

Politicians as Prize Fighters:  
Electoral Selection and Incumbency Advantage

by  
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## Politicians as Prize Fighters: Electoral Selection and Incumbency Advantage

### Abstract

This paper attacks the notion that incumbency advantage in House elections depends on bonds of loyalty or trust between Members of Congress (MCs) and the masses of ordinary constituents. Most MCs never become much better known or liked than they were at the time of their first reelections. The reason that MCs win reelection at high rates is due to what Erikson and Wright (1993) call electoral selection: Owing to their manner of selection, incumbents are simply better politicians than most of their opponents and are therefore usually able to best them in electoral combat. The first part of the paper is based on survey data of constituent attitudes toward MCs; the second part examines electoral selection through an analysis of the career patterns of MCs and world heavy-weight boxing champions, who are also a highly selected group.

*With a volley of thunderous rights and lefts to the head and jaw, a succession of blows that come suddenly, with flashing speed, unerring aim and paralyzing power, Joe Louis last night knocked out Billy Conn, his Pittsburgh challenger, in the eighth round of their scheduled fifteen-round world heavyweight title battle.*

*New York Times Sports Page  
June 19, 1946*

*“The Rock [Rocky Marciano] is an implacable stalker with a terrifying singlemindedness of purpose. His stamina and strength seem inexhaustible. By the end of the eighth round, it looked as though he must have punched himself out in battering the bloody hulk [of the loser]] with the unquenchable spirit. Yet he leaped to the assault with undiminished ferocity to finish the job in the ninth.*

*New York Times Sports Page  
May 16, 1955*

When a boxing champion successfully defends his title, observers typically explain the victory in terms of the champ’s skill, strength, and endurance. But when an incumbent member of Congress successfully defends his seat, political scientists rarely focus on the winner’s skill. More often, they explain the results in terms of the “incumbency advantage” of the winner.

But couldn’t skill and talent be as important in electoral competition as in boxing? Couldn’t the biggest part of what is commonly called “incumbency advantage” be that incumbents are simply better politicians than most of their opponents and beat them primarily for that reason?

This paper shows that skill may be a sufficient explanation for the observed patterns of “incumbency advantage” in congressional elections. The principal analytical tool is a Monte Carlo tournament with the following properties: The skill levels of the two competitors are determined by the luck of the draw; the competitor with the greater skill prevails; and winners can compete (up to a term limit) for as long as they can continue to beat challengers, each of whom gets a fresh draw from the skill lottery. An election-specific luck term is included in the simulation.

The resulting patterns of victory and defeat tend, as the paper shows, to mimic the career win-loss of heavy weight boxing champions and MCs, including high rates of “re-election” and the appearance of a sophomore surge in both professions. Thus, there is no reason to invoke either the idea of incumbency advantage or the notion of voter loyalty to explain why MCs win reelection as often as they do. Like boxing champions, incumbent MCs win because they’re usually better than their opponents.

The paper has two parts. The first describes basic empirical regularities of congressional careers and a simple model to describe them. The second shows that a model of skill-based competition can explain some of these regularities.

### **I. Absence of Voter Loyalty**

Many members of Congress win their first elections by something less than a landslide, and then go immediately to work to consolidate their position. In a furious round of activity, they contact as many voters, activists, and group members as possible in an effort to increase their margin of electoral safety (Fenno, 1978). Their payoff is the so-called "sophomore surge," which is the amount by which incumbents' winning margin increases at the time of their first reelection (Alford and Brady, 1993). On average, the sophomore surge is about seven to nine percentage points in share of the two-party vote.

MCs do not, of course, cease working their districts after their first reelections. They continue intensive activities for several more elections in the so-called "expansionist" phase of their careers. Later, in the "protectionist" phase of their careers, many members become more interested in law-making in Washington, and so scale back their district-oriented activities.

To capture these three phases of a congressional careers – that is, the sophomore surge, the more general expansionist phase, and the protectionist phase – I have estimated the following model:

$$\text{Margin}_t = b_0 + b_1(\text{Incumbent}) + b_2(\text{Terms}_t) + b_3(\text{Terms Squared}_t) \quad (1)$$

where,

- $\text{margin}_t$  = Margin of victory, as defined immediately below.
- $\text{incumbent}_t$  = A variable that takes the value of 0 in the member's initial election and 1 in all elections thereafter.
- $\text{terms}_t$  = Number of prior terms served by MC of district  $t$ .
- $\text{terms squared}_t$  = Terms squared.

