*B. UA Pension Politics and Attorneys*

Civil War military service became an important link to UA veterans' post-war political behavior and to Republican Party strategy.[47] At the time of the debates preceding the 1890 Disability Pension Act, the Republicans believed it to be in their party's interest to advocate broader and more generous pension awards. Republican Senator, soon to be President, Benjamin Harrison, echoed the pension's expansion theme that "there ought to be a place in the Ambulance for every faithful disabled [soldier]."[48] Historian Heywood Sanders aptly stated that the "Democrats were left to protect the pension list as a 'roll of honor,' protesting improper decisions by previous administrations, and searching out and publicizing fraud and abuse."[49]

For the first time in American history, the Civil War pension system also created an ongoing relationship among the federal government, individual veterans, and the advocates and lobbying organizations that represented the veterans' interests. After the war, UA veterans transformed their national organization, the Grand Army of the Republic (G.A.R.), into a political machine. The G.A.R.'s activities kept the veterans' wartime sacrifices in the public consciousness and their lawyer advocates and lobbyists played an important role in the pension system's expansion.[50]

Prior studies show the tie of pension awards to local political party dominance and loyalty.[51] Historian Larry Logue finds that under a Republican national administration in the early 1880s, Republican-dominated counties evidenced a higher proportion of pensioners.[52] In contrast, in the mid-1880s under President Cleveland's administration prior to passage of the 1890 Act, Democratic-dominated counties evidenced greater numbers of successful pensioners.

Likewise, researchers Gerald McFarland and Kazuto Oshio find that Civil War veterans were disproportionately loyal to the

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47. *See* Heywood T. Sanders, *Paying for the "Bloody Shirt:" The Politics of Civil War Pensions, in* POLITICAL BENEFITS: EMPIRICAL STUDIES OF AMERICAN PUBLIC PROGRAMS 137 (Barry S. Rundquist ed., 1980) (arguing that pension policies played a central part in Republican party strategy for ensuring continuing party loyalty).

48. DEARING, *supra* note 20, at 285 (quoting President Harrison).

49. Sanders, *supra* note 47, at 149.

50. *See also* BENSEL, *supra* note 3, at 63–64 (discussing link of G.A.R. to Republican party politics and the pension scheme).

51. *See supra* notes 48–51 (discussing research findings).

52. *See* Larry M. Logue, *Union Veterans and their Government: The Effects of Public Policies on Private Lives*, 22 J. INTERDISC. HIST. 411, 424 (1992).

FIGURE 5B (CONTINUED)

| RELATIONSHIP BETWEEN ATTORNEY INVOLVEMENT AND POLITICAL AFFILIATION OF STATES: SWING STATES FROM 1862 TO 1907 UNDER YEARS OF EQUAL REPUBLICAN AND DEMOCRATIC VOTES | | |
|---|---|---|
| STATE | PERCENTAGE OF APPLICATIONS WITH ATTORNEYS | NUMBER OF APPLICATIONS |
| Maryland | 51.30 | 119 |
| California | 79.20 | 53 |
| New York | 79.90 | 656 |
| Kentucky | 87.10 | 155 |
| Total | 77.54 | 983 |

In a politically important swing state such as Missouri, party affiliation had a striking influence on the hiring of pension attorneys. Missouri overall was Democratically inclined during the pension period. Yet, during those years of Republican Party inclination (Panel 1), less than half (48.30%) of applications were filed with attorneys. In comparison, when Missouri was under Democratic majority vote, Figure 5B (Panel 2) shows that attorneys filed almost nine out of ten (85.90%) applications. A similar but less robust trend is shown for Illinois where attorney involvement under Republican Party inclination was 76.30%, and 79.50% under Democratic inclination.

The final panel of Figure 5B shows the four states in our sample—California, Kentucky, Maryland, and New York—that experienced the most equal (i.e., neutral) non-majority party votes between the years 1862 to 1907. The average attorney involvement in these neutral states was 77.54%, which predictably was roughly the midpoint found between the levels of attorney usage under Republican and Democratic periods of dominance.

In essence, we have shown empirically that during periods of Republican majority votes, individual states were politically friendlier towards pension applicants *and* claimants were less likely to use pension attorneys. Does this conclusion imply, as has been suggested by prior scholars without the aid of the present data set, that for party patronage reasons, Republican presidents blindly supported generous pensions relative to Democratic presidents? We explore this conjecture next.

However, during the longer period of Republican sitting presidents between 1869 and 1885, Figure 6 also shows two noticeable spikes, as well as two noticeable troughs.[94] After 1890, when the Disability Act provided pensions regardless of whether the claimant's disability was war-related, and with reduced political salience of the protective tariff issue, presidential party dominance did not significantly influence average pension rulings (that is, except with passage of the Age Pension Law in 1907).

