# Institutional and Discretional Discrimination in Public Sector Programs: The Union Army Disability Pension

Sven E. Wilson
Brigham Young University

Contact Information:
Department of Political Science
Brigham Young University
830 SWKT
Provo, UT 84602
sven@byu.edu



Prepared for presentation at the Cohort Studies Group meeting of the National Bureau of Economic Research, May 11-12, 2007, Park City, Utah.

## Abstract

From the outset, the Union Army pension was nominally color-blind. But the story of this ambitious social experiment was that color-blind policy does not always prevent discrimination. In the early years of the pension, blacks were subject to "institutional discrimination" that resulted in dramatically lower application rates for blacks. Even when controlling for medical military history, blacks—who often faced a much harder burden in proving their identify and their military service, as well as being less able to navigate the intricacies and costs associated with pension application—fared much worse than whites.

Soon after the war they also began to experience "discretional discrimination." Popular support for increasing pension assistance resulted in increasing discretion exercised by the Pension Board. This discretion, however, was applied to a much greater extent to whites than blacks. Documented evidence from the War Department provided only a partial protection for black applicants as whites with similar medical histories pulled away from blacks. In the decade prior to the 1890 liberalization of the pension system, both blacks and whites applied for pensions at increasing numbers, but the approval rate for black pensions plummeted as the rate for whites held stable. The 1890 law—which negated part of the discretionary role of the Pension Board—narrowed the enrollment gap considerably, but specific disabilities continued to be approved for whites at a higher rate than for blacks. This was most notably true for disabilities that were harder to diagnostically verified. By the turn of the century, the enrollment gap had become predominantly a result of discretional discrimination rather than differential application rates. And finally, although blacks and whites received similar pension awards when they entered the system, increases for white pensioners outpaced those given to blacks.

## 1. Introduction

In an era when blacks faced severe prejudice in every walk of life and were routinely denied basic civil liberties, the Civil War pension system was remarkable in that the same rules and regulations that applied to whites also applied to blacks. The pension system provided a significant infusion of financial capital into black families and communities in a time when the economic opportunities of most blacks were meager. Those who received a pension were often able to avoid the abject destitution that was so often the lot of black Americans who were physically unable to work the long, hard hours that life in Jim Crow America so required of them.

But were black and white veterans actually treated equally in this system? Black veterans hoping to receive a pension faced many obstacles. First, the process of obtaining a pension was relatively complicated, financially burdensome, and time-consuming, and black veterans were largely illiterate and poor; thus successfully navigating this system was very challenging. Second, because most black recruits were former slaves, black veterans had difficulties in both establishing their identity and their military service that whites often did not face. Third, until 1890, pensionable disabilities had to be war-related in some way. This required both that blacks could document illness and injuries that occurred during wartime and persuade the Pension Board that a linkage to war-time service actually existed. Fourth, the examining physicians and the Pension Board had to come to the conclusion that black applicants actually had the disabilities that they claimed, meaning that a condition such as arthritis or heart disease existed and that it limited the amount of manual labor the veteran was able to perform. Fifth, blacks had to accomplish all of the above in a society not accustomed to granting blacks

equal opportunities in any avenue of life. This was true in the North, but particularly true in the South, where many black veterans settled and eventually applied for pensions.[1]

The pension system was an evolving creature, transforming from a system serving a relatively small number of disabled veterans, to a widespread general disability benefit system, to a universal old age pension. This paper is an account of the very different experiences that black and white veterans had under this evolving system. Part of the evolution consisted of differences driven by formal changes in law, either by executive order or Congressional action. But an equally important part of the evolution were the informal changes not documented in histories of the Pension Bureau but inferred from the extensive pension records stored in the National Archives.

The Pension system was of course subject to law, but in important ways, informal changes in the system drove changes in laws or, at the least, were the product of the same political forces behind the expansion and liberalization of the pension system. The largest reform, the 1890 liberalization, incited an immediate and massive number of applications driven by the rule change that disabilities no longer had to be war-related. But such a change was already well underway long before the long was enacted. The number of pensioners was increasing rapidly in the decade prior to 1890, and the idea that these new pensions were the result of increase in chronic disabilities caused by the war some two decades earlier was merely a convenient fiction used to pursue the popular expansion of the program. This fiction could be successfully implemented because of the minimal understanding of disease etiology that existed at the time. An examining board of physicians could claim an etiology rooted in some war-time experience, and who was to say they were wrong? Moreover, given the increasing power of the

[1] See Shaffer (2004) for a more exhaustive description of difficulties blacks had in obtaining pensions.

GAR and public sympathies for doing right by the veterans, who really wanted to say they were wrong?

This growing discretion of the Pension Board, however, was not extended equally to black and white veterans. Blacks who were fortunate to have a documented military medical history fared relatively well under the pension system, especially if they had war injuries, but those lacking such documention lagged further and further behind whites. This paper draws on extensive military and pension records collected by the *Early Indicators* project (discussed in Section 4) to illustrate how the medical history of veterans prevented or delayed the entry of blacks into the pension system and how the Pension Board exercised differential treatment of blacks and whites depending on the types of conditions they claimed.

## 2. White and Black Military Experiences in the Civil War

The decision to allow the enlistment of black troops was made by Lincoln in 1862, but it was not until midway through the war, in May of 1863, that the War Department created the Bureau of Colored Troops to facilitate the enlistment of black soldiers. Regiments constituting the USCT began to be created at this time, though it was sometimes well into 1864 before regiments were created. Some of the regiments in the USCT were pre-existing troops created at the state level, but regiments belonging to the USCT are not associated with states, as most of the white regiments were. Additionally, some "colored" regiments formed in Northern states did not become part of the USCT.[2] Most black soldiers were recently freed slaves from territory liberated by the Union Army.

[2], Such as the famous Mass. 54th, feature in the Hollywood film *Glory*.

The mortality experience of white and black soldiers was notably different in many ways. In the *Early Indicators* samples, 24.4% of all USCT soldiers died during military service, compared to 15.5% of whites. These mortality rates differ somewhat from the overall Union Army figures. According to Dyer, 20.6% of blacks and 17.9% of blacks died in the war. Differences in cause of death are also pronounced in the *Early Indicators* samples: 86.5% of black deaths in the sample were due to disease, compared to 67.4% of white deaths. Combining the differences in all cause mortality with cause of death shows that a white recruit had a 5.0% chance of dying from wounds or injury and a 10.4% chance of dying from disease. A black recruit, on the other hand, had a 3.3% chance of dying of injuries or wounds and a 21.5% chance of dying from disease. Berlin et. (1982, 26) notes that in the final year of the war, General Grant summoned every available soldier to defeat the Confederate strongholds in Virginia, including numerous USCT troops. They claim that "by war's end nearly all black soldiers received a taste of combat." Undoubtedly the cumulative battle exposure was greater for whites than blacks, but this should not be overemphasized. The mortality risk due to wounds and injuries was also substantial for blacks—indeed, it was two-thirds the level for whites.[3]

Blacks also differed from whites in that their period of service often extended much longer past the end of the war. Many had a three-year term of enlistment that often went well into 1866 or even 1867. In the *Early Indicators* sample, for instance, only 6.1% of white recruits were discharged in 1866 or later, compared to 58.7% of blacks. In fact, 9.7% of the black sample stayed on active duty into 1867 and beyond. Given that white troops were being

[3] Given the shorter time of war-time service for black recruits, it is not surprising that the percentage killed in action was higher for whites than blacks. Furthermore, Northern commanders were reluctant to use black troops in battle, though the demands of the war eventually forced many to give up this reluctance. Even though they entered the war half-way through, the number of USCT troops killed in action (KIA), according to Dyer, was 72.8% of the number of other Union troops, as a percentage of the total served (a 2.9% KIA mortality rate for blacks and 4.0% for whites). Also, the last two years of the war were particularly bloody. In the *Early Indicators* sample, for instance, two-thirds of deaths that occurred among white troops during the war occurred in the last two years. It is clear from these mortality numbers that the USCT was not just sitting on the sidelines of the war.

rapidly discharged, the Union needed troops to serve as an occupying force during the early years of Reconstruction. USCT regiments who had not yet been discharged were frequently employed to serve in this function. Shaffer (2004) notes that as black troops found themselves as the occupying military force over territory where they had just recently been slaves, they came under increasing hostility from white Southerners, especially former Confederate soldiers. In some cases the War Department was forced to replace them with white troops.

Though there was not, in percentage terms, a high mortality rate from conflict in this post-war period, blacks in the USCT still experienced extremely high mortality during the post-war enlistment period. In the *Early Indicators* sample, 6.8% of the sample died during this short period, which constituted 30.0% of all USCT sample deaths. In comparison, among white recruits, only 1.4% of the white sample died during their post-war service, constituting 13.0% of all their deaths.[4] Figure 1 shows monthly deaths for blacks and whites throughout their military service. In this figure the higher mortality of blacks is evidence both throughout the war and in the post-war service period.

Given the high disease mortality for black soldiers, we would expect a higher rate of disease prevalence during the war. An important part of the *Early Indicators* collection consists of the "carded medical records" from the Union Army. These records contain the medical history of the recruit throughout his service and date and cause of hospitalization. These records were an important part of the Pension Bureau's investigation of the disability claims prior to the liberalization of the law in 1890.

Not surprisingly, whites have a significantly higher rate of being wounded than blacks during their military service. But they also have a slightly higher occurrence of illness. During

[4] Confederate commander Robert E. Lee surrendered his forces on April 9, 1865, but skirmishes continued well into May of that year. In this analysis, the "post-war service period" consists of the period from June 1, 1865 until the date of discharge (or death).

their service, whites had, on average, 2.19 illness-related medical events (meaning that an event was recorded on their medical record, which is almost always associated with a hospitalization). Blacks had an average of 1.67 illness-related events. Over the course of their service, 64.4% of whites had at least one recorded illness, compared to 58.5% of blacks. However, of those black recruits with recorded illnesses, 34% died during service (though not necessarily due to the recorded illness), while only 18% of whites with recorded illnesses died.

Thus we are left with the paradox that even though blacks died much more frequently from disease than whites, they have fewer recorded illnesses in the carded medical records. There is some evidence that illnesses of blacks are less likely to result in hospitalization during the war and, therefore, less likely to have a medical record in their service files. If we look at those recruits who actually died of illness during the war, 63.8% of blacks have an illness in their records compared to 75.0% of whites. This suggests that illnesses during the war are left out of black records more than white records. We cannot, unfortunately, determine the rate of non-fatal illnesses that are missing in the medical records.

Among the 64.4% of whites with recorded illness, only13.9% are known to have died of illness[5]. But among the 58.5% of blacks with a recorded illness, 31.3% died of illness.[6] This means one of two things. Either blacks had case fatality rates that were much higher than whites, which is certainly a possibility, or the reporting rate was higher for whites than blacks, which could have been caused by a lower probability of less serious conditions resulting in a recorded medical event. Glathaar (1990) and Berlin et al (1982) reports that the War Department had a difficult time finding competent physicians to work with the black troops, so this may suggest a

[5] Though these are not necessarily the same illness recorded on the carded medical record. Illnesses on the medical records and cause of death information are both too non-specific to make a firm connection between the two in many cases, though looking at the date of illness and the date of death would allow such a matching to occur. All cause mortality for those with recorded illness was 17.6%.