The expectation in specifying the model in this way is that the incumbency variable will capture the "sophomore surge" that occurs at the time of the first reelection; that the variable for number of terms will capture additional gains accruing to the incumbent in later terms of the expansionist phase; and that the variable for "terms squared" will capture whatever falloff may occur in the late years of the congressional career.

In estimating this model, I define margin of victory as

$$\text{Margin} = (\text{Percent of two-party vote}) - (50 \text{ percent})$$

Before applying this model, it is necessary to decide what to do with uncontested races. To set them aside, as is sometimes done, would be to set aside those cases in which

incumbents have been most successful in generating electoral security, thereby understating the amount of electoral security that develops. On the other hand, to regard victory in an uncontested race as evidence that the MC has captured 100 percent of the vote would probably exaggerate MCs' actual level of support.

To resolve this problem, I calculated the average 1978 share of the vote for incumbents who were uncontested in 1980 but did have opponents in 1978. This figure was 85 percent, and might plausibly be assigned as the average vote share in uncontested races. Yet 85 percent seems an underestimate of actual political support, for two reasons: First, some MCs were also uncontested in 1978, and second, lack of opposition, especially if it recurs, should be given some weight as an indicator of electoral security. In light of these data and considerations, I set the vote share of uncontested MCs at 90 percent rather than 85 percent.

The results of applying equation 1 to data on victory margins in 1980 and 1990 are shown in the first column of Table 1. These two elections are near the extremes of electoral volatility, with 1980 a turbulent year and 1990 an unusually quiet one, so lumping them together, as I do in this analysis, may give a rough idea of general patterns.<sup>1</sup> As can be seen, the only significant coefficient is for the 0-1 variable intended to capture the sophomore surge effect. (The same is true for either set of data analyzed separately.) The other two coefficients, which do not approach statistical significance, suggest a gentle non-monotonicity, such that victory margins rise slightly through the early terms of a member's career, the "expansionist phase", and decline very slightly thereafter. A graph of this non-monotonic effect is shown in Figure 1. The figure shows results through 17 terms because only one percent of MCs seeking reelection in those years had service longer than that, making it hard to tell what actual electoral trends might be above that point. The main finding is nonetheless clear: That MCs gain essentially all the electoral security they are likely to get at the time of their first reelection to office. Subsequent efforts to cultivate support in the district, which continue well after the first reelection bid, generate scarcely any additional support.

