

# Commentary:

## J. David Hacker's "A Census-Based Count of the Civil War Dead"

---

MARK FLOTOW

Every 20th year in the U.S., both a presidential election and a decennial census conclude around the same time, as occurred in 1860. Complete and accurate national censuses have importance beyond the *raison d'être* of reapportionment for the U.S. House of Representatives. Starting with the 1850 census, the constitutionally required enumeration pivoted from a head-of-household focus to individual persons as the basic collection unit.<sup>1</sup> For historical studies, this expanded the available demographic characteristics to include age, place of birth, and race for all residents.

Abraham Lincoln's first presidential term began on March 4, 1861, and the Civil War started less than six weeks later. Images of the president's progressively weary countenance reflect the weight of the war and his effort to preserve the Union.

What were the war's costs in terms of lost productivity, social upheaval, and, especially, human lives? An accounting or even a good approximation of the total dead remained unknown until decades after the war. The most recent nationally comprehensive "count" of the Civil War dead was published by J. David Hacker in 2011, in which he suggests a roughly 20 percent higher figure than what was previously accepted.<sup>2</sup> His approach was rightfully recognized by many historians as an analytical breath of fresh air on a topic that had hardly been touched in the previous century.<sup>3</sup> Among the article's introductory comments was one from James M. McPherson that Hacker's

1. For example, previous to 1850 only the name of the head of household was collected and not the names of others at that household.

2. J. David Hacker, "A Census-Based Count of the Civil War Dead," *Civil War History* 57, no. 4 (December 2011), 307–48.

3. Hacker, "A Census-Based Count," 309–10.

“conclusion involves a number of assumptions, but all of them are quite reasonable and persuasive.”<sup>4</sup>

Are they? During the decade since its publication, criticisms have been relatively few and somewhat misdirected, more or less acknowledging that Hacker’s results represent the new gold standard.<sup>5</sup> Be that as it may, there is room for improvement. Indeed, Hacker has used a methodology that *invites* refinements, which in itself may be more important than his central estimate of 752,000 dead.

Lincoln himself was also a casualty of the conflict, and when he was buried at Oak Ridge Cemetery, officials did not know how many had died due to the Civil War. We still do not have an exact number. This article explores Hacker’s demographic method and why numbers matter in understanding the past.

\* \* \*

Ashes of soldiers South or North . . .  
 From their graves in the trenches ascending,  
 From cemeteries all through Virginia and Tennessee,  
 From every point of the compass out of the countless graves,  
 In wafted clouds, in myriads large, or squads of twos and threes or  
 single ones they come,  
 And silently gather round me.<sup>6</sup>

Almost a year after the surrender of Fort Sumter, the Battle of Shiloh, Tennessee, was contested on April 6–7, 1862. The Union leadership and citizens alike initially rejoiced upon hearing the news of the great victory, until the casualty numbers were reported: 13,000 Federals and more than 10,000 Confederates. For the Union, this was more than the total number of casualties in all previous battles and skirmishes combined up to that point in the war.<sup>7</sup> One of President Lincoln’s responses, although Shiloh is not mentioned by name, was to issue a “Proclamation of Thanksgiving for Victories” on April 10 asking that “the People of the United States” in public worship “implore spiritual

4. Hacker, “A Census-Based Count,” 309.

5. One example is Nicholas Marshall, “The Great Exaggeration: Death and the Civil War,” *Journal of the Civil War Era*, 4:1 (March 2014), 3–27. Marshall does not address Hacker’s methodology and instead focuses on the context of death during the mid-19th century.

6. Walt Whitman, opening lines of “Ashes of Soldiers” (originally titled “Hymn of Dead Soldiers” in *Drum-Taps*, 1865), reprinted in *Civil War Poetry and Prose* (New York: Dover Publications, 1995), 36–37.

7. Casualties are usually defined as the numbers of soldiers killed, wounded, and missing after a combat engagement.

consolations in behalf of all who have been brought into affliction by the casualties and calamities of sedition and civil war . . .”<sup>8</sup> Yet due to the sting of battlefield losses at Shiloh, there followed dogged attempts by political leaders and some military rivals to remove Major General Ulysses S. Grant from command of the Army of the Tennessee. Lincoln, when pressed by Pennsylvania politician Alexander McClure in reference to Shiloh, reportedly retorted: “I can’t spare this man; he fights.”<sup>9</sup>

The fighting and killing continued for another three years, and the numbers of the Civil War dead became staggering. May 7, 1864, marked the last day of the Battle of the Wilderness, a horrific clash at the beginning of Grant’s campaign toward Richmond.<sup>10</sup> That same day, perhaps with the Wilderness in mind, the president penned a brief note to an unnamed correspondent: “Dear Sir, I would give a sentiment, but just now I am not in a sentimental mood. Yours truly, A. Lincoln.”<sup>11</sup> A portrait painter at the White House studied Lincoln’s care-worn face, adding: “During the first week of the battles of the Wilderness he scarcely slept at all.”<sup>12</sup> The president, and the citizens in the Union and the Confederacy, grappled with their grief and the number of human losses. Yet even 20 years after the Civil War, there was still no final tally of deaths for the four years of conflict. Should there not be a definitive answer?