[6] All cause mortality for this group was 34.2%.

lower rate of reporting. Berlin et al. conclude that "racism compounded a problem all soldiers faced. Exasperated by their inability to reverse the high morbidity and mortality rates, some medical officers accused blacks of feigning sickness in much the same way that masters and overseers accused slaves of shirking work. They mistreated, abused, overworked, or neglected such soldiers, thereby contributing to further deterioration of their health." (636)

What are the implications of the war-time experience for blacks following the war with respect to their pension status? First, the combined burden of disease and injury was high for blacks, possibly higher than for whites, especially if mortality during service is an appropriate indicator. Thus their war-time experiences lead us to expect a rate of disability in the future for blacks comparable to that of whites and probably greater if we compare the whole scope of their life experiences. Recent research has demonstrated that illness during the Civil War is associated with a higher rate of chronic conditions in later life, even though the short window of time during the war was the only period for which we observe the health of the recruit prior to his obtaining a pension, usually in later life [Costa (2000, 2002; Wilson (2003); Costa, Helmchen, and Wilson (2007); Pizarro et al. (2006)]. Furthermore, the hard manual labor that slaves faced while in servitude before the war and the higher probability of manual labor following the war would indicate a higher risk of both disease and disability in later life.

But a higher susceptibility to disability does not, by itself, mean a higher rate of eligibility for pension assistance. Blacks were less likely to have war wounds than whites and their medical records were either less complete or showed a lower rate of illness during the war. In either case, they would have had a harder time proving that any condition claimed during 1890 was war-related. For this reason it is useful to compare the subset of whites and blacks which had no recorded injuries on their official medical records.

## 3. The Evolving Union Army Pension System

The nature and quantity of applications to the pension system—and the resulting selection bias issues associated with the *Early Indicators* project—are fundamentally related to the laws and regulations governing the pension system. In July of 1861 when Congress authorized Lincoln to raise 500,000 volunteer troops, they also authorized the creation of a pension for those volunteers that was essentially the regular army pension system applied to the volunteers (Clark, Craig and Wilson 2003, 131). A year later, in 1862, this system was replaced with the "General Law," which governed the distribution of pensions for Union Army volunteers, including the USCT. Thus, by the time USCT troops started their military service, the pension system had already begun.

Figure 2 gives the total number of military pensioners for all the military pension systems combined, including army and navy (Clark, Craig and Wilson, 2003). Three important dates are noted on this figure. The first is 1879, when the Arrears Act was passed, which allowed veterans to collect pension support not only from the date of application onward but going back to the original date of disability, assuming it could be verified. As seen in Figure 3, which gives number of first applications per year (in the *Early Indicators* samples), the 1879 law sparked a sharp jump in the number of pension applications. This is somewhat puzzling because even though the possibility of arrears increases the incentive to apply for a pension, the incentive was already high. Thus it is unclear, why the Arrears Act would have had such a strong effect since it did not change the eligibility requirements.

The next date on Figure 2 is the most significant. In 1890 the law was liberalized to allow for disabled vets to obtain pension support regardless of whether the disability was due to service in the war (as long as it was not due to "viscious habits"). This created a flood of

applications to the Pension Bureau, which soon resulted in a dramatic swelling of the total number of pensioners as is obvious from Figure 2. The next major change in the law was in 1907, which formalized old age as a pensionable disability.[7] By that time, however, almost all the veterans who were going to enter the pension had already entered, and very few black veterans were still alive.

The impact of the 1890 law is easy to see from Figures 2, but the most important feature of Figure 2 for our purposes is the dramatic increase in number of pensioners between the 1879 and 1889. In that decade, the number of pensioners more than doubled. Indeed, 39% of the increase in pensioners between 1879 and the peak in 1902 had already occurred by the time the 1890 law took effect.

## 4. Data and Methods

### *4.1. The Early Indicators Collections*

The primary data sources for this analysis come from data collection efforts headed by Robert W. Fogel under the auspices of the Center for Population Economics at the University of Chicago and the Department of Economics at Brigham Young University. The project is entitled *Early Indicators of Later Work Levels, Disease, and Death* and was been funded by the National Institute on Aging and the National Bureau of Economic Research. The aim of the *Early Indicators* project is to collect health, demographic and socioeconomic information on Union Army recruits across the course of these lives. These records include military service and medical records, pension records, and census records going back to the early childhood of the recruits. The data files used in this collection consist of 35,570 white enlisted men who served

[7] Age, however, was a frequent pensionable claim made by pension applications long before 1907. President Roosevelt set the pensionable age at 62 by executive order in 1904.

as part of 303 randomly selected companies in the Civil War. The black recruits come from a sample of 6,155 soldiers and officers from a random sample of 53 USCT companies

The black sample includes both black soldiers and white officers. Unfortunately, race is not reliably recorded in all instances and must sometimes be inferred from the data, and the *Early Indicators* team has not created a definitive designation of race for this sample. The main problem is distinguishing black non-commissioned officers from white non-commissioned officers. This is done using notes on the "complexion" of the soliders and the history of their rank while in the service. In general, my method excludes cases where race is indeterminate. The resulting sample consist of 5,905 veterans identified as African-American.

## *4.2. Analytical Methods*

### 4.2.1. Outcome Variables

Several variables are used in this analysis to compare black and white experiences in the pension system. Initially, I conduct an analysis of veterans who survived their wartime service and estimate the proportion of living veterans who have applied for and them been approved for pension. At a point in time, the *application rate* is the percent of living veterans have applied for a pension, while the *enrollment rate* is the percentage of all living veterans who have been enrolled in the pension.[8] The *approval rate*, therefore, is the ratio of the enrollment rate to the approval rate. I also estimate the dollar amounts awarded to enrolled pensioners at different points in time. For applications beyond 1890, I break out the comparisons according to whether they were approved under the General Law or the 1890 law.

[8] Technically, enrollment is defined here as the date of an application that would, eventually, be granted. It does not indicate the time from which the pensioner started receiving payment.

At a more detailed level, I further examine the level types of claims that are approved. In the pension record, there is a "ruling form" that indicates which conditions are claimed in the pension application and which of those conditions are approved by the board. The *claim approval rate* is the percentage of a given type of claim that are approved by the Pension Board. Pensionable conditions were supposed to be chronic, though applicants often claimed (and were pensioned for) conditions that are usually not chronic. The applicants would sometimes submit affidavits to certify that the condition was, indeed, chronic.

The claims are generally highly non-specific. I have classified them in a way that follows the patterns in the data and that can, in the future, be used to compare conditions to the types of disease ratings given by the examining physicians. The categories are as follows:

1. *Rheumatism* (This is widely used-term used to capture a variety of musculoskeletal conditions, mostly arthritis).
2. *Heart Disease* (Usually the claim is no more specific than "heart disease," though sometimes heart infections or other conditions are claimed).
3. *Respiratory Disease*
4. *Diarrhea/Dysentary/Constipation* (By far the most common of these is "diarrhea." Oftentimes diarrhea is claimed jointly with constipation. The cause of diarrhea is not known in most cases.)
5. *Ano-rectal Disease*. (Most claims in this category are hemorrhoids, though some general references to rectal disease are included).
6. *Miscellaneous Infections* (includes colds, fevers and other non-specific infections)
7. *Malaria*
8. *Genito-urinary conditions*
9. *Kidney Disease*
9. *Hernias*
10. *Vision problems*
11. *Hearing problems*
12. *Back Pain* (often referred to as "lumbago." Also includes general references to back or spine)

13. *Other gastrointestinal conditions* (general references to stomach, bowel or digestive disorders, not including diarrhea indicated above)

*14. General Debility* (non-specific references to disability that don't mention illness or wounds).

15. *Wounds and injuries* (these are any wound or injury, not necessarily a war-injury)[9]

Claims in the pension files are almost always extremely short and non-specific. The Pension Board would evaluate the claims based on the surgeon's certificate, the official form filed by the board of physicians who would examine all pension applicants. The physicians were charged with verifying the claims given by the applicant and conduct a routine and relatively detailed physical exam. These physical exams uncover a lot of detail on the health of the applicant, but this detail does not make it onto the ruling form made by the Pension Board. Furthermore, in only 4% of cases for whites and 5% of cases for blacks do conditions appear on the ruling form that were not made by the claimant. This suggests that, in practice, the primary function of the physicians was to verify claims made by the applicant rather than come up with reasons for why the applicant should receive a pension.

4.2.2. Military Medical history

In the general law system, pension applicants had to verify their identity, their military service, their disability, and link the disability to wartime service. After the war, the War Department created from the various regimental medical records, individual-medical histories for all the recruits. These "carded-medical records" were the primary means by which the Pension Bureau determined eligibility for the pension. Without evidence from the carded medical record, the veteran had to obtain affidavits from comrades and others about his medical history during

[9] There are also claims made that simply refer to a body part (shoulder, foot, teeth, etc.). These values have not been coded. Many of them probably refer to injuries, but no information is present to confirm this.

the war. Evidence from pension approval rates indicates that the Pension Bureau was skeptical of both black and white applicants in this regard.

The carded medical records contain information on both wounds and illnesses during the war and any accompanying hospitalization that occurred.[10] Occasional references to the severity of the conditions are made, but that information is not used here. I construct a military medical history (MMH) variable that is used to divide each sample into three groups: 1) those who were injured during the war (though not necessarily in battle, since that is often times hard to determine from the record and wounds did not have to be battle-related to be pensionable); 2) those who were not wounded, but who were ill during their service; 3) those who had neither a record of wound or illness on their medical record. As discussed earlier, the rates of illness for blacks are probably understated relative to whites, which suggests that the number of wounds is probably understated as well.

### 4.2.3. Mortality Adjustments

In order to obtain application and enrollment rates over time, it is necessary to have an estimate of the number of sample members who are alive at each point in time. Unfortunately, death dates are often missing from the records, and estimating mortality schedules is challenging for numerous reasons. First, death information for veterans usually exists only for those individuals who either 1) died during the war; 2) died after being awarded a pension; or 3) had a widow, parent or child apply for a pension after the recruit's death. In all, 32.3% of white war-survivors and 51.8% of black war-survivors in the *Early Indicators* samples do not have death

[10] This information is contained in the variables *ilwnd01-ilwnd20* from the special Carded Medical subsample of the *Early Indicators* data. It is important to use this sub-sample rather than the same variables from the main (merged) sample because the merged sample includes illness and wound information that was obtained from applicant affidavits and other post-service information in the pension. The Carded Medical subsample contains only the information collected by the War Department from war-time records.

dates (even a small portion who received a pension do not have a death date in the pension files). Second, we know relatively little about life tables for blacks in the nineteenth century. Third, we don't know how health and disability affected survival. One would think that those with traumatic war experiences would have had higher mortality, but this is difficult to determine given the nature of the *Early Indicators* data, especially for the period prior to the 1890 law.

