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Revisiting Adjusted ADA Scores for the U.S. Congress, 1947–2007

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This paper replicates and extends Groseclose, Levitt, and Snyder, ''Comparing Interest Group Scores Across Time and Chambers: Adjusted ADA Scores for the U.S. Congress,'' which appeared in the *American Political Science Review* (1999/93:33–50). We replicate the most recent unpublished extension by Dr. Groseclose and research assistants for years 1947–1999, and then we extend the analysis to include years 2000 through 2007. We make available inflation-adjusted ADA scores from 1947 through 2007, allowing scholars to incorporate the most recent interest group scores into their analyses.

1 Introduction

Groseclose, Levitt, and Snyder (1999) (henceforth GLS) introduced a means of comparing interest group scores for members of Congress. Roll call votes selected by interest groups to rate members of Congress are not necessarily comparable over time or across chamber, an obvious confound for scholars addressing questions such as whether the House was more liberal than the Senate or whether a given member of Congress preferred more conservative policy in a certain year. By estimating so-called ''shift and stretch'' parameters, GLS provided a method for rendering ratings from organizations such as the Americans for Democratic Action (ADA) comparable, a method similar in logic to adjusting dollar values for inflation.[1] Although adjusted scores have been widely used in the literature on Congress, (e.g., see Burden, Caldeira, and Groseclose 2000; Krause 2000; Ansolabehere,

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[1]It is for this reason that GLS-adjusted ADA scores are often referred to as ''inflation-adjusted.''

Synder, and Stewart 2001; Covington and Bargen 2004; Bernhard and Sala 2006; Butler and Butler 2006; Bailey 2007), shift and stretch parameter estimates beyond 1999 have not been made available to scholars.[2]

We replicate and extend the original GLS work to make adjusted interest group available scores through 2007, an additional 11 years of data beyond scores published in GLS, and 8 years of data from the most recent unpublished replication by Dr. Groseclose. We begin by noting some caveats concerning the availability of nominal ADA scores, and we then present the procedure used to replicate and extend GLS, followed by our results.[3]

Two comments related to the nominal ADA scores merit mention, the first concerning omissions in the GLS article and the second regarding how the ADA treats absent votes. Concerning the first, GLS was unable to locate nominal ADA scores for 1962,[4] and thus the study omitted 1962 entirely. Data posted on Dr. Groseclose's Web site corrected for the 1962 omission, reporting both nominal and adjusted values for that year. We therefore focus our analysis on replicating and extending the unpublished work by Dr. Groseclose, which included scores through 1999, rather than revisiting the parameter estimates reported in GLS through 1996. However, neither GLS nor the replication by Dr. Groseclose located unique scores for years 1963 and 1964; rather, both analyses used term scores, that is, an average of 1963 and 1964 values. We provide both nominal and adjusted scores for 1963 and 1964 here.[5]

Our second comment on the nominal scores concerns how ADA has treated absent votes historically. Particularly in the period prior to 1972, the ADA did not count absent votes as votes against the interest of the organization, whereas in more recent years, absent votes have been treated as antagonistic to the ADA (Shaffer 1982; Shaffer 1989). To illustrate the extent to which the change in metric matters, consider a given member of Congress present for 10 of 20 votes. In a year when the ADA adjusted for absenteeism, the highest possible score for this member is 100; however, in a year where ADA did not adjust, the highest possible score is 50. That is, in a year ADA adjusted for absenteeism, the denominator is the total number of votes for which the member was present, in this case 10. In years where ADA does not adjust for absenteeism, the denominator is the total number of votes the ADA used to rate legislators, in this case 20. Our added scores for years 2000 through 2007 were not adjusted by the ADA for absenteeism.[6]

[2]Few of these works extend their period of analysis into the 2000s, presumably due to the lack of available adjusted ADA scores.

[3]We focus our replication and extension on scores compiled by the Americans for Democratic Action. Although GLS does provide adjustments for American Conservative Union scores, these ratings are not the focus of their analysis. Our method, however, would permit subsequent researchers to replicate and extend these series as well.

[4]See the footnote to Table 1, p. 36, in GLS.