Subsequently, William F. Fox’s and Thomas Leonard Livermore’s combined work in the late 19th century represents a painstaking accounting of deaths derived from Union administrative records, such as battlefield losses, regimental muster rolls, and hospital reports.<sup>13</sup>

8. Roy P. Basler et al., eds., *The Collected Works of Abraham Lincoln*, 9 vols. (New Brunswick, NJ: Rutgers University Press, for the Abraham Lincoln Association, 1953–55), 5:185–86.

9. Alexander K. McClure, *Abraham Lincoln and Men of War-Times*, 2nd ed. (Philadelphia: Times Publishing, 1892), 180.

10. Six subsequent Civil War battles recorded more casualties than those at Shiloh, including the Battle of the Wilderness.

11. Abraham Lincoln to an unnamed correspondent, May 7, 1864. Holograph letter, in *With Malice Toward None: The Abraham Lincoln Bicentennial Exhibition*, Library of Congress, February 12–May 10, 2009. On loan from a private collector (193) Digital ID # al0193.

12. Francis Bicknell Carpenter, *Six Months at the White House* (1866; reprint, Bedford, Massachusetts: Applewood Books, 2008), 30.

13. William F. Fox, *Regimental Losses in the American Civil War, 1861–1865* (Albany, New York: Albany Publishing Co., 1889); Thomas L. Livermore, *Numbers and Losses in the Civil War in America, 1861–1865* (1900; reprint, Bloomington: Indiana University Press, 1957). Both began with official lists of names (and thousands of ‘name unknown’ graves) collected from burial grounds in each state and territory, in Quartermaster General’s Office, *Roll of Honor: Names of Soldiers Who Died in Defence of the American Union . . .*, 27 vols. (Washington, D.C.: GPO, 1866–71).

Both Fox and Livermore used assumptions based on Union experiences to estimate Confederate losses, given that most Confederate records were destroyed or lost by the end of the war. For a century, historians accepted, albeit sometimes grudgingly, their figure of 620,000 dead soldiers due to the Civil War.

Hacker, a demographic historian, used a census-based, indirect method to address the question "How many soldiers died due to the Civil War?" His calculations led him to a midpoint estimate of approximately 750,000 deaths. Why do these two methods give such different results? Which renders the more accurate or "true" number?

Fox's book *Regimental Losses in the American Civil War, 1861–1865* probably is best summarized by its subtitle: "A Treatise on the extent and nature of the mortuary losses in the union regiments, with full and exhaustive statistics compiled from the official records on file in the state military bureaus and at Washington." Fox's accounting task was Herculean in determining battlefield deaths (including bodies buried by the enemy), those who died of disease, expired in prisoner-of-war camps, deaths due to accidents of all types, suicides, executions (by either side), homicides, deaths during surgery or at a hospital, and deaths from causes unknown. The counting process is further complicated by soldiers with multiple enlistments, the short-term bounty-jumpers, recruits and replacements, enlistees using aliases, the missing-in-action, deserters, "French leave" takers, and escaped POWs who never reported back to the military.<sup>14</sup> For the Confederates, Fox readily stated that the number he calculated for soldiers who served "is too low an estimate." Similarly, he wrote that his totals for deaths were too low (partially due to incomplete rolls), but "the extent of such increase must remain a matter of conjecture."<sup>15</sup> Fox concluded, "The official records of the Civil War, though voluminous and rich in valuable information, are too often deficient in the facts essential to a proper statement of a regimental loss in action. . . . Too often, no return of casualties whatever was made. As a result the statistics of our last war are, in many instances, meager and unsatisfactory; and, in some cases are wanting entirely."<sup>16</sup>

14. Bounty-jumpers are those who enlisted with the intention of deserting after receiving a portion of their enlistment bounty or inducement. Some individuals were serial bounty-jumpers, often using enlistment aliases. "French leave" was a temporary absence, usually for personal purposes, from a military unit without prior announcement or permission (i.e., "short-term" desertion).