My estimates of mortality schedules use 19th century life tables developed by Haines (1994) as a starting point. I use the ${}_nq_x$ curves (hazard rates) from Haines' period life tables for 1860-1900 to build a synthetic cohort life table for the cohort at the end of the Civil War in 1865.[11] To account for the higher mortality of blacks, I then scale the hazard rates in the synthetic cohort life table for blacks according to the relative hazards for blacks and whites in 1900.[12] But these sythentic life-tables cannot be used directly. This is because the sub-sample without death dates are dominated by those who die before they had a pension. And just as this group is shorter-lived than the average person in the population, those with death dates are longer-lived. My adjustment hinges critically on an assumption that by 1910, three years after the pension system became age-based, almost all of living recruits would have applied for a pension. I assume an application rate of 95% for both blacks and whites in 1910. I then calibrate the life tables to be applied for those with missing death dates for each of the six race-MMH sub-groups by multiplying the ${}_nq_x$ curve by a constant adjustment factor that results in each sub-group reaching a 95% application rate in 1910.

The number of sample members alive time *t*, therefore, is a combination of those with known death dates who are known to be alive at time *t* and an estimated number alive of the

[11] Haines reports tables for 1860,1870,1880,1890, and 1900 for whites. The hazard rates for years 1865, 1875, 1885, and 1895 are obtained by interpolation, and 1905 values are obtained by project based on a linear trend from 1880-1900.

[12] Haines 1900 estimates are based on the children ever born method for the 1900 census and is the first year that Haines gives estimates for blacks.

subset with no death dates according to the method described above. Experimentation with different assumptions about the application rate has shown that the results presented below are robust to different assumptions about the final pension application rate. In short, differences between sub-groups in the outcome variables swamp the impact of various mortality assumptions.

## 5. Analyses

### *5.1. Pension Application and Enrollment*

#### 5.1.1. The General Law

The main distinguishing feature of the General Law system following the war was the rate of increase in both applications and pension enrollment. As noted earlier, we would expect that most truly war-related conditions and injuries would result in disability either immediately or soon following the war, say by 1870 or so, and then a leveling off of new applications. Figure 4 which shows application rates, and Figure 5, which shows enrollment rates, indicate that this is clearly not the case. Only 6.9% of whites and 1.3% of blacks alive in 1870 had applied for and been enrolled in the pension. By 1889, on the eve of the General Law, that figure had risen to 39.5% of whites and 11.4% of blacks. How is it that so many war-related conditions were still being developed decades after the war?

A first piece of this puzzle is that in the years immediately following the war, pension enrollment rates were not increasing uniformly for all sub-groups of veterans. Whether black or white, those without a recorded medical event in their medical history were seldom admitted to the pension and few applied. Before 1879, there are two salient facts. First, those without documented war injuries have very low pension enrollment rates. Second, the enrollment rates

among those with war injuries are much higher for whites (39.0%) than blacks (19.0%). A similar racial discrepancy existed for those with illness but no wounds in their history:10.0% of whites were enrolled, but only 1.6% of blacks. In sum, prior to 1879, the General Law system was primarily catering to those with war injuries. But even in this early period, the creeping tendency to attribute disabilities to illness in the war was much higher for whites than black—though whites still needed documented records to obtain much of an advantage.

The period between the 1879 arrears law and the 1890 act was one of rapidly increasing pension applications and enrollments for all the six sub-groups under analysis. Whether the rising tide was driven by increasing disability, increasing applications due to more leniency, or increasing leniency due to an increase in applications is hard to tell. But the tendencies seen in the earlier period becomes more pronounced between 1879 and 1889. Blacks without a war injury remained at relatively low (though increasing) enrollment rates, as did whites with no medical events, but whites who could show some illness on their carded medical record (but no injury) were awarded pensions at rapidly increasing rate (rising from a rate of 10% in 1878 to 42.9% in 1889). In fact, by my estimate the enrollment of whites in this group actually surpassed the enrollment rate of war-injured blacks and stayed marginally higher until they died.

The 1890 law made pension eligibility of all sub-groups easier, but on the eve of the law's passage, the rates of enrollment were already relatively high. On one hand, we expect such a disparity because whites were wounded during the war at a higher rate. But pensionable disabilities that were the result of war-time would have been, in most cases, readily apparent immediately after the war. It is not that whites had much higher application rates in the first few years following the war that points to discrimination—that is the part due to different war

experiences. The discrimination is seen in the rising differential between blacks and whites in the decades beyond the war.

5.1.2. The 1890 Law

The largest immediate impact of the 1890 law was on two groups: whites with no medical event history and blacks who didn't have a war injury. The enrollment rates for those bottom groups increased by roughly 20 percentage points almost overnight. In contrast, whites with a war injury had less than a 10 percentage point increase. As is easily evident from Figure 5, the range of enrollment rates varied considerably immediately after the onset of the 1890 law.[13]

The enrollment rate discussed above is the product of the application rate and the approval rate. Figure 6 illustrates the dramatic differences in the trends in approval rates between blacks and whites over time. For those veterans with the protection of military documents certifying their wounds, approval rates for blacks did not differ dramatically from whites, though hardly any blacks actually applied during this period. For others, however, we see a markedly different pattern for blacks and whites. White applicants had their pensions approved roughly 80% of the time—a number that stayed fairly stable prior to 1890 and was similar for both those with and without war illnesses. For blacks, however, the approval rate declined significantly (to less than 40%) during the General Law period—both for those with and without documentation of military medical events. Whites, on the other hand, faced no such problem.

[13] The estimated enrollment rates continued to narrow after 1890. However, as calendar time increases in this figure, the impact of the estimated mortality becomes increasingly large. Recall that the procedure for estimating the number of living veterans requires the application rate (though not enrollment rate) for blacks and whites to converge at 1910.

Therefore, as the number of applicants began to swell after 1879, whites—regardless of their medical history—were approved at a relatively constant rate. For blacks however, who likely had the same optimistic hopes as whites, their success began to decline precipitously after the 1879 Act. But even prior to these approval declines, the enrollment gap enrollment gap, in percentage terms,[14] had been high from the beginning of the pension system. But, as Figure 7 indicates, the enrollment gap was originally a function entirely of differential application rates between whites and blacks. Between the late 1870s and the early 1890s, the enrollment gap, especially for those without a documented military history, became a function of white approval advantage. The enrollment gap narrows considerably for all groups with the passing of the general law (and continues to fall) and, associated with this liberalization, the failure of blacks to be enrolled becomes not a story about differing application rates, but one of Pension Board discretion.

The liberalization of the law in 1890 was a great equalizing force in terms of equating the disability benefits available to all veterans. Part of this equalizing force was that blacks without documentation of their wartime medical conditions could start taking their place in the pension system. What is less appreciated is that the informal liberalization of the pension system that had started more than a decade before treated black and white applicants very differently. As the number of applications increased dramatically for both whites and blacks, blacks without a military medical history fared much worse than whites and even those whites without such a documented history had a relatively constant rate of Board approval, while the approval rates for Blacks declined precipitously.

[14] The enrollment gap is defined here as (WER-BER)/WER, where WER is the white enrollment rate and BER is the black enrollment rate.

*5.2. Specific Claims*

In addition to the pension approval rates discussed above, it is possible to analyze Pension Board behavior based on specific conditions claimed by the applicants. Associated with each application is ruling form indicating which conditions were claimed by the applicant and which were approved by the Pension Board. For this analysis, I divide the sample of veterans who survived the war into two parts. The first consists of those who applied under the General Law between 1865 and 1889. The second are those who apply under the 1890 law[15] between 1890 and 1906 (the year before the Act of 1907, which makes the pension system formally age-based). Under the General Law, I first give summary measures for claim approval for the medical history subgroups, and then I compare different specific conditions for blacks and whites.[16] Under the 1890, medical history is no longer a relevant criterion. Thus I simply compare black and white approval rates for the specific conditions.

The results presented here refer to specific claimed conditions as discussed earlier. Figure 8 shows that as the number of applications were increase over the decades, the number of claims per application increased as well. The pattern is similar for blacks and whites. By the late 1890s, blacks actually surpass whites in the number of claims per application. The sharp falloff at the end of the time period is the result of pension applications being do to age and automatic increases, thereby not necessitating specific disabilities. In general, the number of conditions claimed for blacks is not significantly different than the number claimed by whites.

The story is quite different when we examine in more detail the types of conditions claimed and their approval rates. This evidence is presented in Table 1. The overriding feature of this table is that blacks are much less likely to get their specific claims approved than whites,

[15] Thus applications made under the General Law after 1890 are excluded from the analysis.
[16] Because of the small number of black applicants under the General Law, I do not exploit the comparison of medical history sub-groups when looking at specific conditions.

sometimes dramatically so. The only exception to this is genito-urinary disease (including STDs), which is claimed infrequently by both blacks and whites. For many conditions, the rate of approval for blacks is less than half the approval rate for whites.

What can explain this broad variation in approval rates? First, for conditions that were harder for the physician to directly verify, the physicians and the Board might have given more benefit of the doubt to whites than blacks. The evidence is mixed relative to this hypothesis. Many of the conditions at the bottom of Table 1 (which are those for which the black/white approval ratio is low), are either hard to observe clinically or, in particular, difficult to prove the condition is chronic, a requirement for a pensionable condition. Blacks probably had a harder time accumulating the evidence necessary to verify these claims. Diarrhea, kidney disease, miscellaneous infections, and gastrointestinal conditions would likely be examples where the burden of verification fell harder on blacks. But other conditions, such as hearing loss, rheumatism, and back pain, were also hard to verify, and they are higher on the list, though blacks still face a disadvantage. Conditions that could, in many cases, be physician verified, would include heart disease, some genito-urinary conditions, wounds and injuries, hernias, eye disease and general debility (to the extent it was associated with emaciation or obvious disability). That these conditions tend to be in the top half of Table 1 suggests that verifiability was an important criterion in explaining the racial disparities. On the other hand, varicose veins and ano-rectal disease (mostly hemorrhoids) were easily verified by physicians, but the black/white approval ratio was low.[17]

[17] Various conditions related to the lower gastrointestinal tract (including ano-rectal disease) were very important causes of disability among white soldiers, but they were much less acknowledged to be disabling for blacks. One might guess that it was hard to make a case that these conditions were difficult to link to war-time service, but why were whites so much more successful than blacks in doing so? Among white applicants, 10% were approved for ano-rectal disease, 16% for diarrhea and 4% for other gastrointestinal conditions, wheras blacks had these conditions certified less than 2% of the time.

One interesting feature of the approval rates for specific conditions is that the approval rate is positively correlated with the claim rate; i.e., the more commonplace is the claim, the higher is the likelihood of approval. This is true for both blacks and whites, and the correlation coefficient is relatively high: .45 for blacks and .48 for blacks.[18] It would make sense if the Pension Board were skeptical of uncommon conditions. But their skepticism has an important racial dimension as well: the black/white ratio of claim rates is positively correlated with the black/white ratio of approval rates. In other words, conditions for which blacks were, in relative terms, less likely to claim than whites, had a lower approval rate for blacks than whites. To illustrate, diarrhea is a condition with a low black/white claim ratio (column 7) of .391. Correspondingly, the black/white approval ratio (column 8) is also a low .313. These low ratios are why white applicants are more than 8 times as likely to have board certified diarrhea than blacks are (.168 compared to .020). In contrast, for heart disease, the black/white ratio in claims is .618 and the ratio in the approvals is .874. Thus whites are a little less than twice as likely to have heart disease as blacks (.083 compared to .045).