Figure 7 further supports the conclusion that from 1890 until 1907, the proportion of increases and rejections in pension applications was not associated strongly with the presidential administration in power. The proportion of applications receiving increases was high under Democratic presidential administrations and the proportion of pension rejections also was high under Republican presidents.

Therefore, with the advent of American industrialization and the decline of the protective tariff issue at the turn of the nineteenth century, Republican and Democratic administrations alike lessened their support for the continued expansion of UA pensions.[95] Lastly, Figure 7 illustrates that toward the end of the disability pension scheme, under Progressive President Theodore Roosevelt (1901–1909), the proportion of pension increases rose and rejections declined.

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94.    *See infra* Figure 7 (demonstrating that evidence on pension ruling increases or rejections is mixed).

95.    *But see infra* note 138 and accompanying text (providing Professor Pam Karlan's suggestion that partisan effects toward the pension system may have been more obvious in local political races, such as in congressional contests).

FIGURE 8

SUMMARY OF STUDIES CLASSIFYING IMPAIRMENTS/DISABILITIES
INTO CATEGORIES SUBJECT TO MORE AND LESS
ATTITUDINAL PREJUDICE (TOP) AND AS APPLIED TO
DISEASE/DISABILITY CATEGORIES DERIVED FROM
THE SURGEON'S CERTIFICATES (BOTTOM)

| *Impairments Subject to Less Predudice* | *Impairments Subject to More Predudice* |
|---|---|
| Back or spine problems | Missing legs, arms, hands, or fingers |
| Broken bone or fracture | Blindness or vision problems |
| Head or spinal cord injury | Deafness or hearing impairment |
| Hernia or rupture | Speech disorder |
| High blood pressure | Stroke |
| Learning disability | Paralysis |
| Stiffness or Deformity of Limb | Epilepsy |
| Thyroid trouble or goiter | Cerebral palsy |
| Tumor, cyst, or growth | Mental retardation |
| Stomach trouble | Alcohol or drug problem |
| Arthritis or rheumatism | Mental or emotional problem |
| Lung or respiratory trouble | Acquired immunodeficiency syndrome |
| Diabetes | |
| Heart trouble | |

CATEGORIZATION OF DISEASE CATEGORIES
FROM SURGEON'S CERTIFICATES

| *Less Prejudice* | *More Prejudice* |
|---|---|
| Cardiovascular | Ear diseases |
| Diarrhea | Eye disorders |
| Endocrine | General appearance |
| Gastrointestinal | Genito-urinary |
| Hernia | Liver |
| Injury/gun-shot wound | Infectious Diseases/fever |
| Rectum/hemorrhoids | Nervous system |
| Respiratory | |
| Rheumatism/musculo-skeletal | |
| Tumor | |
| Varicose veins | |

Acknowledging these caveats, Figures 9A, 9B, 9C, and 9D separate disability types into the two categories—as subject to more and less prejudice—as predictors of pension awards. Figure 9A groups the claimed disabilities during the period 1862 to 1907.

We conclude that two non-disability factors contributed to the prevalence of applications during system sub-periods. The first may be described as a "political-pension law effect," whereby certain disabilities received recognition from the Bureau for the political, party patronage, and social reasons we have identified previously, such as year of application and political affiliation of the state in which the claimant filed his application. Despite this effect, it is not surprising that GSWs accounted for over 60% of the applications under the General Law, compensating conditions with clear ties to the war.

The second factor is an "age-disability effect." As veterans aged, their health deteriorated. We have shown elsewhere that a claimant's occupation and social class moderated this effect.[104] With age, claimants were more likely to contract conditions such as rheumatism and ear or eye disease that were not direct products of war-related injuries. The age-disability effect is indicative of the negative stigma we have found to be attached to certain disabilities claimed, because they were considered less deserving for military pensions.[105]

We have suggested that after the war, infectious diseases and nervous conditions were regarded to be particularly less deserving of awards due to stigma and lack of direct ties to the war. In contrast, veterans with GSWs, in many cases with less severe medical conditions than those with nervous disorders, received greater public approval for their claims. Thus, in prior analyses we found that pension rejection rates for applications with more stigmatized disabilities were significantly higher relative to conditions subject to less stigma.[106] Yet, our prior studies show that once admitted into the pension system, veterans received on average higher monthly awards for more stigmatized disabilities.[107]

Figure 9A shows that disabilities subject to more prejudice accounted for 18.10% of the total claims (10,672 out of 59,171

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104. *Id.* at 166–69 (finding relation of occupation and social class to pension awards).

105. *See* Blanck & Millender, *supra* note 9, at 23–27 (discussing findings for disability stigma).

106. Blanck, *supra* note 7, at 162–64 (discussing findings regarding degree of prejudice and awards); *see also* BLISS, *supra* note 70, at 27–32 (discussing the Bureau's classification of diseases into "obscure" and "not obscure," whereby obscure diseases generally can be distinguished only by a physician and not obscure may be distinguished by non-physicians). The Bureau recognized that at some stages proof required in claims of all diseases can be either obscure or not obscure depending on the development and symptoms of the disease and the competency of the witness describing the condition. *Id.* For purposes of the present analysis, therefore, disease type and severity are more focused indicators of pension outcomes.