15. Fox, *Regimental Losses*, 552, 554.

16. Fox, *Regimental Losses*, 574.

Livermore's book *Numbers and Losses in the Civil War in America, 1861–1865* focused on battle outcomes by ascertaining the numbers engaged (i.e., "effectives," those present for duty), the resulting losses or survivorship, and using those as the basis for measures of military efficiency and soldier courage. Livermore also expounded on direct and indirect ways of determining Confederate numbers and losses in lieu of comprehensive records.<sup>17</sup> His statement, "the per cent. of mortality in the Confederate army was, as seems probable, greater than that in the Union army," encapsulates the resulting uncertainty.<sup>18</sup> The end result is 359,528 Union deaths and a rough figure of 260,000 Confederate deaths, giving a rounded total of 620,000.<sup>19</sup>

Can these human losses ever be quantified in a way that will satisfy all posterity purposes? Among the introductory comments to Hacker's article, it is asked "*can we ever count the Civil War dead?*"<sup>20</sup> His answer was "no." There are far too many unknowns regarding battlefield statistics (especially for Confederate losses), African-American deaths, and losses due to guerrilla warfare, just to name a few, ever to merit an attempt to improve upon the accounting-style methodology of both Fox and Livermore. Simply put, a direct count is unrealistic, and thus deriving a verifiable number for the Civil War dead will remain forever unknowable.

Before examining Hacker's methodology, it should be noted that there is a difference between a count and an estimate. A count is an enumeration, like a regimental roll call in determining the number present. A U.S. decennial census of population is a similar count or enumeration.<sup>21</sup> In demographic nomenclature, a population estimate is a number often based on a census count or enumeration and then adjusted backward or forward in time from the date of the enumeration. Both counts and estimates are subject to errors, with censuses considered the more reliable benchmarks.<sup>22</sup>

17. For example, "neither [none] of the Confederate States kept a record of the men furnished to the Confederate service." Livermore, *Numbers and Losses*, 2.

18. Livermore, *Numbers and Losses*, 62.

19. These Confederate deaths include killed in action, mortally wounded, deaths from diseases, and fatal accidents. This is based on Livermore's "corrected" figure of 164,000 killed by disease (using a ratio based on Union army experiences) and 94,000 killed in action and mortally wounded (based on Fox's estimates).

20. Hacker, "A Census-Based Count," 308. The italics are from the original article.

21. Decennial censuses generally have had estimated net undercounts (also called coverage errors).

22. Census counts are more likely to be used for legal purposes (e.g., legislative representation, certain federal funding), and population estimates are often used for planning and statistical purposes (e.g., allocating services or other resources).

Intercensal population estimates are those made retrospectively between two completed censuses. Hacker's methodology is based on using two U.S. censuses in particular, 1860 and 1870, to estimate how many died during the intervening period. This statement is a gross oversimplification on my part, but it describes the basic concept. The two-census or intercensal method has been a part of the demographer's toolkit for many decades.<sup>23</sup>

Using again the Battle of Shiloh as an example, which of the following circumstances might include battle-related deaths? Those killed by the enemy on the battlefield? Those who were killed by friendly fire and other battlefield accidents? Those who died at a nearby field or regimental hospital, either from wounds or attempted therapeutic interventions? Those who fled the battlefield and drowned in the Tennessee River? Those evacuated to general army hospitals (e.g., in Indiana, Illinois, Mississippi) and subsequently succumbed to their wounds there? Those who were discharged because of wounds received at the battle and subsequently died at home within a year of the engagement? Civilians (including sutlers) and non-army partisans (e.g., guerrillas, nurses) who died in the Shiloh area as a result of the battle? Those missing in action (who may have become prisoners of war, deserted, died and bodies not found, etc.)? The answers depend on the exact nature of the question, whether that be for determining regimental losses, commemorative honors, military pensions, or lost productivity, as examples. For the Battle of Shiloh, which of the above circumstances should be included as part of "the Civil War dead" and which excluded?

For example, Fox appropriately notes that "[t]hese figures, let it be remembered, include only the killed and mortally wounded. To understand their full significance, one must bear in mind the additional loss of wounded men who survived their injuries—many of

23. United Nations, *Manual X (10): Indirect Techniques for Demographic Estimation*, a collaboration of the Population Division of the Department of International Economic and Social Affairs of the United Nations Secretariat with the Committee on Population and Demography of the National Research Council, U.S. National Academy of Sciences (New York: United Nations, 1983), remains perhaps the best treatise on the topic. Chapter IX: "Estimation of Adult Mortality Using Successive Census Age Distributions" is apropos to Hacker's application of this method. For example, "This method of mortality estimation from intercensal survival is appealingly simple and straightforward . . . providing estimates of mortality for a clearly defined time period. The trouble is that these advantages are nullified by the requirements that the censuses be accurate and that the population be closed" (p.196).

them surviving only to drag their marred and crippled lives along a lower plane of existence."<sup>24</sup>

In the 21st century there are few practical reasons to know the exact number of the Civil War dead. While there still may be honors to retroactively bestow upon those who have died, an exact accounting of everyone is not necessary and also not possible. However, the broader question remains of how big an impact the Civil War had on the U.S. population, numerically, socially, and economically.

These are items Hacker begins to address. There are two basic demographic concepts that his methodology is based upon: 1) the population balancing equation, and 2) "excess deaths." These are key to understanding how he estimated Civil War deaths, and both are relatively easy to grasp (but not always easy to calculate).