There is also variation in claim approval rates according to military medical history. As Table 2 shows, blacks and whites who were injured during the war had very high and similar rates for war-time injuries. But, as noted before, the number of these claims for blacks was very low. The big difference between whites and blacks concerns how illness claims are treated. For whites, the war-time medical history is largely independent of their medical history status (between 61% and 69%). Blacks, on the other hand, differ sharply by medical history. On average, those without a recorded medical history had only 39% of their injury claims and 36% of their illness claims approved. The approval rates for whites with no medical history are nearly twice as high (74.4% and 66.8%). We see again that when blacks had the benefit of military

[18] These correlations are between columns 1 and 3 (for blacks) and 4 and 6 (for whites).

documentation, their claims were supported at much the same rate as white claims, but without that recorded history, whites were given the benefit of the doubt much more often.

Applications under the 1890 Law demonstrated a higher number of claims across all conditions, but a significantly lower claim approval rate, as shown in Table 3. On average, only 36% of black claims and 50.9% of whites claims were approved by the Pension Board under the General Law. Injury claims and illness claims were approved at approximately the same rate within each racial group.

As with the General Law, all conditions were not treated equally for blacks and whites, as indicated by black/white approval ratios that range between .216 and .899. The conditions where blacks and whites received the most equal treatment (approval ratio>.8) were varicose veins, hernias, heart disease, genitor-urinary conditions and general debility; these are conditions where, arguably, physician verification of disability is possible. Those conditions where the races differ the most (approval ratio <.5) are hearing problems, back pain, diarrhea and other gastrointestinal diseases; these are conditions where physician verification would be difficult in many cases. However, clearly the story is not just about verifiability—if it were, ano-rectal disease and injuries would have a high approval ratio and rheumatism and kidney disease would be low. The physicians assessment of how disabling is a given condition must be playing a very important role in determining the assessment of disability. The question then becomes whether the hemorrhoids or the diarrhea of white veterans was so much more severe than the hemorrhoids and diarrhea of black veterans that they would justify such a low approval ratio. Given the racial politics of the day, a much more plausible explanation is that racial prejudice in the pension administration gave these black veterans much less than their due.

### *5.3. Pension Awards*

An obvious additional measure of potential discrimination is the relative dollar amount awarded to black and white veterans. Table 4 gives the monthly awards allocated by the pension system. The top block of numbers refer to the *initial* awards given to veterans who were first approved in the given period, and the final column represents the ratio of white to black awards. These ratios for initial awards are generally small, with blacks even having higher average awards in two periods. A weighted average of these ratios indicates that initial awards for whites were only about 5% higher than for blacks. This is a far cry from the ratios associated with pension approval rates received earlier.

The bottom block of numbers in Table 4 captures the monthly pension amount at different points in time, thereby capturing the impact of increases in pension awards over time as well as differential mortality of blacks and whites. These estimates show a somewhat higher rate of white advantage, indicating that blacks lagged behind whites in receiving increases in pension amounts.[19] Whites had a 10.6% advantage in 1879, which grew to 21.9% in 1889 and 27.3% by 1900. As automatic increases and age-base pensions were increasingly awarded between 1900 and 1910, the white advantage fell to 15.3% in 1910. Table 4 also shows that in 1900 and 1910, the white/black ratio was higher under the old General Law than under the new 1890 law, mostly because the 1890 law had more stringent caps place on it (originally pensions under the 1890 law ranged from $6 to $12), which is seen as well in the lower average awards under the General Law.

[19] The estimates of approval of specific claims above also includes applications for pension increases in addition to additional pension support.

*5.4. Black Health and the Discretionary Role of Examining Physicians*

Obviously an important confounding variable missing from the analysis above is the lack of direct measures comparing black and white health. To this point, the analysis has not distinguished between medical assessments made by examining physicians and the ruling of the pension board based on those examinations. However, given that the physicians were Board employees and not independent assessors, and given that physicians likely harbored the same prejudices as other white professionals of the day, it is unwise to treat the physician assessment as an unbiased indicator of health.

The issue of interactions between the Board and the examining physicians in determining approval rates will not be taken up here.[20] I do note, however, the conclusions of Costa, Helmchen and Wilson (2007) that chronic conditions for blacks in the surgeons's certificates were likely understated for blacks relative to whites. They argue, for example, that the infectious disease burden over the life course was much higher for blacks than whites. The much higher mortality rate of blacks over the nineteenth century are also prime evidence that black disease rates are underrepresented in the data. Blacks also faced higher physical demands from physical labor, both during slavery and after the war. The cumulative insults of repeated exposure to disease, poor nutrition, and hard manual labor over the life course surely left the black veterans with a higher disease burden than their white counterparts.[21]

Further research on the ratings given by examining surgeons for whites and blacks is warranted. One small piece of evidence indicating the treatment of black veterans is, according to Costa, Helmchen, and Wilson, is that by 1900, 4.5% of black examinees were blind in at least

[20] Evans (2007) has undertaken preliminary analysis of this topic for the white sample.

[21] The idea that chronic disease was low, in general, in the nineteenth century because frail individuals died from infectious diseases has been successfully reputed by the experiences of white veterans, whose high rates of disease and disability have been chronicled, among other places, in Costa(XXXX) and (Costa and Fogel XXXX). There is no reason to expect that the same pattern would not hold true for blacks.

one eye, compared to 4.0% of white examinees. But among these blind veterans the examining surgeons rated[22] only 44% of blacks as disabled compared to 88% of whites. In sum, the idea that blacks were pensioned at lower rates than whites because blacks were less disabled seems highly implausible.

Earlier I asserted that attributing rapidly increasing pension enrollment to war-related disabilities, as the statute required, was a "convenient fiction" employed by pension administrators and physicians. How was this fiction developed and maintained? I do not address this question systematically here, but two main causes seem highly plausible. The first, of course, was that the Federal government faced increasing political demands from the GAR and the public to increase support for the veterans. The Union Army pension was on of the dominant political issues of the late nineteenth century which had the capacity to turn elections, and it was the foundation, in many ways, of Federal social welfare policy (Skocpol 1992). Finocchiaro (2006) notes it was key factor in the rise of "private bills" before Congress. This political pressure was seen in the formal passage of the 1890 and 1907 reforms. It was also the likely source of the increasing liberalization that took place between the major reforms.

The second factor is the limited and, therefore, easily exploitable understanding of disease etiology, particularly heart disease. The examining physicians frequently made comments discussing the etiology of disease. In some cases these assessments are quite reasonable—diarhhea is linked to various infectious diseases; ear problems are due to injuries and catarrh (probably chronic sinusitis); hernias were usually linked to injuries—but many were not terribly plausible. The two most ubiquitous conditions reported in the surgeon's certificates are rheumatism and heart disease. There is, of course, a well-known link between rheumatic

[22] The physicians would give assign veterans a "rating," which was an indicator to the pension board that they thought the veteran deserved a pension for the indicated disability.

fever and valvular heart disease. But the surgeon's certificates indicate that physicians frequently viewed rheumatism and heart disease as closely related, with the causal link going in either direction. In today's vernacular, we might refer to this 19th century conception as "rheumatic syndrome," which would encompass any form of heart disease and any kind of joint or muscle discomfort. Their descriptions of the evidence for rheumatism (pain, swelling the in the joints) clearly indicates that what they talking about is either arthritis or other musculoskeletal condition, not heart disease. But they saw a close relationship. The also frequently attributed heart disease to nerves, diarrhea, injuries, sunstroke, gastrointestinal problem, lung disease and even such things as asthma, hernias, or "urine trouble." Their ideas about the etiology of coronary disease was facilitated by the fact that coronary disease was astoundingly high in the veterans they examined, something which they had ample diagnostic evidence for. Thus we have extremely common conditions, thought to be related, that could be attributed to virtually anything—including some scrap of medical information from Civil War records.

The problem with this story about fictional etiology is that it can only account for part of the disadvantage faced by blacks relative to whites. This is because for heart disease (especially) and rheumatism, the black/white claim approval ratios are relatively high, at least when compared to other conditions. The conditions that blacks had the least luck in getting approved were the various forms of gastrointestinal disorders, usually just indicated by diarrhea. These were frequently attributed by the physicians to "fevers," malaria, or other infectious diseases. There is nothing outlandish, per se, with this attribution. But given that these men lived in the pre-antibiotic era where nutrition was sometimes poor and sanitation was almost always poor, it is surely the case that they suffered from *numerous* infectious agents and parasites across the

course of their lives. Their claims of chronic gastrointestinal troubles were very real and were often highly debilitating. What is very tenuous, however, is being able to say that they were caused by some "camp fever" or other illness during the war. That is the point at which the increasing bureaucratic discretion comes in and the point at which blacks were increasingly disfavored relative to whites, especially if they didn't have documentation from the War Department that they were ill during the war.

But, then, why were whites so much more successful at gaining approval for these conditions than blacks? It is probably because, as discussed earlier, it was hard for these conditions for the physician to verify that the condition 1) existed; 2) were chronic; and 3) were disabling. In all likelihood, the examining physicians were simply much less likely to give black veterans the benefit of the doubt than they were whites when faced with difficulties in verification. Or, it could have just been simple racist ideas that they felt much more sympathy for the sufferings of white soldiers (even when the condition was easily diagnosable, such as hemorrhoids) than they felt towards blacks.

## 6. Conclusions

Black veterans were subject to both institutional and discretional discrimination. The institutional discrimination was the result, probably unintended by the designers of the pension statutes, that resulted in a lower enrollment rate than they were probably entitled given the magnitude of their service (not to mention the horrors of slavery from which most of the recruits had come). They did not come out of the war with as many obvious battle injuries as their white counterparts, nor did the serve as long, but their service was significant, and the burdens of disease and injury they faced were comparable to white veterans.

Because of the institutional features of the system, blacks had a harder time getting pension support, including establishing their identity and their military service. They were more illiterate and poorer than whites, both obstacles in applying for a pension. Early applications to the pension system were few in numbers and mostly by those blacks with documented war injuries. The requirement that disabilities be war-related worked against blacks since they were injured at lower rates and there is evidence that their military medical histories were less complete than the records of whites. Also, the pension system made few allowances for the difficulties that blacks faced in applying for pensions. Yes, they were subject to the same law, but the burden they faced in proving their case was much higher. It is also likely that, since so few blacks actually had a pension in the early years, many black veterans probably did not know they were eligible or how to even begin the process.

In the decade following the war, the differences in enrollment rates between blacks and whites was entirely due to institutional discrimination—i.e., the factors that suppressed pension applications. However, starting very early on, the Pension Bureau began exhibiting an informal discretion that, though, benefiting blacks overall, widened the gap between black and white veterans. This discretional discrimination took the form of increasing willingness to attribute disabilities to war-time service. Blacks who had documented injuries and illnesses during the war fared much better than those who didn't, but within each category of military medical history, blacks lagged increasingly behind comparable whites. Long before the 1890 law was liberalized, the Pension Board began aggressively pensioning applicants based on rather dubious links to war-time service, but this discretion was not applied equally to blacks and whites. Increasing numbers of both black and whites occurred prior to 1890, but the pension approval rate for blacks without war injuries plummeted, while the approval rate for whites remained

constant—regardless of their medical history. It became increasingly less important for whites to establish this history. The relative black/white approval rate declined sharply in the decade before 1890 for both those with and without a military medical history. By the eve of the 1890 war, less than 10% of living black veterans who did not have a documented injury were part of the pension system.