107. Blanck, *supra* note 7, at 163.

pensioners *and* their attorneys, which was not fixed over time but was responsive to the economic incentives provided in the changing pension laws.[110]

### C. Attorney Usage Model

*1. Summary Statistics*—To set up this part, Figure 10 provides the definitions of the key variables under study, as well as their prevalence (means) in this sample, for purposes of the subsequent regression analyses.

FIGURE 10
VARIABLE DEFINITION AND VARIABLE MEAN
APPLICATION-RECRUIT PAIRS, ALL DISABILITIES

| VARIABLE USED IN THE LOGISTIC OR OLS REGRESSIONS | VARIABLE DEFINITION | VARIABLE MEAN (27191 OBSERVATIONS) |
|---|---|---|
| **Attorney Variable** | | |
| Attorney | 1 if application assisted by attorney, 0 otherwise | 84.65% |
| **Award Variable** | | |
| Ruling Increase | 1 if an increase in monthly pension, 0 otherwise | 34.49% |
| Ruling Amount | $ amount of pension per month for a successful application | $9.52 (16861 Observations) |
| **Occupational Variable** | | |
| Professional | 1 if professional, skilled, or semi-skilled, 0 otherwise (omitted group in the regressions) | 27.94% |
| Agricultural | 1 if farm owner or farm laborer, 0 otherwise | 59.99% |
| Manual Labor | 1 if manual labor, 0 otherwise | 12.07% |

---

110.   Other factors such as a veteran's marital status, the number of dependents, regional economic conditions, and labor force opportunities might have influenced application filings.

month for a successful application at $9.52. We examine below the predictors of attorney usage, and whether the hiring of attorneys affected the probability of a ruling increase, or a raise in the monthly dollar amount of pension granted by the Bureau.

In addition, we compare pension outcomes for the different claimed disabilities. We have hypothesized that the Pension Bureau treated varying disabilities differently for several reasons. First, depending on the phase of pension legislation, some disabilities were more convincing as a consequence of the war than were others. We have shown that injury and GSWs formed the largest claim category under the General Law because they were directly war-related.

Second, some disabilities were defined by the Bureau as more debilitating than others; for instance, the ability to perform manual labor was thought to be dramatically limited by blindness but less affected by deafness, and the debilitating nature of a disability varied as a function of the claimant's occupation.[112]

Third, negative stigma was attached to disabilities such as infectious or nervous conditions because they were contagious, less understood or less visible (i.e., more obscure), or made individuals less physically attractive, and thereby not perceived worthy of a pension. Consequently, the necessity for legal advocacy in the application process may have differed as a function of disability type, severity, and visibility.

In the analyses that follow, we control statistically for individual application characteristics identified in Figure 10, such as enlistment occupation, application year, and the state's political affiliation in the year of application. This control is necessary, given that we have established above the influence of year and state of pension application as general indicators of political inclination or environment (i.e., Republican, Democratic, or swing state).

In addition, as an indicator for claimant social status, we suggested that occupation likely affected pension attorney usage at time of application, and in turn might have influenced application outcomes.[113] Since it is possible that a recruit had several different jobs pre- and postwar, in our analysis we focus on occupation at the time of enlistment, given prior findings of the strong predictive relation between claimant occupation at enlistment and postwar.[114]

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112. For example, a desk clerk who lost a leg in the war would be relatively less debilitated in performing manual labor.

113. Blanck, *supra* note 7, at 158 (finding relation between occupation and pension awards).

114. *See* Chulhee Lee, *Effects of Occupation, Nativity, Height, and Age at Enlistment on the Assignment of Rank and Duty, and Promotion in the Union Army,* University of Chicago, Center for Population Economics Working Paper Series (1994).

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outcomes.[142] This study is underway to assess the attorney usage effect on other disability categories, while controlling for impairment severity as well as for claimant general health and mortality rates.[143]

Fourth, study is underway to understand other social, economic, and political forces underlying contemporary and historical attitudes about disability policy and advocacy in our society.[144] To this end, we are beginning a comparative study of foreign-born and African-American UA veterans. In one series of studies, we have compared pension outcomes, disability type and severity ratings, attorney usage, and other variables in our research model for native versus non-native born UA veterans.[145]

Ella Lonn's seminal work *Foreigners in the Union Army and Navy* chronicles the important contribution of non-native born UA veterans to the outcome of the Civil War.[146] Indeed, in 1860 more than 85 percent of foreign-born persons in the United States lived in the North. Using the Civil War data set, we have begun to address the degree to which native and foreign-born UA veterans enjoyed equal access to, as well as equitable rewards from, the pension scheme. And, if inequality of access to the pension system existed, what disability and extra-disability factors–such as ethnicity, attitudinal prejudice or attorney usage—accounted for such a disadvantage?