The population (or, demographic) balancing equation is used for calculating the total number of people from a beginning point (T1, or time 1) to an ending point (T2, or time 2).<sup>25</sup> Those two points usually are from one census to the next. If it is applied to the world's population, the equation is

$$\text{Pop (T2)} = \text{Pop (T1)} + \text{B (T1 to T2)} - \text{D (T1 to T2)}$$

where Pop is population, B is births, and D is deaths.<sup>26</sup> As a hypothetical example, the world's population in year 2020 would be equal to the population in 2010, plus all births on the planet between 2010 and 2020, and minus all deaths between 2010 and 2020.<sup>27</sup>

If the equation is applied to a single country, say, then another factor needs to be included in the equation:

$$\begin{aligned} \text{Pop (T2)} = & \text{Pop (T1)} + \text{B (T1 to T2)} - \text{D (T1 to T2)} \\ & + \text{MigIn (T1 to T2)} - \text{MigOut (T1 to T2)} \end{aligned}$$

where MigIn is the number of migrants into the country during the two time periods and MigOut is the number of migrants leaving the country. In essence, Earth represents a closed system regarding the

24. Fox, *Regimental Losses*, 9.

25. Henry S. Shryock, Jacob S. Siegel and Associates, *The Methods and Materials of Demography*, 2 volumes, fourth printing (rev.), U.S. Department of Commerce, Bureau of the Census (Washington, DC: U.S.: Government Printing Office, 1980), 1:6.

26. Shryock et al. in *The Methods and Materials of Demography* when stating this equation include an "error of closure" term (*e*) because, in a practical world, censuses and vital registration systems are not 100% accurate or complete.

27. The births minus deaths part of the equation is sometimes referred to as "natural increase" when the resulting number is positive.

human population. An individual country generally is not closed because of in- and out-migration.

To understand Hacker's use of this equation for the Civil War decade, Pop (T1) is derived from the 1860 U.S. census and Pop (T2) is from the 1870 U.S. census. In knowing both of those population numbers, the equation can be rebalanced and solved for deaths:

$$D (T1 \text{ to } T2) = \text{Pop} (T2) - \text{Pop} (T1) + B (T1 \text{ to } T2) \\ + \text{MigIn} (T1 \text{ to } T2) - \text{MigOut} (T1 \text{ to } T2)$$

Below, we will see that Hacker is using an age-specific variant of this form of the equation to figure out how many Civil War-related deaths there may have been during the decade, which was long before there were death certificates or a comprehensive vital records system in the U.S.<sup>28</sup>

However, how can it be determined which deaths during this decade were due to war-related causes and, as such, would be excess deaths? "Excess deaths" refers to how much of the total number of deaths during a given time period are due to specified causes or exceptional circumstances.<sup>29</sup> Perhaps think of it as a pie chart of all deaths divided into two pieces: those due to the hypothetical expected or "normal" force of mortality during the 1860–1870 decade and those due to the occurrence of the war, with the latter being in excess of what would have happened otherwise. As Hacker explains, his estimate

is an indirect measure of *excess* male deaths occurring between the 1860 and 1870 censuses, not a direct count of the number of currently enlisted men killed in the war. Although excess male deaths include military men killed in the war, it also includes men who died between the date of their discharge from the armed forces and the 1870 census from wounds, infections, and diseases contracted during their service and non-enlisted men killed in guerilla raids and in other war-related violence. The number of excess deaths excludes, however, the deaths of men in military service who would have died in the absence of war.<sup>30</sup>

28. There were no birth certificates, either. The systematic recording of vital events was a 20th-century endeavor in the U.S. and elsewhere.

29. The concept of excess deaths also is used to determine, post hoc, the numbers of deaths from possibly similar causes. For example, for the spring of 2020 expected deaths (based on past mortality experiences) for certain respiratory causes were compared to actual numbers of deaths. The resulting excess deaths were possibly attributable to the 2019 novel coronavirus.

30. Italics in the quotation are by Hacker, "A Census-Based Count," 312.



Hacker's approach, which is fundamentally different from that of Fox or Livermore, uses a demographic methodology that, for the most part, is independent of the resources employed by either Fox or Livermore. Hacker's assumptions in implementing the two-census or intercensal method are key to understanding both his calculations and reasoning. Some of these are simplifying assumptions, which render his calculations easier to do and more transparent (but also subject to criticism, or they represent areas for refinement). To Hacker's credit, he outlines and explains each assumption, which are summarized below, along with quotations from his article.