The 1890 law significantly narrowed the pension enrollment gap between whites and blacks, though it remained significant. My examination of the approval rate for specific claimed conditions indicates that examining physicians and the pension board had significant differences in the way they viewed black and white disability. Discretional discrimination was apparent in the broad range of approval rates across conditions. Blacks fared relatively better (though still below whites) on conditions that could be more easily verified. For those conditions where it was hard to verify that a chronic disability existed, blacks were not extended the same discretion as whites. And even when diagnoses was straightforward (as in the case of hemorrhoids), the disability claims of blacks were approved less often than those of whites.

Furthermore, not only did blacks face greater obstacles to applying for a pension and a lower approval rate when they did apply, they also earned less. Interestingly, though blacks had to apply more often than whites in order to get their first application approved, the compensation they received on their first successful application was very close to whites—a fact that remained constant through the end of the Civil War pension. However, blacks were less successful at getting their pensions awards increased. Over time, the white monetary advantage was greater for blacks than for whites. By January of 1900, whites in the pension system were earning 27% more than blacks (partly because they were more likely to have been successful under the old General Law than the new 1890 law).

Finally, the pension system had a hugely positive effect on the economic welfare of the black veterans. It gave them a significant leg up financially and reinforced the pride they often felt in their military service. But, in practice, the pension system ended up being very much like the rest of their lives: they were rejected more, paid less, investigated more, and believed less. It was a significant first step in obtaining equal treatment by the government, but the system fell appreciably short in most every way.

**References**


Berlin, Ira, Joseph P. Reidy, and Leslie S. Rowland, eds. 1982. *Freedom: A Documentary History of Emancipation, 1861-1867. Series II: The Black Military Experience.* Cambridge: Cambridge University Press.

Clark, Robert L., Lee A. Craig, and Jack W. Wilson. 2003. *A History of Public Sector Pensions in the United States.* Philadelphia, Pennsylvania: University of Pennsylvania Press.

Costa, Dora L. 2000. Understanding the Twentieth Century Decline in Chronic Conditions Among Older Men." *Demography*. February 2000. 37(1): 53-72.

_____. 2002. "Changing Chronic Disease Rates and Long-term Declines in Functional Limitation Among Older Men." *Demography* 39(1): 119-138."

Costa, Dora L., Lorens Helmchen, and Sven E. Wilson. 2007. "Race and Health in the Past: Infection and Arteriosclerosis." *Proceedings of the National Academy of Science,* forthcoming.

Dyer, Frederick H. 1908. *A Compendium of the War of the Rebellion.* New York: Thomas Yoseloff).

Evans, Richard. 2006. "Perceptions of Disability: Personal, Medical, Administrative." Unpublished Manuscript, University of Texas at Austin.

Finocchiaro, Charles J. 2006. "Party Politics, Civil War Pensions, and the Development of the US Congress." Paper presented at the American Political Science Association, Philaledphia, August 31-September 3, 2006,

Fogel, Robert W. and Dora L. Costa. 1997. "A Theory of Technophysio Evolution, With Some Implications for Forecasting Population, Health Care Costs, and Pension Costs." (joint with Robert W. Fogel), *Demography*. February 1997, 34(1): 49-66."

Glatthaar, J.T. (1990) *Forged in Battle* (Louis. State Univ. Press, Baton Rouge).

Haines, Michael R. "Estimated Life Tables for the United Statues, 1850-1900." NBER Historical Paper No. 59.

Pizzaro, Judith, Roxanne C. Silver, and JoAnn Prause. 2006. "Physical and Mental Health Costs of Traumatic War Experiences among Civil War Veterans." *Archives of General Psychiatry* 63:193-200.

Shaffer, Donald R. 2004. *After the Glory: The Struggles of Black Civil War Veterans.* Lawrence, Kansas: University of Kansas Press.

Wilson, Sven E. 2003. "The Prevalence of Chronic Respiratory Disease in the Industrial Era: The United States, 1895-1910, " in Dora Costa (ed.) *Health and Labor Force Participation over the Life Cycle: Evidence from the Past,* Chicago: NBER and University of Chicago Press.

Wilson, Sven E., Joseph Burton, and Benjamin L. Howell. 2005. "Work and the Disability Transition in Twentieth Century America" *NBER Working Paper* No. 11036, January, 2005.

## TABLE 1: Specific Claims and Approvals under the General Law: 1865-1889

| | BLACKS | | | WHITES | | | Black/White Ratios | |
|---|---|---|---|---|---|---|---|---|
| **Condition Claimed** | Percent Claiming (1) | Percent Approved (2) | Approval Rate (3) = (1)/(2) | Percent Claiming (4) | Percent Approved (5) | Approval Rate (6) = (4)/(5) | Claims (7) = (1)/(4) | Approvals (8) = (3)/(6) |
| Genito-urinary conditions | 0.027 | 0.019 | **0.697** | 0.028 | 0.018 | **0.651** | 0.995 | 1.071 |
| Heart Disease | 0.072 | 0.045 | **0.621** | 0.117 | 0.083 | **0.710** | 0.618 | 0.874 |
| *Wounds/Injury* | *0.470* | *0.297* | ***0.633*** | *0.405* | *0.349* | ***0.860*** | *1.160* | *0.735* |
| Hearing | 0.045 | 0.023 | **0.519** | 0.074 | 0.053 | **0.720** | 0.607 | 0.720 |
| Rheumatism (arthritis) | 0.249 | 0.122 | **0.490** | 0.175 | 0.119 | **0.683** | 1.424 | 0.718 |
| Back Pain | 0.077 | 0.032 | **0.419** | 0.068 | 0.042 | **0.618** | 1.134 | 0.678 |
| General Debility (No cause) | 0.045 | 0.014 | **0.315** | 0.082 | 0.038 | **0.466** | 0.549 | 0.675 |
| Hernia | 0.056 | 0.028 | **0.507** | 0.050 | 0.038 | **0.759** | 1.121 | 0.669 |
| Vision | 0.115 | 0.038 | **0.333** | 0.087 | 0.062 | **0.711** | 1.310 | 0.469 |
| Varicose Veins | 0.002 | 0.001 | **0.333** | 0.026 | 0.019 | **0.736** | 0.097 | 0.453 |
| Respiratory Conditions | 0.074 | 0.023 | **0.315** | 0.117 | 0.082 | **0.697** | 0.630 | 0.451 |
| Gastrointestinal Conditions | 0.022 | 0.006 | **0.259** | 0.068 | 0.039 | **0.577** | 0.331 | 0.449 |
| Anal/Rectal Disease | 0.051 | 0.018 | **0.361** | 0.121 | 0.098 | **0.809** | 0.417 | 0.446 |
| Diarrhea/Dysentary/Constipation | 0.079 | 0.020 | **0.253** | 0.202 | 0.163 | **0.807** | 0.391 | 0.313 |
| Kidney Disease | 0.025 | 0.002 | **0.067** | 0.040 | 0.010 | **0.245** | 0.630 | 0.272 |
| Miscellaneous Infectious Disease | 0.025 | 0.001 | **0.033** | 0.042 | 0.017 | **0.400** | 0.594 | 0.083 |
| Malaria | 0.005 | 0.000 | **0.000** | 0.033 | 0.024 | **0.726** | 0.151 | 0.000 |
| Combined | All Claims | | **0.480** | | | **0.723** | | ***0.663*** |
| | Injury Claims | | **0.633** | | | **0.860** | | ***0.735*** |
| | Illness Claims | | **0.473** | | | **0.706** | | ***0.669*** |
| N (applications)= | | | 1,205 | | | 32,332 | | |

## TABLE 2: Claim Approval Rate under the General Law: 1865-1989

| Group 1: War-Injuries | **Blacks** | **Whites** | *Ratio* |
|---|---|---|---|
| All Claims | 0.765 | 0.636 | *1.202* |
| Injury Claims | 0.863 | 0.904 | *0.955* |
| Illness Claims | 0.577 | 0.610 | *0.945* |
| N (applications)= | 386 | 14,562 | |
| **Group 2: War-Illness (no injury)** | | | |
| All Claims | 0.376 | 0.688 | *0.546* |
| Injury Claims | 0.281 | 0.660 | *0.426* |
| Illness Claims | 0.527 | 0.690 | *0.763* |
| N (applications)= | 389 | 12,677 | |
| **Group 3: No Wartime Medical Events** | | | |
| All Claims | 0.368 | 0.676 | *0.544* |
| Injury Claims | 0.389 | 0.744 | *0.522* |
| Illness Claims | 0.361 | 0.668 | *0.541* |
| N (applications)= | 440 | 5,093 | |

## TABLE 3: Claim Application and Approval Rates under the 1890 Law: 1890-1906

| | BLACKS | | | WHITES | | | Black/White Ratios | |
|---|---|---|---|---|---|---|---|---|
| | Percent Claiming | Percent Approved | Approval Rate | Percent Claiming | Percent Approved | Approval Rate | Claims | Approvals |
| **Condition Claimed** | (1) | (2) | (3) = (2)/(1) | (4) | (5) | (6) = (5)/(4) | (7) = (1)/(4) | (8) = (3)/(6) |
| Varicose Veins | 0.033 | 0.020 | **0.604** | 0.059 | 0.040 | **0.672** | 0.554 | 0.899 |
| Hernias | 0.088 | 0.064 | **0.730** | 0.123 | 0.100 | **0.815** | 0.710 | 0.896 |
| Heart Disease | 0.390 | 0.214 | **0.549** | 0.428 | 0.265 | **0.620** | 0.911 | 0.886 |
| Genito-urinary Conditions | 0.045 | 0.020 | **0.434** | 0.067 | 0.035 | **0.526** | 0.674 | 0.825 |
| General Debilty | 0.471 | 0.193 | **0.410** | 0.410 | 0.208 | **0.508** | 1.149 | 0.806 |
| Rheumatism (arthritis) | 0.738 | 0.356 | **0.483** | 0.603 | 0.372 | **0.617** | 1.223 | 0.782 |
| Kidney Disease | 0.151 | 0.009 | **0.060** | 0.164 | 0.013 | **0.082** | 0.921 | 0.729 |
| Miscellaneous Infections | 0.073 | 0.017 | **0.234** | 0.154 | 0.056 | **0.367** | 0.472 | 0.636 |
| Ano-rectal Disese | 0.211 | 0.084 | **0.401** | 0.271 | 0.178 | **0.655** | 0.777 | 0.612 |
| *Wound/Injury* | *0.277* | *0.097* | ***0.351*** | *0.267* | *0.159* | ***0.598*** | *1.038* | *0.587* |
| Vision | 0.334 | 0.069 | **0.207** | 0.220 | 0.078 | **0.356** | 1.518 | 0.580 |
| Malaria | 0.019 | 0.005 | **0.250** | 0.033 | 0.015 | **0.434** | 0.560 | 0.576 |
| Respiratory | 0.178 | 0.046 | **0.258** | 0.158 | 0.072 | **0.456** | 1.124 | 0.567 |
| Gastrointestinal | 0.128 | 0.026 | **0.203** | 0.202 | 0.087 | **0.432** | 0.634 | 0.470 |
| Diarrhea | 0.098 | 0.019 | **0.196** | 0.172 | 0.084 | **0.485** | *0.566* | *0.404* |
| Back Pain | 0.179 | 0.020 | **0.110** | 0.158 | 0.044 | **0.277** | 1.131 | 0.397 |
| Hearing | 0.106 | 0.008 | **0.073** | 0.176 | 0.059 | **0.339** | 0.605 | 0.216 |
| *Combined* | *All Claims* | | **0.360** | | | **0.509** | | ***0.707*** |
| | *Injury Claims* | | **0.351** | | | **0.598** | | ***0.587*** |
| | *Illness Claims* | | **0.371** | | | **0.535** | | ***0.694*** |

