysis, the pension amount remains a significant predictor of survival.

Though it is perhaps beyond the scope of the present data to confirm, an economic contribution to UA veterans’ mortality may be proposed. We know that war-related pensions were generous at century’s end. Indeed, the average award, for those receiving more than the current-disability maximum, was nearly \$240 per year.⁴⁵ Considering the additional longevity benefit of home ownership, it is tempting to suggest a standard-of-living explanation for veterans’ mortality.

Such an explanation, however, would overlook the importance of contact with physicians, as reflected in the application rate variable. Economic circumstances appear to have been important determinants of veterans’ longevity, but regardless of their pension income and property ownership, the more they appeared before physicians, the longer the ex-soldiers were likely to live. Turn-of-the-century medicine may have been short on miracles, but the attention of physicians could apparently prolong some elderly men’s lives.

The limitations of historical data make these conclusions speculative. But, we mean to illustrate important economic and public policy factors to place alongside public health measures (and alongside self-selection hypotheses, in the case of the postwar subsample) as contributors to the transition in mortality.

Our emphasis on renewed consideration of the economic, political, and public policy forces behind the experience of disability and longevity after the Civil War is consistent with earlier work by Blanck and Song suggesting the strong partisan forces behind the pension scheme.⁴⁶ They write that “[a]mong its aftereffects, the Civil War changed conceptions of disabled persons in American society. To a great extent, political and economic forces coinciding with the growth of the Civil War pension system shaped attitudes toward UA

44. The pension amount in Costa’s study is given as the payment in 1900 and mortality is observed continuously after 1900, whereas the present article assigns an average pension for 1891 to 1907, and mortality observation in Table 3 is from 1900 to 1907.

45. Blanck, *supra* note 4, at 126–27.

46. See generally Blanck & Song, *Pension Attorneys*, *supra* note 4.

veterans with disabilities.”⁴⁷

Thus, UA military service was connected to veterans’ post-war political behavior and to Republican Party strategy. The Republicans advocated for broad and generous pension awards. Republican Senator Benjamin Harrison, soon to be president in a contest against Grover Cleveland, echoed the pension’s expansion theme that “there ought to be a place in the Ambulance for every faithful disabled [soldier].”⁴⁸

Logue also finds that under a Republican administration in the early 1880s, Republican-dominated counties evidenced a higher proportion of pensioners. In contrast, in the mid-1880s under President Cleveland’s administration, Democratic-dominated counties evidenced greater numbers of successful pensioners.⁴⁹ And, by the mid-1890s, when virtually all UA veterans were receiving pension awards so that the political salience of the pensions ceased, Costa finds that pension awards did not vary according to the strength of the dominant political party in the claimant’s county of residence.⁵⁰

By the early twentieth century, the number of pensioners decreased because of sickness and old age, and the Civil War pension system faded as a political force. “Needs-based” social insurance programs emerged, reflecting a progressive view toward disability policy.⁵¹ Yet, we continue to observe the enduring legacy of the UA pension scheme, as in many contemporary disability policies that disproportionately benefit those disabled whom society deems “worthy.”

Harlan Hahn stresses that America’s conception of disability is best understood through its social attitudes, public policy, and political events.⁵² The modern disability rights movement and disability civil rights laws like the American with Disabilities Act question historical constructions of disability in American society.⁵³

47. *Id.* at 138.

48. MARY R. DEARING, *VETERANS IN POLITICS: THE STORY OF THE G.A.R.* 285–86 (1952) (quoting President Harrison); see Blanck & Song, *Pension Attorneys*, *supra* note 4, at 147 & n.47 (citing Heywood T. Sanders, *Paying for the “Bloody Shirt”: The Politics of Civil War Pensions*, in *POLITICAL BENEFITS: EMPIRICAL STUDIES OF AMERICAN PUBLIC PROGRAMS* 137 (Barry S. Rundquist ed., 1980) (arguing that pension policies played a central part in Republican party strategy for ensuring continuing party loyalty)).

49. Logue, *supra* note 4, at 424.

50. See COSTA, *supra* note 5, at 164–65 (commenting on the resulting de-politicization of the pension system by the late 1800s).

51. *Id.* at 139.

52. Harlan Hahn, *Disability Policy and the Problem of Discrimination*, 28 *AM. BEHAV. SCIENTIST* 293, 294 (1985).

53. PETER BLANCK ET AL., *DISABILITY CIVIL RIGHTS LAW AND POLICY* 1-2 to 1-

2004]

DISABILITY POLICY AND MORTALITY

67

The lessons learned from the past help us to challenge today's misconceptions of disability and disability policy. They also help us to recall the expansive and profound life and death effects of our laws and policies on persons with disabilities. We are reminded that governmental policy is a complicated business and it must include a broad view of the social, economic, attitudinal, and individual patterns surrounding the people whose lives it touches.