*Assumption 1: The native-born white population of the United States in the late-19th century was closed to migration.*

Here is the modified demographic balancing equation from above:

$$D(T1 \text{ to } T2) = \text{Pop}(T2) - \text{Pop}(T1) + B(T1 \text{ to } T2) \\ + \text{MigIn}(T1 \text{ to } T2) - \text{MigOut}(T1 \text{ to } T2)$$

In this assumption, Hacker is suggesting that the [MigIn (T1 to T2) – MigOut (T1 to T2)] portion is essentially equal to zero (i.e., "closed to migration"). The equation then becomes:

$$D(T1 \text{ to } T2) = \text{Pop}(T2) - \text{Pop}(T1) + B(T1 \text{ to } T2)$$

He specifically refers to the *native-born* (i.e., in the U.S.) white population enumerated in the 1850 through 1880 censuses.<sup>31</sup> Certainly, some U.S.-born people moved to Canada or Mexico, say, and some U.S.-born living in other countries returned to the U.S. Collectively, these migrants could potentially bias Hacker's methodology by overstating or understating the number of deaths experienced by the U.S. white population. However, Hacker concludes that the offsetting biases due to any such movements were "low enough to be negligible" and hence no need to adjust for migration.<sup>32</sup>

This assumption is important due to the survivorship ratios implicit in the age cohorts between the 1860 and 1870 censuses. For example, those age 20–24 years in the 1860 census would be age 30–34 in the 1870 census, assuming the cohort *was not subject to migration*. In Table 1, this age cohort experienced a survivorship of 0.7172, or a little less than 72 percent survived from 1860 to 1870 (or conversely, more

31. Hacker examined multiple mid-19th-century censuses to compare the Civil War decade to temporally similar non-Civil War decades.

32. Hacker, "A Census-Based Count," 321.

Table 1. Native-born male white population in the United States from the 1850 to 1880 censuses, with selected survivorship probabilities.

Age Group	1850	1860	1870	1880
10–14	1,147,038	1,446,005	1,988,994	2,361,832
15–19	956,661	1,233,984	1,533,347	1,965,748
20–24	830,860	<b>1,055,632</b>	1,267,929	1,945,279
25–29	654,370	855,794	950,049	1,472,960
30–34	548,139	678,327	<b>757,104</b>	1,128,308
35–39	452,270	584,639	692,199	920,264
40–44	372,137	471,681	543,292	<b>726,832</b>

than 28 percent died).<sup>33</sup> Those who did not survive would have died either from a war-related cause or from some other (“normal”) cause. The 1860–70 survivorship ratios for males age 20–44, especially, were lower compared with the same for before and after the war. Hacker states, “the war dramatically lowered the survival probability of men in these cohorts,” which is just as expected.<sup>34</sup>

As part of his methodology, Hacker initially focused on the native-born U.S. population to measure the demographic impact of the Civil War. Later, he argued that the non-native-born portion of the U.S. population likely had similar survivorship experiences and incorporated those results in a subsequent step. Moreover, as a practical element of his method, place of birth (or nativity) was a recurring question during the mid-19th-century censuses.

Because Hacker was concerned with deaths among those of potential military age, there are no birth cohorts (i.e., age 0) for which to account among males age 10–44 years. Without net migration and births, then the balancing equation can be further simplified to:

$$D (T1 \text{ to } T2) = \text{Pop} (T2) - \text{Pop} (T1)$$

Ergo, it is a demographic truism that a *closed* population (i.e., not affected by in- and out-migration) of young adults, say, can only numerically change from one time period to the next by deaths within that cohort.

33. Table 1, above, is a subset of the populations in Hacker’s Table 1, with a few of the survivorship ratios shown on the diagonal lines and derived from Hacker’s Table 2. Hacker, “A Census-Based Count,” 322, 323.

34. Hacker, “A Census-Based Count,” 321. However, survivorship values also are partially due to the relative quality and completeness of the 1870 versus the 1880 census. See further discussions under Assumptions 2, 3, and 4.

*Assumption 2: Changes in the net undercount of the native-born white population among the four censuses affected males and females equally.*

Not all U.S. censuses are of equal quality in coverage, and that is a factor when making measurements between censuses.<sup>35</sup> Relative to the 1860 census, the 1870 census had a larger undercount, meaning that more people were missed during the enumeration process and thus could bias mortality measurement. Hacker points out that the southern states may have been especially affected by the 1870 census undercount, meaning that there likely were instances in which whole households were not enumerated. (Demographers typically use a specific post-hoc demographic analysis to estimate net undercount for each census.)

A critical issue relative to this assumption is whether any of the four censuses in question tended to miss more males than females (or vice-versa) during the enumeration process. Others' research has suggested that these censuses tended to miss whole households rather than individuals within households. If it is true that the changes in the net undercounts affected males and females equally, then the differences between the sexes in survivorship would be unbiased for comparative purposes. This detail is important in determining and observing the lower male survivorship due to the war, as explained below.