[5]Nominal scores for members of the ADA through 1999 were downloaded from Dr. Groseclose's website in 2004. Using these scores assured us that we were working with the same data as Dr. Groseclose and colleagues, aside from the 1963 and 1964 scores that we collected. The nominal scores from 2000 through 2007 also came by our own efforts.

[6]To offer an estimate of how much the adjustment for absenteeism matters, we compared 2000 through 2006 reported scores to scores we adjusted for absenteeism. Of the total 3687 ADA scores for all members of Congress across these seven years, 634 (17.2%) changed when absent votes were not counted against legislators. The mean increase for these 634 scores was 6.0, with a standard deviation of 7.6. On average then, adjusting for absenteeism during this period made some difference. At times this difference was substantial; Senator John Kerry's ADA score in 2004 increased from a reported 25 to 100 after adjusting for absenteeism, given that Kerry voted in favor of the ADA's interest on all five of the votes for which he was present that year.

2 Replication and Extension

We now turn to the specifics of the replication and extension. GLS estimate the following likelihood function:

$$L\left(\bar{a},\bar{b},\bar{x},\sigma;\bar{y}\right)=\prod_{t\in T}\prod_{c\in\{H,S\}}\prod_{i\in I_t^c}\phi\left(\frac{y_{it}-a_t^c-b_t^c x_i}{\sigma}\right)\frac{1}{\sigma},$$

where a and b are the annual ''shift'' and ''stretch'' parameters, x_i is the mean-preference parameter, T is the set of all years in the sample, I_t^c is the set of all members serving in chamber c (House H or Senate S) at year t, and $\phi()$ is the standard normal density. In order to replicate and extend, we make use of the Matlab files previously used by Dr. Groseclose and colleagues to calculate inflation-adjusted scores through 1999.[7]

Prior to presenting the results, we briefly describe the replication process. One of the Matlab files, *iiter*, contains a shortcut routine entitled ''OptStep'' (presumably shorthand for ''optimal step'' since it was designed to calculate the optimal step size at each iteration). Inspection of the OptStep routine suggested that turning OptStep on would lead—when three consecutive iterations produced the same value of the likelihood function—to a division by zero and a subsequent failure of the program to continue the estimation routine; thus, we began our replication by turning OptStep off. However, the parameter estimates produced without OptStep differed substantially from those presented in GLS (and those of the unpublished Groseclose replication). A comparison of the log likelihoods suggests that estimates using the OptStep routine were better.[8] These trials led us to believe that the estimation is slow to converge and that the OptStep routine provides a key shortcut, especially considering the computing power and time necessary to run a sufficient number of iterations without the routine. In order to mitigate the problem of the estimation routine terminating, we altered the Matlab program files so as to save values for the a and b parameter estimates following the division by zero. We first replicated the a and b estimates through 1999 to ensure we were reaching similar values,[9] and we then extended the series through 2007.

The results of our exercise, the estimation of the a and b parameters through 2007, are presented in Table 1, analogous to the original Table 1 published by GLS (p. 37). We provide this table to allow scholars to calculate any member's adjusted ADA score by making use of the following formula, recorded on page 35 of GLS:

$$\hat{y}_{it}=\frac{y_{it}-a_t^c}{b_t^c}.$$

[7]We received these files through correspondence with Professor Groseclose, to whom we are grateful. These files credit David Primo and Alan Wiseman for research assistance. They were at one time available through Dr. Groseclose's Stanford University Web site, http://wesley.stanford.edu/groseclose.

[8]Although the estimates exhibited similar trends, the mean difference in a parameters between the Groseclose estimates and our estimates with OptStep off was 4.9 for the years 1947–1980, although considerably less, 1.1, for years 1980 through 1999. Interestingly, when we changed the seed values for the a and b parameters from the default values of 0 and 1, respectively, to the a and b parameters printed in GLS (it is necessary to begin the iterations with some starting values for the a and b parameters and GLS choose 0 and 1 for these values), the estimates for the years 1947 through 1999 with OptStep off are nearly identical to the Groseclose replication, and the values from 2000 through 2007 resemble our replication with OptStep on.