Notes: Does not include applicants who applied under the General Law after 1890

## TABLE 4: Monthly Pension Awards for White and Black Veterans

*Initial Pension Awards*

| Period of First Award | N | Blacks | N | Whites | White/Black |
|---|---|---|---|---|---|
| 1865-1879 | 51 | $5.62 | 1,300 | $5.53 | 0.98 |
| 1870-1874 | 19 | $4.74 | 662 | $4.89 | 1.03 |
| 1875-1879 | 44 | $3.91 | 1,980 | $4.05 | 1.04 |
| 1880-1884 | 66 | $3.91 | 2,419 | $4.60 | 1.18 |
| 1885-1890 | 118 | $7.10 | 2,416 | $6.38 | 0.90 |
| 1890-1894 | 843 | $8.52 | 6,036 | $9.15 | 1.07 |
| 1895-1899 | 226 | $6.96 | 1,146 | $7.30 | 1.05 |
| 1900-1904 | 194 | $6.76 | 690 | $7.40 | 1.09 |
| 1905-1909 | 88 | $9.21 | 482 | $9.81 | 1.07 |
| *Weighted Average* | | | | | *1.05* |

*Pension Amounts at:*

| Date | | | | | |
|---|---|---|---|---|---|
| Jan. 1, 1879 | 74 | $6.59 | 2,960 | $7.29 | 1.106 |
| Jan. 1, 1890 | 236 | $8.92 | 7,801 | $10.87 | 1.219 |
| Jan. 1, 1900 | 971 | $9.30 | 12,076 | $11.84 | 1.273 |
| General Law | 189 | $12.87 | 6,749 | $14.34 | 1.114 |
| 1890 Law | 782 | $8.69 | 5,327 | $9.45 | 1.087 |
| Jan. 1, 1910 | 768 | $13.37 | 8,961 | $15.41 | 1.153 |
| General Law | 145 | $15.36 | 4,757 | $17.32 | 1.128 |
| 1890 Law | 623 | $12.97 | 4,204 | $13.67 | 1.054 |

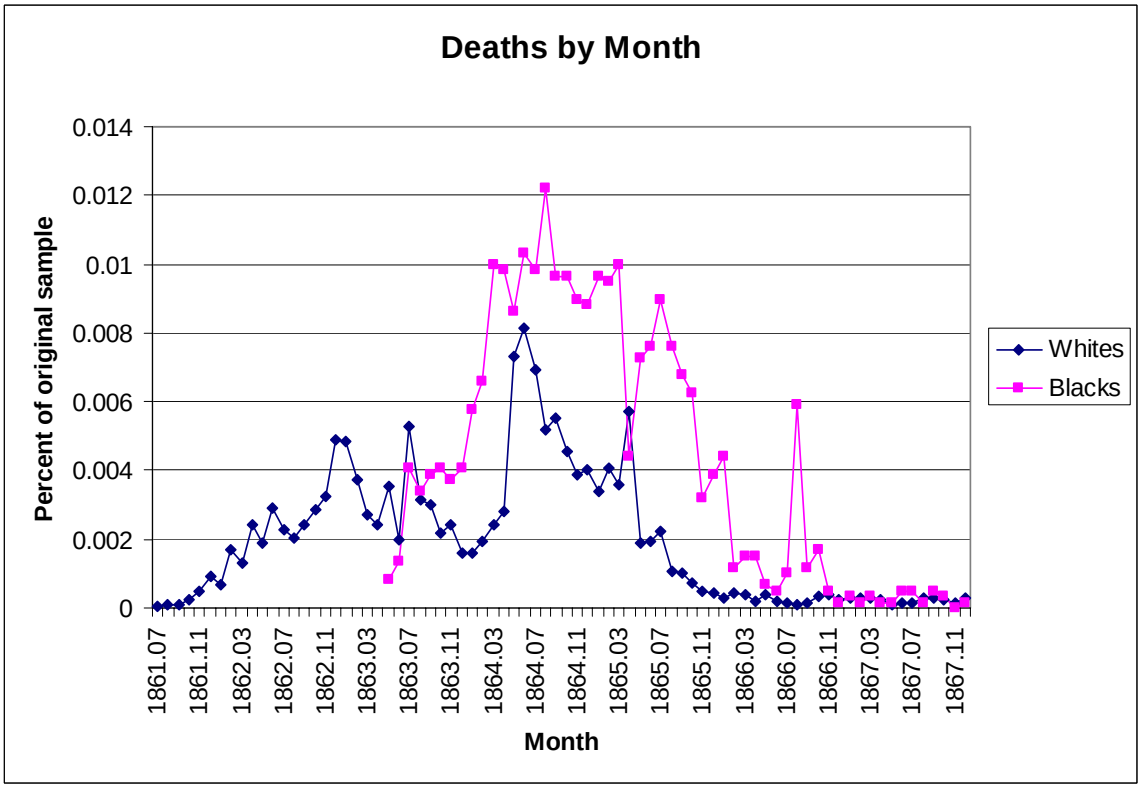

Deaths by Month
Percent of original sample
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
1861.07
1861.11
1862.03
1862.07
1862.11
1863.03
1863.07
1863.11
1864.03
1864.07
1864.11
1865.03
1865.07
1865.11
1866.03
1866.07
1866.11
1867.03
1867.07
1867.11
Month
Whites
Blacks

**Figure 1**

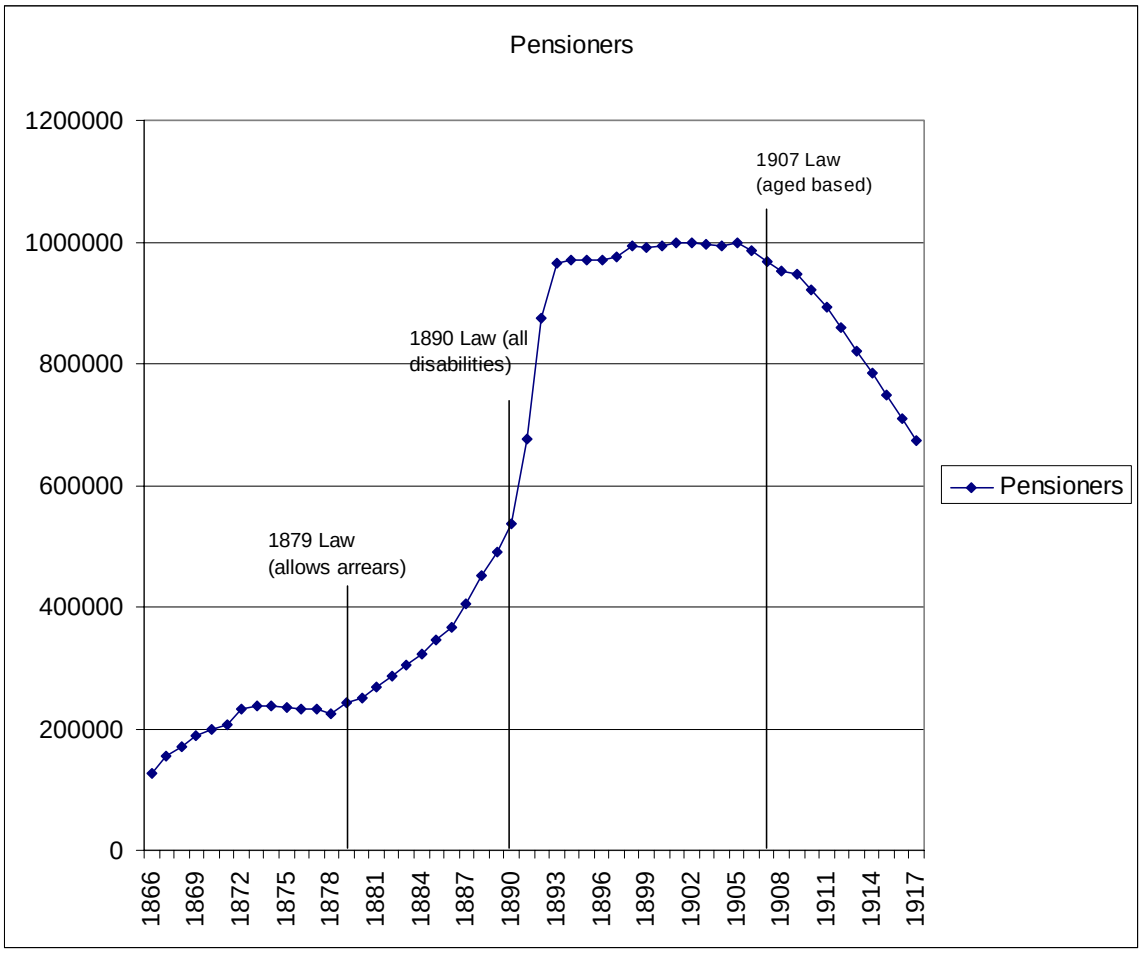

Pensioners
1200000
1000000
800000
600000
400000
200000
0
1907 Law
(aged based)
1890 Law (all
disabilities)
1879 Law
(allows arrears)
1866
1869
1872
1875
1878
1881
1884
1887
1890
1893
1896
1899
1902
1905
1908
1911
1914
1917
Pensioners