*Assumption 3: War-related mortality among white females age 10–44 was negligible relative to war-related mortality among white males age 10–44.*

One of Hacker's key comparisons is between female and male mortality patterns. He used the mortality pattern, or more specifically the differential in mortality patterns, between females and males in five-year age increments to determine the "normal" mortality for males *if there had been no Civil War*. To do that, he used other census results—namely, 1850–60 and 1870–80—to estimate the 1860–70 "normal" mortality for white males age 10–44 years. This also explains why *Assumption 2* was needed to establish that the census undercounts for females and males were similar among the mid-19th-century censuses.

In examining female mortality, Hacker flatly stated that "the total number of civilian deaths during the Civil War is unknown," and the majority of these would have occurred in the Confederacy.<sup>36</sup> While the Union armies did practice "hard war" measures, these were directed

35. Shryock et al. include this as an "error of closure" in their demographic balancing equation.

36. Hacker, "A Census-Based Count," 326.

primarily toward property and not civilians per se. Hacker made special note of James McPherson's estimate of 50,000 civilian deaths during the Civil War.<sup>37</sup> If McPherson was correct, Hacker estimated that native-born southern white women would have experienced 9,000 of those deaths, which he concluded represents "a very small error relative to the expected numbers of male deaths."<sup>38</sup> Hacker decided that the error was small enough to simply assume there were zero deaths to the civilian white female population. In effect, assuming zero white female deaths also results in a more conservative Civil War death total.

*Assumption 4: The expected "normal" age pattern in the sex differential in survival for the 1860s is best approximated by averaging the sex differentials in survival observed in the 1850–60 and 1870–80 intercensal periods.*

This assumption is about selecting a preferred or "normal" set of survival rates, which in turn will be used to calculate male deaths during the 1860–70 decade. This is how Hacker simulated or estimated mortality as if the Civil War had not occurred. Selecting a set of survival rates is a critical choice in later determining excess deaths due to the war, by way of subtraction. Again, the reason for simply not using the 1860 and 1870 census survival ratios is because of the large differences in the two censuses' relative undercounts. Hacker proposed using averages of the 1850–60 ratios and the 1870–80 ratios as a substitute for calculating the 1860–70 survivorship. "If the average reflected the expected, or 'normal,' sex differential in the proportion surviving at each age group in the 1860s, subtracting the observed sex differential in the 1860–70 intercensal period from the average yields an estimate of the excess male proportion that failed to survival [*sic*] the 1860s (i.e., the excess proportion dying or excess male mortality)" presumably due to the Civil War.<sup>39</sup>

Instructively, Hacker included a table showing the excess male deaths attributable to each of the three comparative standards (for the five-year age groups 10–14 through 40–44 years): 1850–60, 1870–80,

37. James M. McPherson, *Battle Cry of Freedom: The Civil War Era* (New York: Ballantine, 1988), 619. These are deaths to civilians *due to* the Civil War.

38. Hacker, "A Census-Based Count," 328.

39. Hacker, "A Census-Based Count," 329.

and an average of 1850–60 and 1870–80.<sup>40</sup> Respectively, those totals are 451,000, 627,000, and 539,000 deaths. Hacker argued for using the averaged standard (539,000). He noted: “Clearly, the choice of comparative standard has a large impact on the final estimate of excess male deaths and introduces a large margin of potential error.”<sup>41</sup>

*Assumption 5: Foreign-born white males experienced the same rate of excess mortality as native-born white males.*

According to Hacker, about “one-fifth of the white men of military age enumerated by the 1860 census were foreign-born” (i.e., not native to the U.S.).<sup>42</sup> Were their survival experiences between 1860 and 1870 different from those who were native-born? After examining some other researchers’ work related to this topic, Hacker concluded that non-native white men’s mortality experiences were about the same as those who were native-born. In terms of mortality calculation, this allowed Hacker to add these two populations together, which sums to deaths for “total white males” (by age group). The adding of the foreign-born mortality increased the excess male deaths total from 539,000 (for native-born only) to 673,000.

*Assumption 6: The net census undercount of white men age 10–44 in the 1860 Census was between 3.7 and 6.9 percent, with a preferred estimate of 6.0 percent.*

This is one of the more important assumptions because the net undercount percentage directly impacts the resulting mortality estimates. Up to this point in his estimation process, Hacker had assumed that there was no net undercount in the 1860 census. Realistically, that is quite unlikely, especially given how the censuses were conducted in the mid-19th century. Hacker arrived at a 6.0 percent undercount for white males age 10–44 years based on his earlier research.<sup>43</sup> By inflating these age cohorts by 6.0 percent, this adds 43,000 excess male deaths to the previous step’s 673,000, for a new total of 716,000 deaths. Hacker stated that “Given the small range in the estimates for

40. Although probably posing an insignificant impact on Hacker’s methodology, it is worth noting that through the various Confederate conscription acts, the eligibility age was raised to fifty years in February 1864. See, for example, David Williams, *Bitterly Divided: The South's Inner Civil War* (New York: The New Press, 2008), 55–56, as well as his examples about Confederate citizens avoiding the draft.