Additionally, with the expansion of the Civil War data set, we are beginning to compare black and white UA pension claimants' disability types and severity, attorney usage, and pension outcomes.[147] Carrie Kiewitt, in a study of seventy-three African-American UA veterans in Baltimore, finds that one unethical pension attorney overcharged and preyed on these veterans while defrauding the pension bureau.[148]

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142. *See* Song & Nguyen, *supra* note 130.

143. Disability-specific ratings and diagnostic records on diarrhea and cardiovascular disease have been standardized and are available for use.

144. Blanck & Millender, *supra* note 9, at 33–44.

145. *See* Blanck & Song, *supra* note 130, 69–72 (discussing findings related to nativity and pension outcomes).

146. ELLA LONN, FOREIGNERS IN THE UNION ARMY AND NAVY 1 (1951).

147. *See* Dora Costa, Memorandum, Early Indicators of Later Work Levels, Disease, and Death (Feb. 13, 2001) (unpublished manuscript, on file with authors) (discussing study of black UA veterans).

148. Carrie Kiewitt, A Study of Fraud in African-American Civil War Pensions: Augustus Parlett Lloyd, Pension Attorney, 1882–1909, 73–78 (1996) (unpublished M.A. thesis, University of Richmond) (on file with authors); *see also* Blanck & Millender, *supra* note 9, at 31–32 (discussing pension attorneys).

In a more recent study, Donald Shaffer compares the pension experiences of 1,100 white and black UA veterans.[149] He finds that a substantially smaller proportion of black veterans received pensions. Shaffer contends that racial inequality in receipt of UA pensions did not stem from the pension laws themselves, which were written to apply to white and black veterans equally. Rather, discrimination in pensions against African-American UA veterans was the result of social, attitudinal, and economics forces. These negative forces included that black veterans were more likely to face poverty and illiteracy, lack of support in the application process, prejudice by pension bureaucrats, and inability to retain honorable attorney advocates. As Shaffer has found for African-American UA veterans, we find that the use of pension attorneys by certain types of claimants, such as those with obvious visible disabilities, actually hindered pension outcomes.

However, as Blanck and Millender have argued generally with regard to UA veterans,[150] Shaffer illustrates that many African-Americans with their attorney advocates successfully exerted their pension rights and proved their "worthiness."[151] They often successfully pursued their rights "in an era that held little other hope of fair treatment for African-Americans."[152] Likewise, today many disabled Americans have successfully asserted their civil rights in the context of political, social, economic, and attitudinal adversity. From the United States Supreme Court cases pitting golfer Casey Martin against the Professional Golf Association to grass-roots advocacy efforts to make county courthouses accessible, disabled Americans and their advocates are fighting discrimination against people with disabilities.

Lastly, our studies examining the evolution of and attitudes toward contemporary disability policies like the Americans with Disabilities Act are enhanced by an appreciation of the experiences of disabled Americans and their advocates historically.[153] Research questions such as the following may be examined: In comparison to the aggressive advocacy efforts of disabled UA veterans and their attorneys, in what ways has ADA advocacy been persistent and

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149. Donald R. Shaffer, *"I Do Not Suppose that Uncle Sam Looks at the Skin": African Americans and the Civil War Pension System, 1865–1934*, 46 CIV. WAR HIST. 132, 133–36 (2000) (describing empirical findings).

150. Blanck & Millender, *supra* note 9, at 49.

151. Shaffer, *supra* note 149, at 145.

152. *Id.* at 147.

153. *See, e.g.*, PETER DAVID BLANCK, THE EMERGING WORKFORCE ON PERSONS WITH DISABILITIES (1999) (discussing contemporary studies); EMPLOYMENT, DISABILITY, AND THE AMERICANS WITH DISABILITIES ACT (Peter David Blanck ed., 2000) (same).

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FIGURES 11–13

THE NOTES ACCOMPANYING FIGURE 11 HAVE BEEN INSERTED DIRECTLY INTO THE ARTICLE

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FIGURE 11
LOGISTIC PROCEDURE EXPLAINING ATTORNEY USAGE, BY DISABILITY
DEPENDENT VARIABLE = 1 IF APPLIED WITH ATTORNEY, o IF NOT