**Figure 2**

## Number of First Applications, by Year

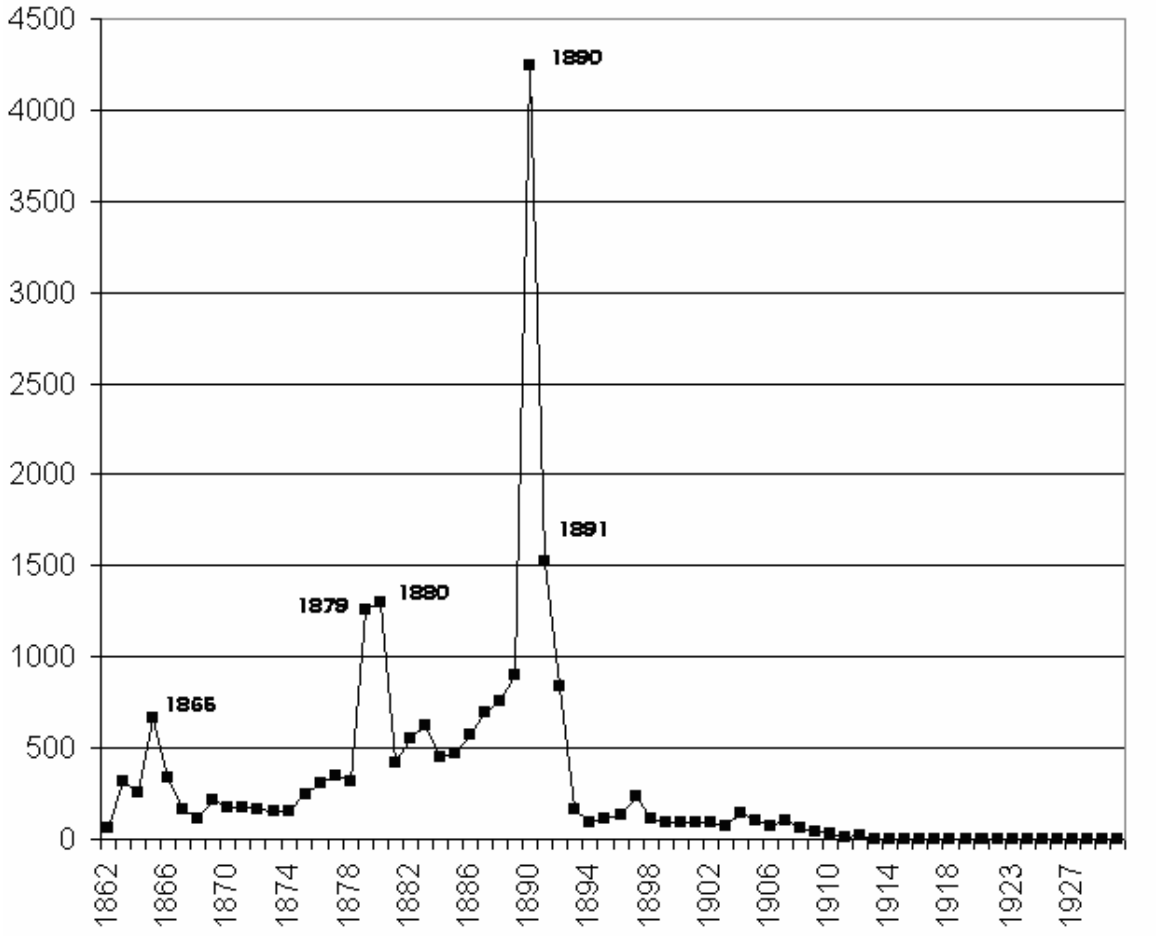



**Figure 3**

## Figure 4: Percent of Living Veterans With Initial Pension Application, 1865-1910

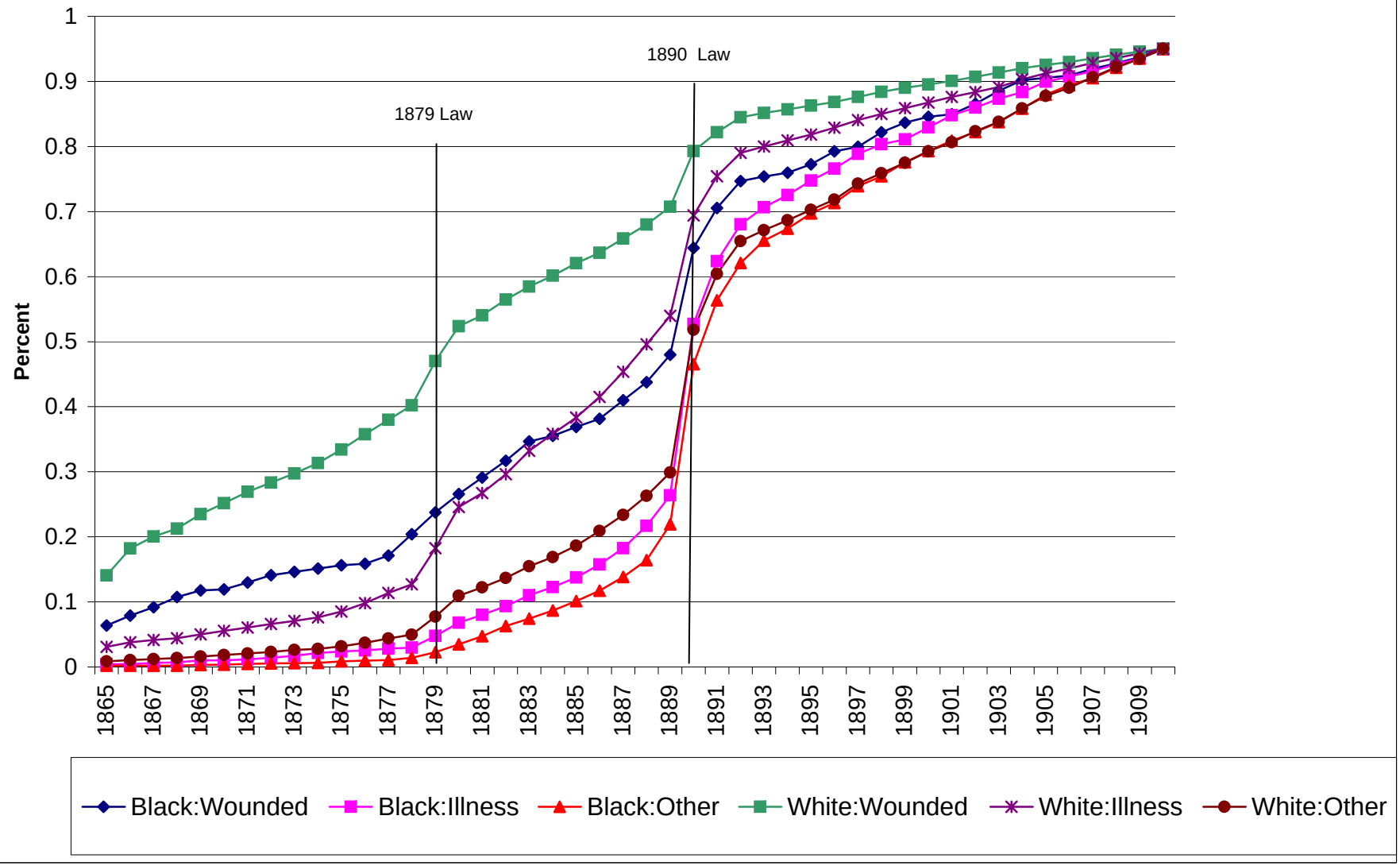
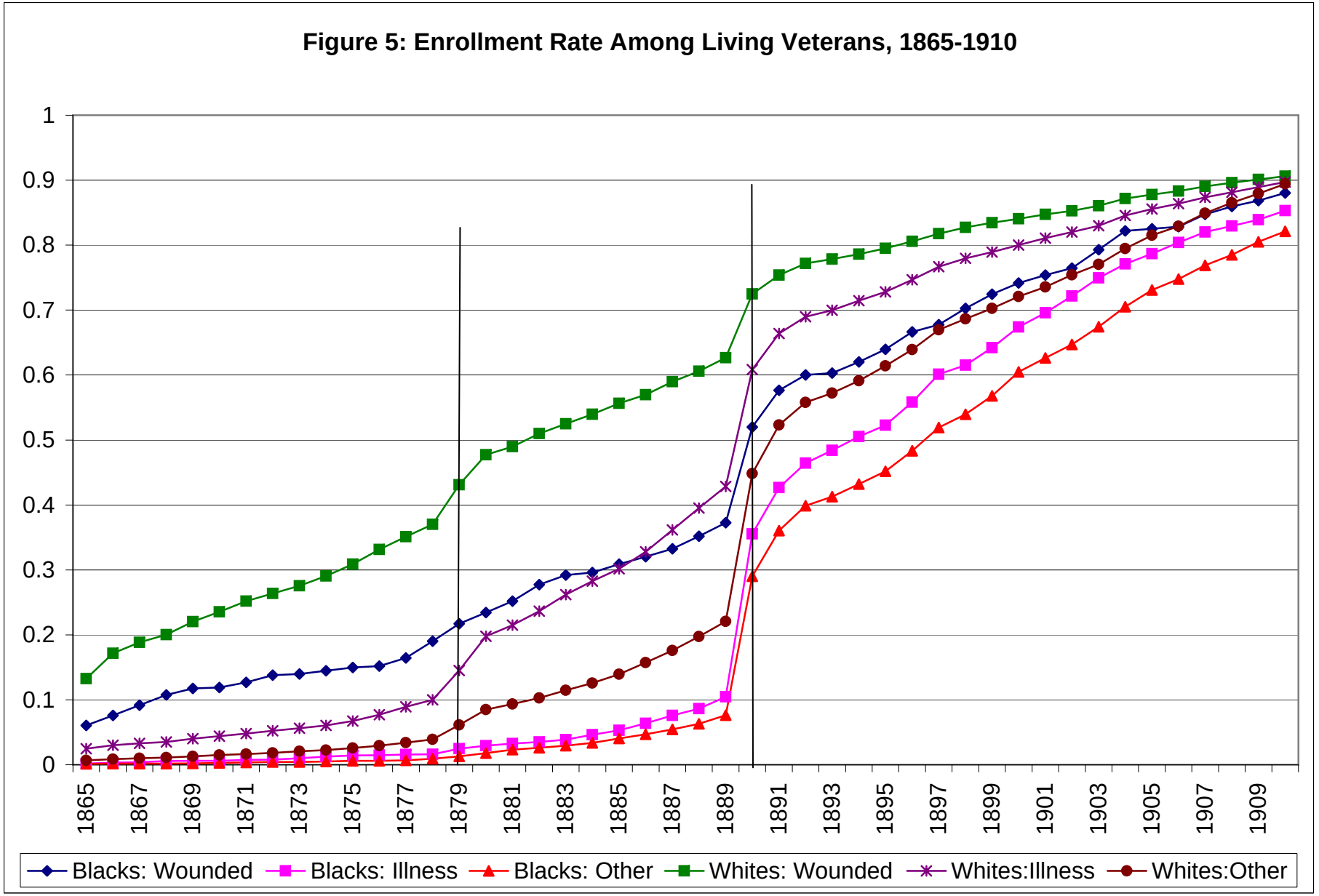
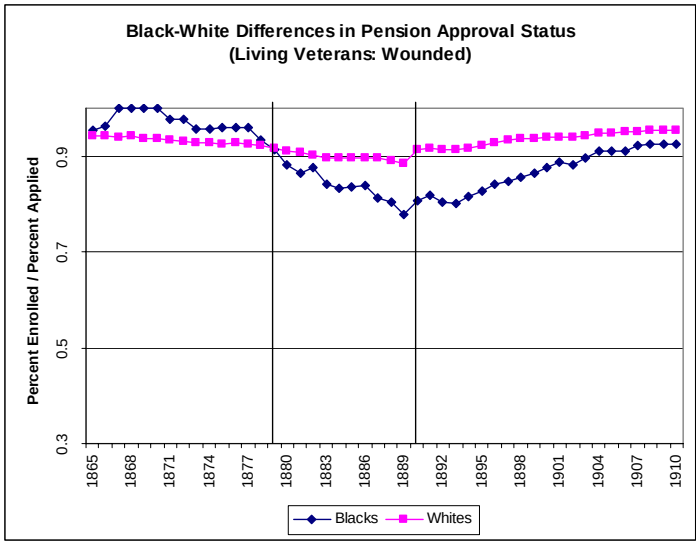
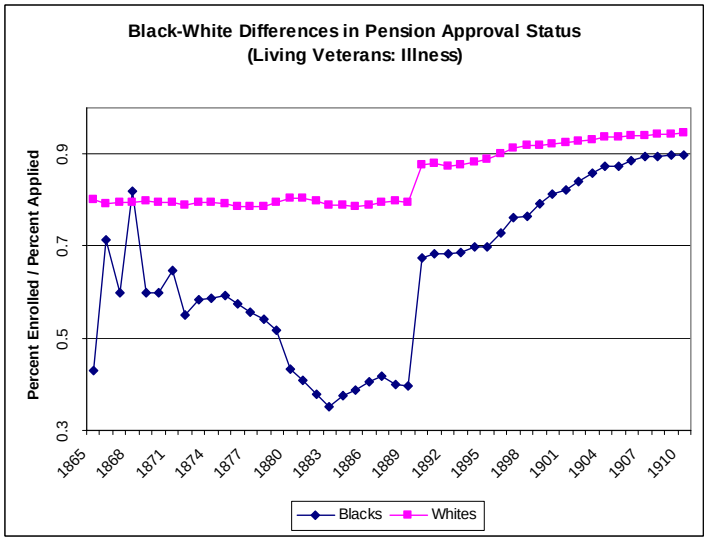