41. Hacker, “A Census-Based Count,” 334.

42. *Ibid.*, 334.

43. J. David Hacker, “New Estimates of Census Coverage in the United States, 1850–1930,” *Social Science History*, 37 (1, 2013), 71–101.

the 1850–1930 period, it is probably safe to assume that the true net undercount of the 1860 census fell within the 3.7–6.9 percent range estimated for the other censuses.”<sup>44</sup>

*Assumption 7: 36,000 black men died in the war.*

Hacker realized that determining Black male deaths does not fit well into the two-census methodology, partially because “black civilian deaths . . . likely approached or exceeded the number of [Black] military deaths.”<sup>45</sup> He also noted that it is uncertain how many of the Black male deaths during the 1860s were due to the Civil War. So, he simply used an estimate of 36,000 Black soldier deaths determined by the War Department. Thus, 36,000 is added to the 716,000 deaths, from above, to give 752,000 excess male deaths.

*Assumption 8: Excess male mortality in the 1860s was due entirely to the American Civil War.*

While undoubtedly the Civil War was the primary reason for these excess male deaths, is it reasonable to assume that it was the *sole* cause? For example, the Civil War changed the pattern and impact of diseases, but should that be included as a war effect?<sup>46</sup> As Hacker put it, “Arguably, the postwar deaths of soldiers mustered out of service with diseases contracted while in camp, the deaths of men from complications related to unhealed battle wounds, and the postwar suicide of men with post-traumatic stress disorder should be attributed to the war.”<sup>47</sup> Hacker concluded that the war is the “overwhelming explanation for excess male mortality in the 1860s.”<sup>48</sup>

Hacker ended the article with an assessment of his excess-deaths methodology. “Each step in the calculation of excess male deaths in the 1860s introduces potential error. For the final estimate to be useful, some sense of its robustness to alternative assumptions is needed. The most critical assumptions are the net census undercount of the 1860 census and the assumed ‘normal’ male-female differential in ten-year cohort survival ratios in the 1860s.”<sup>49</sup> Using Hacker’s extreme assumptions for census undercount and sex differentials for survival thus results in an excess male death *range* of 618,000 to 879,000 (while his “preferred” assumptions gave a more central estimate of

44. Hacker, “A Census-Based Count,” 338.

45. *Ibid.*, 338.

46. Reading, for example, Illinois Civil War soldiers’ letters, reveals that deaths due to disease could occur to recruits after just a few weeks living at a mustering camp.

47. Hacker, “A Census-Based Count,” 339.

48. *Ibid.*, 340.

49. *Ibid.*, 344.

752,000). Other minimum and maximum adjustments for his other stated assumptions would expand this range more modestly. Hacker stated, "It is very unlikely, however, that the true number of excess male deaths fell at or near one of the two extremes."<sup>50</sup>

\* \* \*

Hacker's work, compared with that of Fox and Livermore, does not address the same question. Fox and Livermore sought an answer regarding "the numbers and losses" to regiments due to military-related actions (i.e., battlefield losses and camp deaths from diseases) which in turn determined combat strength and the numbers of soldiers engaged during the battles of the Civil War (i.e., 1861–65). Hacker's work addresses "how many soldiers died due to the Civil War," which also would include deaths to *former* Civil War soldiers who subsequently died prematurely (and presumably due to the war, up to 1870). Thus, the resulting answers cannot (or should not) be similar, either in numerical value or interpretation.

Furthermore, Fox's and Livermore's efforts constitute a *direct* method of counting or enumerating the Union armies (although rather more indirectly for the Confederate armies due to the lack of surviving documentation) through regimental records, battlefield reports, and the like. Hacker's work, however, while involving enumerations from the U.S. decennial censuses, constitutes an *indirect* method based on those of military age who did not survive the 1860–70 decade and due to the effects of the war.<sup>51</sup>

However, that is not to say that Fox's and Livermore's combined work is equal in credibility to Hacker's, and that these studies simply addressed different questions. Fox and Livermore strove to do, especially for the Union side of the equation, a comprehensive accounting method where there were, in many cases, conflicting reports, and incomplete and unverifiable records. In such cases, they used their best judgment.<sup>52</sup> Basically, their task and intentions were noble but too many unknowns limited the veracity and value of their results at a national level. However, their results were the best (and only) comprehensive Civil War numbers available for many decades to come. For individual battlefield figures, in many cases they may still be the best available.

50. *Ibid.*, 348.

51. Based on what I have outlined in this article, it might be more precise if Hacker's piece was retitled as "A Census-Based Estimate of . . ."