[9]Our values were highly comparable, differing occasionally at the hundredths or thousandths place.

Table 1 Index for converting ADA scores, 1947–2007

House			*Senate*		*House*			*Senate*	
Year	a_t^H	b_t^H	a_t^S	b_t^S	*Year*	a_t^H	b_t^H	a_t^S	b_t^S
1947	13.218	1.121	24.463	1.129	1978	0.810	0.769	5.445	0.799
1948	14.359	0.981	26.024	1.056	1979	0.677	0.941	7.046	0.782
1949	2.881	1.242	9.822	1.316	1980	0.000	1.000	12.154	0.898
1950	1.217	1.170	17.270	1.045	1981	−2.119	0.962	−1.394	1.087
1951	1.990	1.155	11.580	1.190	1982	0.589	0.989	5.066	1.071
1952	0.277	1.198	15.548	1.166	1983	1.573	1.037	5.787	1.004
1953	12.790	1.038	15.426	0.986	1984	1.074	0.995	4.653	1.123
1954	12.001	1.044	18.589	1.031	1985	2.151	0.958	−3.313	1.126
1955	16.447	0.972	2.585	1.089	1986	0.158	1.018	0.418	1.118
1956	26.162	0.961	19.197	1.123	1987	3.243	1.040	7.863	1.058
1957	21.639	0.891	25.705	0.827	1988	7.592	0.988	0.641	1.121
1958	6.959	1.137	13.407	1.115	1989	0.297	1.057	−1.680	1.074
1959	5.488	1.198	0.258	1.239	1990	3.050	0.989	2.015	1.072
1960	5.318	1.284	4.284	1.272	1991	−0.804	0.990	0.566	1.116
1961	−4.979	1.394	4.197	1.332	1992	7.222	0.975	5.712	1.118
1962	4.051	1.243	−0.256	1.188	1993	0.942	1.026	7.163	1.023
1963	−0.287	1.273	8.377	1.137	1994	−0.839	0.996	4.184	1.114
1964	−0.252	1.236	7.091	1.066	1995	−4.933	1.085	−3.377	1.276
1965	−11.580	1.221	−0.745	1.212	1996	−1.782	1.009	−0.727	1.180
1966	−12.899	1.230	−3.936	1.211	1997	0.978	1.013	2.212	1.095
1967	−5.130	1.079	−0.570	1.022	1998	−1.296	1.105	−2.389	1.236
1968	−7.251	1.139	0.010	0.928	1999	4.926	1.050	−5.377	1.349
1969	−2.871	0.989	2.037	1.132	2000	−1.991	1.000	−2.303	1.164
1970	−2.813	1.009	−0.646	1.100	2001	−2.398	1.097	2.836	1.209
1971	−3.464	1.009	0.804	1.124	2002	−5.382	1.121	1.480	1.141
1972	−9.002	1.029	−1.730	0.992	2003	1.901	1.061	2.400	1.095
1973	−2.810	1.023	1.819	1.046	2004	−0.109	1.091	8.801	1.126
1974	0.207	0.901	2.462	1.049	2005	−2.281	1.140	2.384	1.253
1975	−4.890	1.077	1.010	1.059	2006	−0.145	1.040	−2.302	1.238
1976	−5.965	0.965	−0.432	0.958	2007	8.705	1.017	11.480	1.001
1977	−4.244	0.922	−0.064	0.996					

Figure 1 shows that our *a* and *b* estimates are highly similar to those of the Groseclose replication. The values are not identical, which is to be expected given the additional 8 years of data we incorporate.

3 Discussion

We conclude by presenting updated versions of GLS' Figs 3 and 4 (published on page 40) that display means and medians of adjusted ADA scores by chamber over time, labeled here as Figs 2 and 3.