| VARIABLES IN THE LOGISTIC REGRESSION[1],[2] | INJURY & GSW $\partial E(Y)/\partial x_k$ [3] | MUSCULO-SKELETAL $\partial E(Y)/\partial x_k$ | DIARRHEA $\partial E(Y)/\partial x_k$ | EAR $\partial E(Y)/\partial x_k$ | RESPIRATORY SYSTEM $\partial E(Y)/\partial x_k$ | INFECTIOUS & PARASITIC $\partial E(Y)/\partial x_k$ |
|---|---|---|---|---|---|---|
| | (Column 1) | (Column 2) | (Column 3) | (Column 4) | (Column 5) | (Column 6) |
| Intercept | 0.2293 | 0.2008 | 0.2557 | 0.2937 | 0.2023 | 0.2634 |
| Agricultural | 0.0277 | -0.0222 | -0.0311 | 0.0306 | 0.0227 | 0.0097 |
| Manual Labor | 0.0619 | -0.0228 | -0.0539 | 0.0499 | 0.1284 | 0.0469 |
| Republican | -0.0652 | -0.0135 | -0.0090 | -0.0315 | -0.0429 | -0.0950 |
| Neutral | -0.0161 | 0.0014 | -0.0900 | (5) | 0.0338 | -0.1080 |
| Year 1879-1889 | 0.0523 | 0.0406 | 0.0229 | 0.0033 | 0.0307 | 0.0368 |
| Year 1890-1907 | 0.0886 | 0.0821 | 0.0311 | 0.0072 | 0.0693 | 0.0863 |
| Additional Increase | 0.0509 | -0.0023 | 0.0183 | -0.0613 | -0.0229 | -0.0734 |
| Disability | -0.0366 | -0.0749 | -0.0654 | -0.1028 | -0.0714 | -0.0612 |
| Reissue | -0.0709 | -0.0820 | -0.0095 | -0.1491 | -0.0259 | -0.0540 |
| Change of Law | -0.3171 | -0.0841 | -0.1451 | -0.1298 | -0.0002 | (6) |
| Re-rate | -0.0794 | -0.1742 | 0.1368 | (5) | -0.1337 | -0.2425 |
| Type Missing | -0.1023 | -0.0262 | -0.1664 | (5) | -0.1129 | (6) |
| Number of Applications | 7811 | 5721 | 3366 | 1694 | 1656 | 1239 |
| Dependent Variable Mean | 0.8117 | 0.8726 | 0.8681 | 0.8495 | 0.8786 | 0.8418 |
| -2 Log L (p-Value)[4] | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 |

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FIGURE 11 (CONTINUED)
LOGISTIC PROCEDURE EXPLAINING ATTORNEY USAGE, BY DISABILITY
DEPENDENT VARIABLE = 1 IF APPLIED WITH ATTORNEY, 0 IF NOT

| VARIABLES IN THE LOGISTIC REGRESSION | HERNIA $\partial E(Y)/\partial x_k$ | EYE $\partial E(Y)/\partial x_k$ | NERVOUS SYSTEM $\partial E(Y)/\partial x_k$ | GENITO-URINARY $\partial E(Y)/\partial x_k$ | GENERAL APPEARANCE $\partial E(Y)/\partial x_k$ | HEMOR-RHOIDS $\partial E(Y)/\partial x_k$ |
|---|---|---|---|---|---|---|
| | (Column 7) | (Column 8) | (Column 9) | (Column 10) | (Column 11) | (Column 12) |
| Intercept | 0.1647** | 0.1706*** | 0.2273*** | 0.1344*** | 0.2216** | 0.2756*** |
| Agricultural | 0.0548** | 0.0281 | -0.0196 | 0.0346 | 0.0265 | 0.0626** |
| Manual Labor | 0.0860** | 0.0235 | 0.0722* | 0.0822* | 0.0595 | 0.0466 |
| Republican | 0.0001 | 0.0047 | -0.0673* | -0.0146 | -0.0418 | -0.1309*** |
| Neutral | -0.1223** | (8) | -0.2046** | (10) | (11) | (12) |
| Year 1879-1889 | 0.0328 | 0.1166*** | 0.1072** | 0.0266 | 0.0754 | 0.0261 |
| Year 1890-1907 | 0.0674* | 0.0844** | 0.0796** | 0.0892** | 0.0219 | -0.0060 |
| Additional Increase | 0.1208 | -0.1110** | 0.0420 | -0.0042 | 0.0088 | (12) |
| Disability | -0.0384 | -0.0960*** | -0.0415 | -0.0106 | -0.0347 | -0.0502* |
| Reissue | -0.1602*** | -0.1562*** | -0.1199* | -0.0011 | -0.0805 | -0.1073** |
| Change of Law | -0.0895 | -0.1923*** | -0.1239 | (10) | -0.0922 | (12) |
| Re-rate | (7) | (8) | (9) | (10) | (11) | (12) |
| Type Missing | (7) | (8) | (9) | (10) | (11) | (12) |
| Number of Applications | 1116 | 1064 | 673 | 594 | 491 | 464 |
| Dependent Variable Mean | 0.8418 | 0.8543 | 0.8455 | 0.8653 | 0.8310 | 0.8664 |
| -2 Log L (p-Value) | 0.0001 | 0.0001 | 0.0118 | 0.1967 | 0.7574 | 0.0029 |