**Figure 5: Enrollment Rate Among Living Veterans, 1865-1910**




Black-White Differences in Pension Approval Status
(Living Veterans: Wounded)
Percent Enrolled / Percent Applied
0.3
0.5
0.7
0.9
1865
1868
1871
1874
1877
1880
1883
1886
1889
1892
1895
1898
1901
1904
1907
1910
Blacks
Whites


Black-White Differences in Pension Approval Status
(Living Veterans: Illness)
Percent Enrolled / Percent Applied
0.3
0.5
0.7
0.9
1865
1868
1871
1874
1877
1880
1883
1886
1889
1892
1895
1898
1901
1904
1907
1910
Blacks
Whites

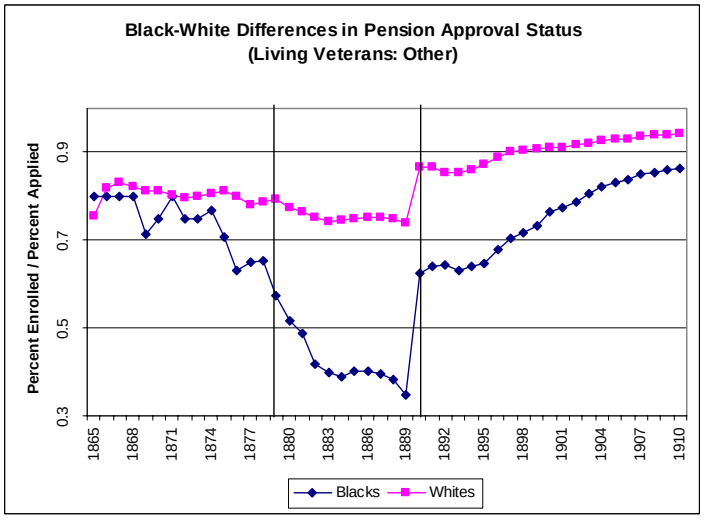
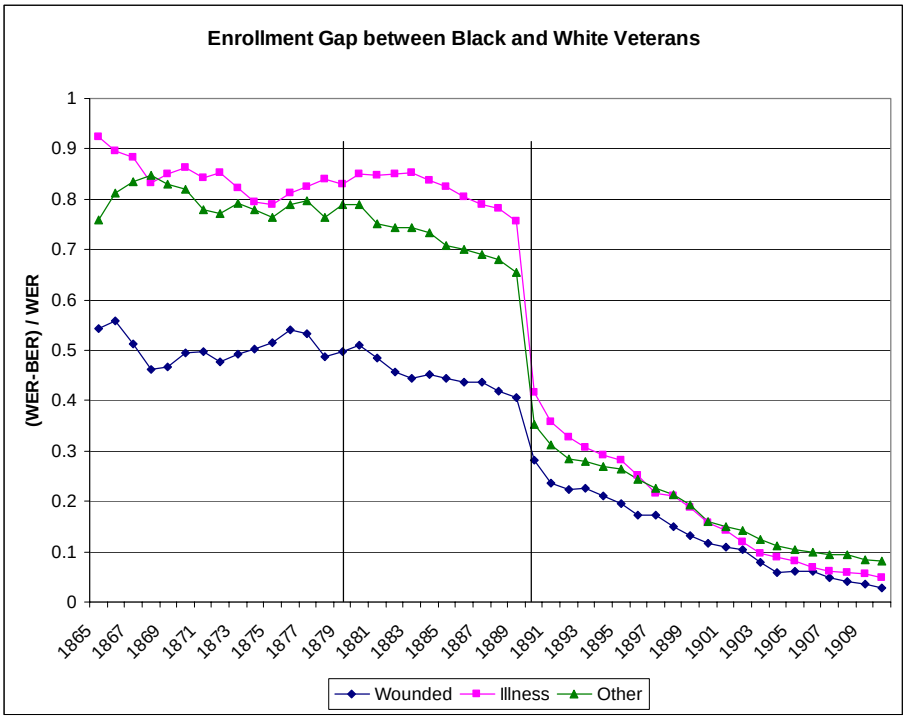

Black-White Differences in Pension Approval Status
(Living Veterans: Other)
Percent Enrolled / Percent Applied
0.3
0.5
0.7
0.9
1865
1868
1871
1874
1877
1880
1883
1886
1889
1892
1895
1898
1901
1904
1907
1910
Blacks
Whites

**Figure 6**


Enrollment Gap between Black and White Veterans
(WER-BER) / WER
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1865 1867 1869 1871 1873 1875 1877 1879 1881 1883 1885 1887 1889 1891 1893 1895 1897 1899 1901 1903 1905 1907 1909
Wounded
Illness
Other

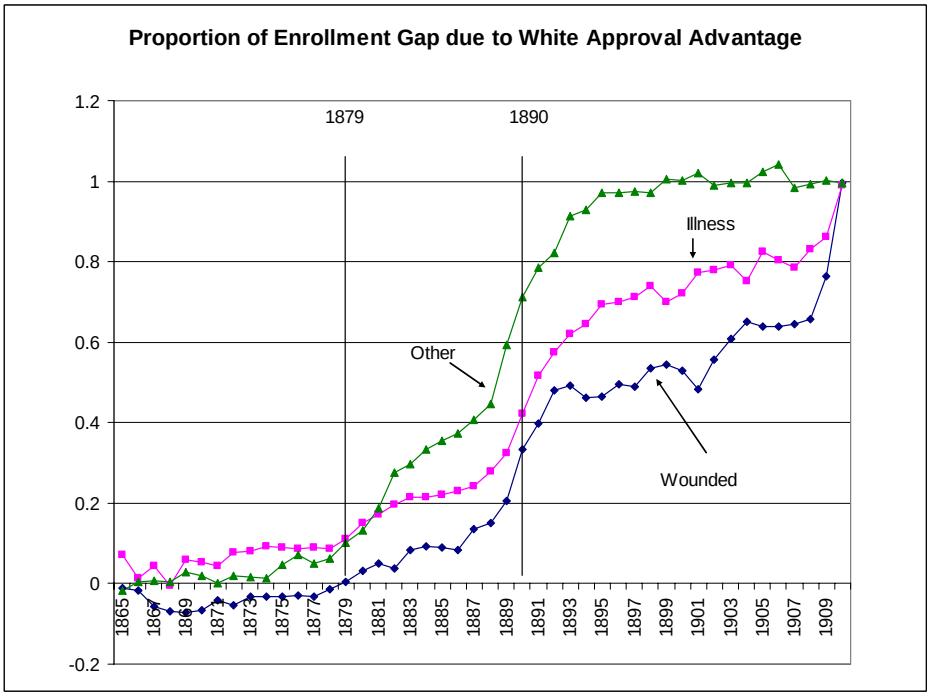

Proportion of Enrollment Gap due to White Approval Advantage
1.2
1
0.8
0.6
0.4
0.2
0
-0.2
1879
1890
Illness
Other
Wounded
1865 1867 1869 1871 1873 1875 1877 1879 1881 1883 1885 1887 1889 1891 1893 1895 1897 1899 1901 1903 1905 1907 1909

**Figure 7**

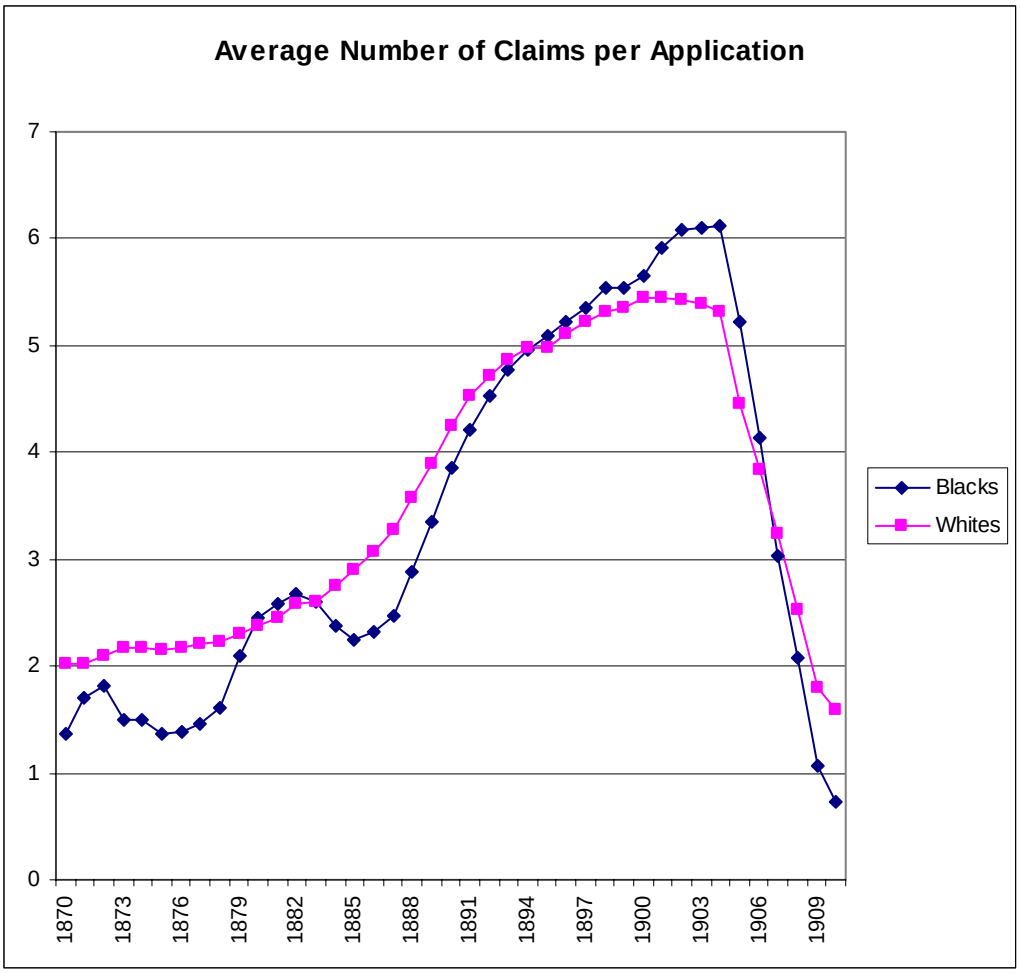

Average Number of Claims per Application
7
6
5
4
3
2
1
0
1870
1873
1876
1879
1882
1885
1888
1891
1894
1897
1900
1903
1906
1909
Blacks
Whites

**Figure 8**