Figure 2 makes clear that in the 10 years since GLS, the mean Representative has been more liberal than the mean Senator. The movement toward conservatism (lower ADA scores) that followed the 1994 election has, generally speaking, persisted to the present. The level of conservatism in the House and Senate over the past 10 years is comparable to that of the very early 1980s and the early 1970s, although not nearly as conservative as the

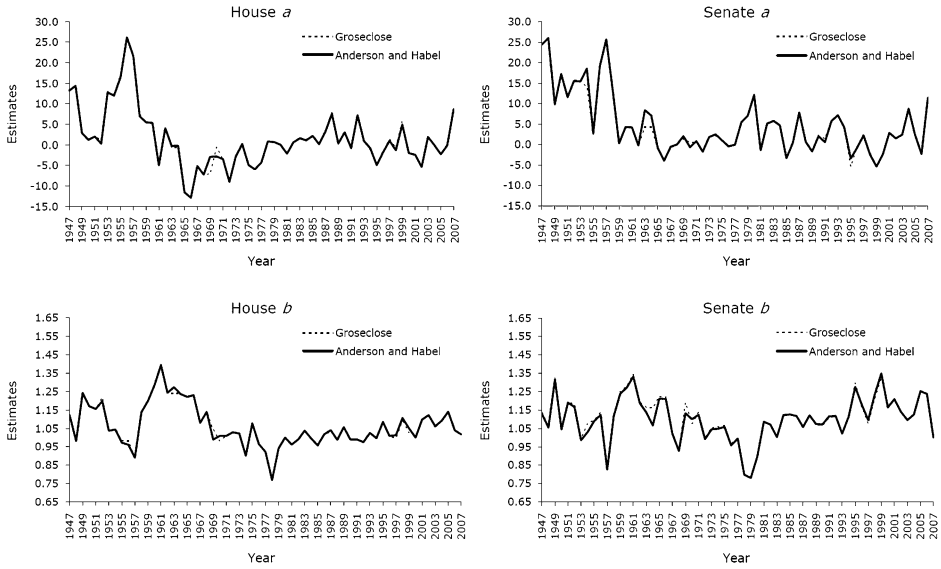

Fig. 1 A comparison of Groseclose 2000 and Anderson Habel 2007 parameter estimates.

1950s. When looking at the chamber medians, Figure 3 also shows that the period from 1995 through 2006 was marked by greater conservatism. The year 2007, however, represents a marked shift. Concerning the 2006 midterm elections, President Bush remarked, "You look at it race by race, it was close. The cumulative effect, however, was not too close. It was a thumping."[10] We measure, in units on the ADA scale, precisely what

Fig. 2 Mean inflation adjusted ADA scores by chamber, 1947–2007.

[10]As quoted in Espo, David. "Voters Usher Out Republicans in 2006." *Washington Post*. 15 December 2006.

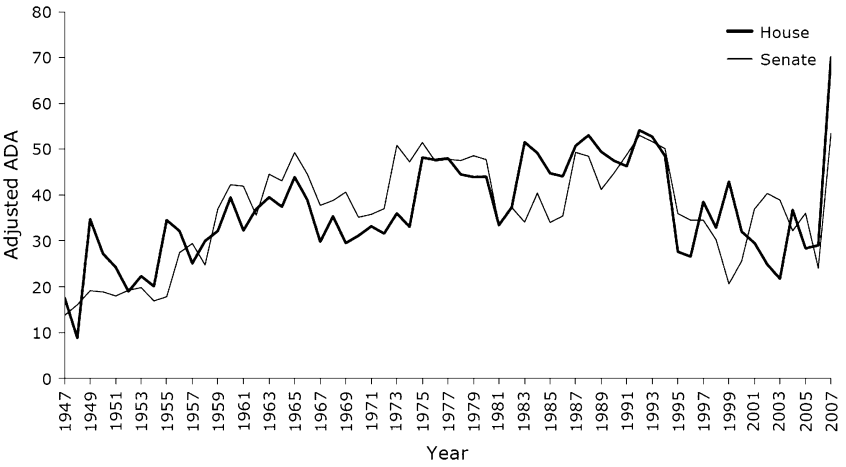

Fig. 3 Median inflation adjusted ADA scores by chamber, 1947–2007.

a ''thumping'' is. As seen in Fig. 3, the Senate adjusted median shifted almost 30 points in 2007 from its 2006 value, whereas the House median moved a dramatic 41 points.

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