FIGURE 11 (CONTINUED)
LOGISTIC PROCEDURE EXPLAINING ATTORNEY USAGE, BY DISABILITY
DEPENDENT VARIABLE = 1 IF APPLIED WITH ATTORNEY, 0 IF NOT

| VARIABLES IN THE LOGISTIC REGRESSION | GASTRO-INTESTINAL $\partial E(Y)/\partial x_k$ (Column 13) | VARICOSE VEINS $\partial E(Y)/\partial x_k$ (Column 14) | ACCIDENT, BLOOD SYSTEM, CARDIOVASCULAR, ENDOCRINE, LIVER, NEOPLASM, SKIN TISSUE, AND SPLEEN $\partial E(Y)/\partial x_k$ (Column 15)[15] |
|---|---|---|---|
| Intercept | 0.0361 | 0.3551*** | 0.3036*** |
| Agricultural | 0.0690* | 0.0042 | 0.0316 |
| Manual Labor | 0.0403 | (14) | 0.0439 |
| Republican | -0.0076 | -0.0914 | -0.0716* |
| Neutral | (13) | (14) | -0.0448 |
| Year 1879-1889 | 0.2192** | 0.0204 | -0.0681 |
| Year 1890-1907 | 0.2122** | 0.1072* | -0.0131 |
| Additional Increase | (13) | (14) | 0.0294 |
| Disability | -0.1224*** | -0.1861*** | -0.0849 |
| Reissue | (13) | -0.3661*** | -0.0899 |
| Change of Law | (13) | (14) | (16) |
| Re-rate | (13) | (14) | (16) |
| Type Missing | (13) | (14) | (16) |
| Number of Applications | 408 | 350 | 544 |
| Dependent Variable Mean | 0.8407 | 0.7914 | 0.8695 |
| -2 Log L (p-Value) | 0.0083 | 0.0001 | 0.0172 |

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FIGURE 12

LOGISTIC PROCEDURE EXPLAINING SUCCESS, BY DISABILITY
DEPENDENT VARIABLE = 1 IF AN INCREASE WAS GRANTED, 0 IF NOT

| VARIABLES IN THE LOGISTIC REGRESSION[1],[2] | INJURY & GSW $\partial E(Y)/\partial x_k$ [3] | MUSCULO-SKELETAL $\partial E(Y)/\partial x_k$ | DIARRHEA $\partial E(Y)/\partial x_k$ | EAR $\partial E(Y)/\partial x_k$ | RESPIRATORY SYSTEM $\partial E(Y)/\partial x_k$ | INFECTIOUS & PARASITIC $\partial E(Y)/\partial x_k$ |
|---|---|---|---|---|---|---|
| | (Column 1) | (Column 2) | (Column 3) | (Column 4) | (Column 5) | (Column 6) |
| Intercept | -0.1416 | -0.2042 | -0.2959 | -0.1257 | -0.2579 | -0.3214 |
| Agricultural | -0.0059 | -0.0120 | 0.0052 | 0.0018 | 0.0083 | -0.0018 |
| Manual Labor | -0.0080 | -0.0202 | -0.0127 | -0.0212 | -0.0102 | 0.0492 |
| Republican | 0.0575 | 0.1171 | 0.0435 | 0.2153 | 0.0613 | 0.1456 |
| Neutral | 0.0946 | 0.1444 | 0.1525 | 0.1455 | 0.0676 | -0.0110 |
| Year 1879-1889 | 0.0768 | 0.0658 | 0.1806 | 0.1207 | 0.1264 | 0.0605 |
| Year 1890-1907 | 0.0127 | 0.0115 | 0.1587 | 0.0056 | 0.0947 | 0.0067 |
| Attorney | -0.0771 | -0.0829 | -0.0443 | -0.1609 | -0.0455 | -0.0282 |
| Number of Applications | 7811 | 5721 | 3366 | 1694 | 1656 | 1239 |
| Dependent Variable Mean(4) | 0.3669 | 0.3101 | 0.3559 | 0.4445 | 0.3394 | 0.2785 |
| -2 Log L (p-Value)(5) | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0252 | 0.0004 |

## FIGURE 12 (CONTINUED)
### LOGISTIC PROCEDURE EXPLAINING SUCCESS, BY DISABILITY
### DEPENDENT VARIABLE = 1 IF AN INCREASE WAS GRANTED, 0 IF NOT