52. As noted earlier, for Confederate losses their computational efforts constituted guesswork, by necessity.

For the numbers of Civil War dead, Hacker's method is more evenly and comprehensively applied across all the states, and, perhaps more importantly, uses a generally *replicable* set of calculations. This is the aspect that invites methodological refinements and improvements in the estimation of deaths due to the Civil War. The eight assumptions in Hacker's article can, and should, be reexamined and potentially improved upon. For example, further research on the estimates of the 1860 census enumeration undercount (Hacker's *Assumption 6*) may suggest a value different from 6.0 percent, or that the estimates of Black soldier deaths (*Assumption 7*) are found to be too low (or high).<sup>53</sup>

Building on Hacker's work, in 2019, Swanson and Verdugo used white males age 10–44 years in 1860 in the 11 Confederate states to produce an "expected" 1870 population by age group, and then compared those estimates to the actual 1870 census numbers.<sup>54</sup> They found that roughly 25% of that cohort did not survive from 1860 to 1870, which generated a number of Confederate war dead 1.33 times greater than the 260,000 figure of Fox and Livermore.<sup>55</sup>

Hacker's central estimate of 752,000 has been cited by scores of authors during the past decade, almost all of whom mention *the number* and exclude the range it falls within (618,000 to 879,000). Another misleading and repeated exercise is to compare Fox's and Livermore's 620,000 "count" of losses *during* the Civil War with Hacker's central estimate of those of military age who died due to the war *by 1870*. Again, to some extent, the results are different by definition.

Hacker has helped define the broader "human cost of the Civil War" as part of the impacts and legacies of the war's destructiveness.<sup>56</sup>

53. Regarding census quality, see Judith Giesberg, "'A Muster-Roll of the American People': The 1870 Census, Voting Rights, and the Postwar South," *The Journal of Southern History* 87, no. 1 (February 2021), 35–66. While not a demographer, Giesberg provides a good discussion of the political and mechanical aspects of the troubled 1870 decennial census.

54. David A. Swanson and Richard R. Verdugo, "The Civil War's Demographic Impact on Non-Hispanic White Males in the 11 Confederate States: An Analysis by State and Selected Age Groups," *Journal of Political & Military Sociology*, 46:1 (Spring 2019, University Press of Florida), 1–26.

55. *Ibid.*, 18. Note that Swanson and Verdugo's 345,802 figure is for those who died in the former Confederate states from 1860 to 1870, which is temporally similar to Hacker and dissimilar to Fox and Livermore. Also see Hamilton Lombard, "The Demographic Impact of the Civil War in Virginia," Weldon Cooper Center for Public Service, University of Virginia; on-line article: <https://www.arcgis.com/apps/Cascade/index.html?appid=0d606d52ea0842308b399fffbab8300c> accessed 12 January 2021. Lombard does not focus on mortality but instead on population change from 1860 to 1870.

56. Hacker, "A Census-Based Count," 348. This is a phrase from the last sentence in the article.



President Lincoln had asked for hundreds of thousands to serve in the military. In the second half of 1864 alone, Lincoln issued presidential proclamations for 800,000 additional Union soldiers, which was twice as many as he had called for in all of 1863.<sup>57</sup> During the entire war, President Lincoln, through proclamations and executive orders, asked for more than 2.2 million Federal soldiers.

Above, I used the Battle of Shiloh, Tennessee, to pose the question regarding which deaths were due to the battle, such as to those trying to swim the Tennessee River to escape, civilians caught up in the fighting (e.g., local populace, sutlers, and other camp followers), captives who subsequently succumbed at a POW camp, wounded who died at home a year later, and the like. Such scenarios suggest the broader mortality impact of the Civil War beyond the soldiers during the battles. All of these examples, *if each only applied to males age 10–44 years old in 1860*, would fit within Hacker's concept of excess deaths, meaning those who died due to, or because of, the occurrence of the Civil War. Since Hacker's focus is on males of potential military age, civilians of other ages, females, and older soldiers and officers, as examples, would not be included as part of the "excess deaths" definition.

Hacker has given historians plenty to think about. Beyond examining the robustness of his assumptions and final estimates, we all can gain a better appreciation of a longer "demographic shadow" from the aftermath of the Civil War.<sup>58</sup> Again hypothetically, how might Lincoln's own death fit into this methodological discussion? Would he have been accounted for in either of Fox's or Livermore's military accounting methods? No—even though he was commander in chief of the Union forces and died during the Civil War. Would his death have been an infinitesimal portion within Hacker's estimate? Again, no, even though he died midway between the 1860 and 1870 censuses. In Hacker's methodology, Lincoln was not of military age, yet it could be argued that the president did indeed die due to the Civil War. Was he even an "excess death" during that decade? Within the demographic sense of the concept, Lincoln was not. A poet such as Walt Whitman, however, might agree that there are some historic notions and human emotions that numbers simply do not capture nor embrace.

57. Basler et al., *Collected Works of Abraham Lincoln*, 6:277–78, 6:523–24, 7:448–49, 8:171–72.

58. This is James M. McPherson's term from a 2011 Binghamton University online article about Hacker's work.