| VARIABLES IN THE LOGISTIC REGRESSION | HERNIA $\partial E(Y)/\partial x_k$ | EYE $\partial E(Y)/\partial x_k$ | NERVOUS SYSTEM $\partial E(Y)/\partial x_k$ | GENITO-URINARY $\partial E(Y)/\partial x_k$ | GENERAL APPEARANCE $\partial E(Y)/\partial x_k$ | HEMOR-RHOIDS $\partial E(Y)/\partial x_k$ |
|---|---|---|---|---|---|---|
| | (Column 7) | (Column 8) | (Column 9) | (Column 10) | (Column 11) | (Column 12) |
| Intercept | -0.1749** | -0.1173* | -0.0399 | -0.2930*** | -0.4403*** | -0.3334** |
| Agricultural | 0.0045 | -0.0080 | -0.0101 | 0.0274 | -0.0231 | -0.0643 |
| Manual Labor | -0.0410 | -0.0945* | 0.0041 | 0.0515 | 0.0091 | -0.0314 |
| Republican | 0.0560 | 0.1019*** | 0.0756* | 0.0543 | 0.1217** | 0.1144* |
| Neutral | 0.1316* | 0.2283** | -0.1335 | (e) | 0.0407 | -0.0260 |
| Year 1879-1889 | 0.0907* | 0.0239 | -0.0741 | 0.1288* | 0.3184** | 0.2011 |
| Year 1890-1907 | 0.0506 | -0.0830* | -0.1163* | 0.0590 | 0.2965** | 0.1141 |
| Attorney | -0.0682* | -0.0742* | -0.0395 | -0.0548 | -0.1094* | -0.0122 |
| Number of Applications | 1116 | 1064 | 673 | 594 | 491 | 464 |
| Dependent Variable Mean | 0.3620 | 0.3336 | 0.3804 | 0.2475 | 0.3259 | 0.3233 |
| -2 Log L (p-Value) | 0.0599 | 0.0001 | 0.2234 | 0.2007 | 0.0333 | 0.1038 |

### FIGURE 12 (CONTINUED)
### LOGISTIC PROCEDURE EXPLAINING SUCCESS, BY DISABILITY
### DEPENDENT VARIABLE = 1 IF AN INCREASE WAS GRANTED, 0 IF NOT

| VARIABLES IN THE LOGISTIC REGRESSION | GASTRO-INTESTINAL $\partial E(Y)/\partial x_k$ (Column 13) | VARICOSE VEINS $\partial E(Y)/\partial x_k$ (Column 14) | ACCIDENT, BLOOD SYSTEM, CARDIOVASCULAR, ENDO-CRINE, LIVER, NEOPLASM, SKIN TISSUE, AND SPLEEN $\partial E(Y)/\partial x_k$ (Column 15) |
|---|---|---|---|
| Intercept | -0.4640** | -0.1488 | -0.1875* |
| Agricultural | -0.0029 | -0.0027 | 0.0619 |
| **Manual Labor** | 0.0634 | -0.1708 | 0.0849 |
| Republican | 0.1562** | 0.1566* | 0.0407 |
| Neutral | 0.1231 | 0.2187 | 0.1884 |
| Year 1879-1889 | 0.4069* | 0.0513 | 0.0233 |
| Year 1890-1907 | 0.2567 | 0.0441 | -0.0207 |
| Attorney | -0.1592*** | -0.2100*** | -0.0797 |
| Number of Applications | 408 | 350 | 544 |
| Dependent Variable Mean | 0.2990 | 0.3486 | 0.2996 |
| -2 Log L (p-Value) | 0.0017 | 0.0075 | 0.3458 |

Notes:

1) The omitted categories are professional occupation, democratic party majority, and year 1862 to 1878.
2) The symbol "***" indicates a statistical significance of 1%, the symbol "**" indicates a statistical significance of 5%, and the symbol "*" indicates a statistical significance of 10%.
3) See Methodological Appendix for an explanation of the symbol "$\partial E(Y)/\partial x_k$."
4) Almost all the known ruling decisions were either increases (49.3) or rejections (49.4%). There were very few decreases (1.3%).
5) See Methodological Appendix for an explanation of the symbol "-2log L (p-Value)."
6) There were only four applications under neutral political affiliation. Including this dummy variable in the logistic procedure would cause a convergence problem in the maximum likelihood estimation.

## Figure 13
## OLS Regression with Robust Standard Errors Explaining Pension Award for Successful Applications, by Disability
### Dependent Variable = Pension Dollars Granted per Month
#### Corrected for Time Series Correlations between Adjacent Applications for the Same Recruit

| Variables in the OLS Regression[1],[2] | Injury & GSW | Musculo-Skeletal | Diarrhea | Ear | Respiratory System | Infectious & Parasitic |
|---|---|---|---|---|---|---|
| | (Column 1) | (Column 2) | (Column 3) | (Column 4) | (Column 5) | (Column 6) |
| Intercept | 9.3334*** | 7.5150*** | 6.0087*** | 6.9977*** | 7.1572*** | 5.7186*** |
| Agricultural | 0.2584 | -0.6313** | -0.0828 | 0.5935 | -0.8048 | -0.0875 |
| Manual Labor | 0.9111 | -0.9950*** | -0.0533 | 1.0600 | -0.1191 | 0.9701 |
| Republican | 1.3476*** | 0.8648*** | 0.5708 | 1.5468*** | 1.4693*** | 2.4236*** |
| Neutral | 2.6585*** | -0.0897 | -0.0050 | -1.1174 | -0.1749 | 0.3385 |
| Year 1879-1889 | 2.4947*** | 1.3603* | 2.1814*** | 2.8031*** | 1.1064* | 2.9267*** |
| Year 1890-1907 | 5.7355*** | 3.7081*** | 6.5501*** | 2.9407*** | 3.7664*** | 5.6898*** |
| Attorney | -4.5862*** | -1.4691*** | -1.4926*** | -1.3682*** | -0.0916 | -2.2846 |
| Number of Applications | 4788 | 3455 | 2162 | 1175 | 1081 | 717 |
| Dependent Variable Mean | $9.53 | $9.33 | $8.78 | $10.30 | $9.72 | $9.29 |
| Adjusted R Square | 0.1239 | 0.0678 | 0.1287 | 0.0368 | 0.0637 | 0.0634 |

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FIGURE 13 (CONTINUED)

OLS REGRESSION WITH ROBUST STANDARD ERRORS EXPLAINING PENSION AWARD FOR SUCCESSFUL APPLICATIONS, BY DISABILITY

DEPENDENT VARIABLE = PENSION DOLLARS GRANTED PER MONTH

CORRECTED FOR TIME SERIES CORRELATIONS BETWEEN ADJACENT APPLICATIONS FOR THE SAME RECRUIT

| VARIABLES IN THE LOGISTIC REGRESSION | HERNIA | EYE | NERVOUS SYSTEM | GENITO-URINARY | GENERAL APPEARANCE | HEMOR-RHOIDS |
|---|---|---|---|---|---|---|
| | (Column 7) | (Column 8) | (Column 9) | (Column 10) | (Column 11) | (Column 12) |
| Intercept | 5.6543 | 14.8870 | 15.9954 | 4.0910 | 6.5418 | 6.3205 |
| Agricultural | 0.2790 | 0.8611 | -1.0731 | 0.3430 | 0.1120 | 0.2401 |
| Manual Labor | 0.1927 | -0.4063 | -2.0367 | -0.6462 | -0.5526 | -0.5164 |
| Republican | 0.8021 | 2.0003 | -0.1220 | 0.4254 | -0.1346 | 1.3210 |
| Neutral | -0.3833 | 0.6516 | 1.2887 | -3.1951 | -2.2245 | 0.7907 |
| Year 1879-1889 | 2.1388 | -2.2201 | -3.8169 | 2.7611 | 3.0749 | 1.1631 |
| Year 1890-1907 | 4.2748 | -1.4560 | -2.5944 | 5.3630 | 5.2068 | 3.9331 |
| Attorney | -0.4843 | -4.7994 | -1.2056 | 0.2568 | -1.9561 | -1.3198 |
| Number of Applications | 734 | 646 | 429 | 319 | 302 | 311 |
| Dependent Variable Mean | $9.07 | $11.19 | $11.49 | $8.67 | $9.19 | $8.89 |
| Adjusted R Square | 0.1662 | 0.0276 | 0.0106 | 0.1276 | 0.0568 | 0.1070 |

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FIGURE 13 (CONTINUED)

OLS REGRESSION WITH ROBUST STANDARD ERRORS EXPLAINING
PENSION AWARD FOR SUCCESSFUL APPLICATIONS, BY DISABILITY
DEPENDENT VARIABLE = PENSION DOLLARS GRANTED PER MONTH
CORRECTED FOR TIME SERIES CORRELATIONS BETWEEN ADJACENT APPLICATIONS FOR THE SAME RECRUIT

| VARIABLES IN THE OLS REGRESSION | GASTRO-INTESTINAL | VARICOSE VEINS | ACCIDENT, BLOOD SYSTEM, CARDIOVASCULAR, ENDOCRINE, LIVER, NEOPLASM, SKIN TISSUE, AND SPLEEN |
|---|---|---|---|
| | (Column 13) | (Column 14) | (Column 15) |
| Intercept | 7.4447*** | 7.0755*** | 7.9577*** |
| Agricultural | -0.6976 | 1.8093* | -0.1243 |
| Manual Labor | -0.4140 | -1.4118 | -1.4076 |
| Republican | 1.7338** | 0.8873 | 0.0138 |
| Neutral | -1.0502 | -2.5225*** | -2.0073* |
| Year 1879-1889 | 0.9084 | 2.6459*** | 1.9201* |
| Year 1890-1907 | 3.0994* | 4.2809*** | 4.9173*** |
| Attorney | -1.7008 | -2.5559 | -1.5396 |
| Number of Applications | 228 | 212 | 302 |
| Dependent Variable Mean | $9.35 | $9.73 | $10.04 |
| Adjusted R Square | 0.0236 | 0.0957 | 0.0312 |

Notes:

1) The omitted categories are professional occupation, democratic party majority, and year 1862 to 1878.

2) The symbol "***" indicates a statistical significance of 1%, the symbol "**" indicates a statistical significance of 5%, and the symbol "*" indicates a statistical significance of 10%.