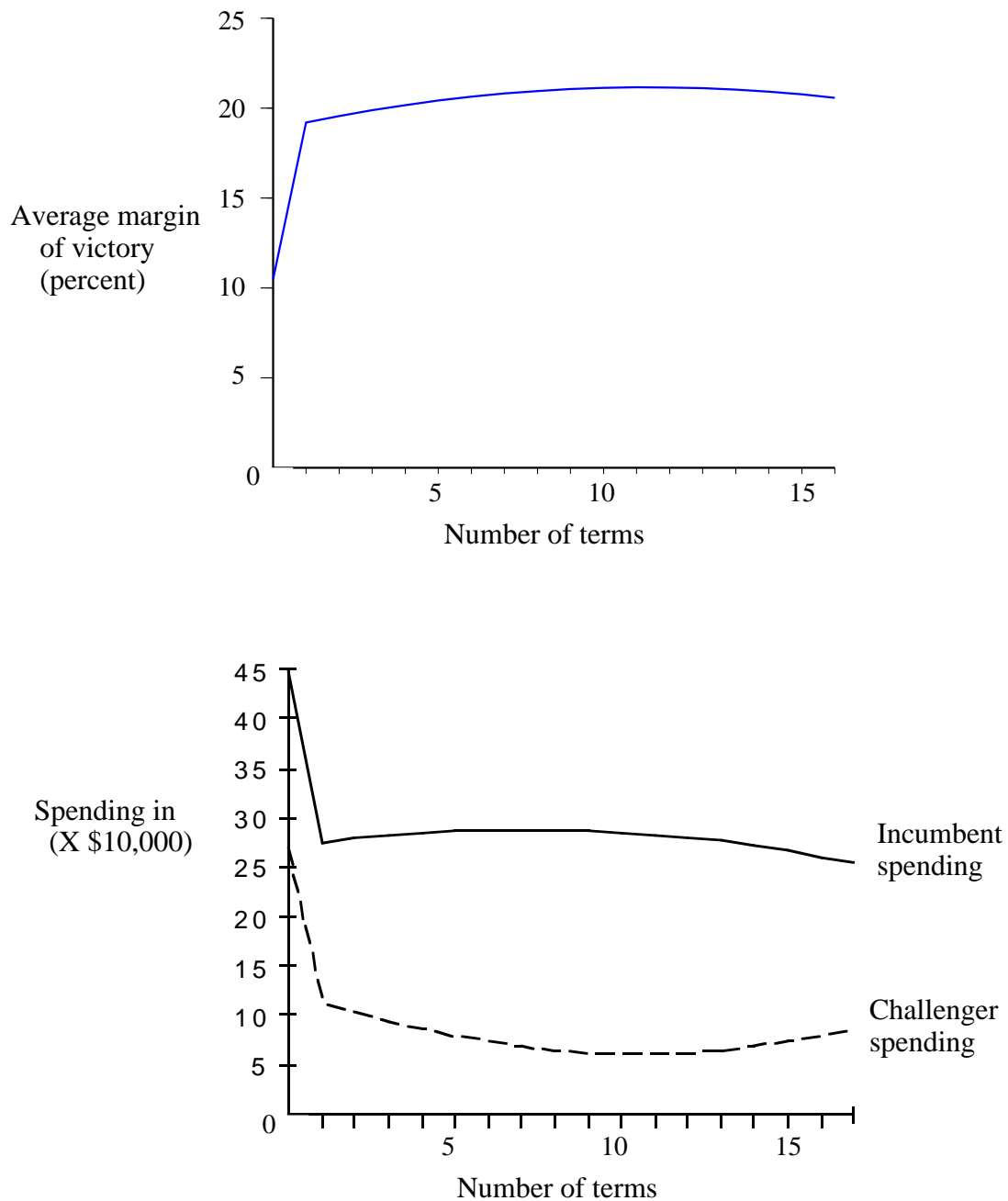
INSERT FIGURE 1 AND TABLE 1 ABOUT HERE

I acknowledge that this conclusion rests on a highly simplified analysis, in that it uses cross-sectional evidence as a basis for making inferences about a dynamic process. The analysis is, in this respect, below the standard in the field, which has developed extremely sophisticated measures of incumbency advantage. But notwithstanding its simplicity, my

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<sup>1</sup> Despite a mean difference in sophomore surge, graphical representations based on either election are quite similar. In fact, my entire argument would go through using either set of results alone. See also the next note.

Figure 1. The effect of Terms of Service on Average Margin of Victory and Spending Patterns in 1980 and 1990 House Elections.



*Note:* Victory margin in top figure is defined as share of vote minus 50 percent. In open-seat contests in lower figure, winners are defined as incumbents and losers as challengers.

Table 1. Coefficients for Effect of Time in Office on Selected Indicators of MC Support among Voters

|  | Victory<br>Margin | Recall<br>name     | Recognize<br>name  | Rate at<br>51+     | Rate at<br>61+     | Ther-<br>mometer<br>score | Net of<br>likes &<br>dislikes | Sum of<br>likes   | Sum of<br>dislikes |
|--|-------------------|--------------------|--------------------|--------------------|--------------------|---------------------------|-------------------------------|-------------------|--------------------|
| Intercept  | 10.48             | -0.08              | 1.85               | 0.36               | -0.34              | 63.7                      | 0.44                          | 0.89              | 0.45               |
| Incumbent – "sophomore surge"<br>(0 if open seat, 1 otherwise) | 8.32<br>(1.72)    | -0.26<br>(.15)     | 0.36<br>(.22)      | 0.59<br>(.15)      | 0.58<br>(.15)      | 8.57<br>(1.74)            | 0.58<br>(.13)                 | 0.33<br>(.11)     | -0.25<br>(.06)     |
| Prior terms of service   | 0.41<br>(.33)     | 0.030<br>(.030)    | 0.11<br>(.06)      | 0.041<br>(.033)    | 0.033<br>(.030)    | -0.25<br>(.34)            | -0.030<br>(.029)              | -0.010<br>(.025)  | 0.019<br>(.013)    |
| Prior terms squared  | -0.018<br>(.020)  | -0.0022<br>(.0019) | -0.0047<br>(.0039) | -0.0013<br>(.0021) | -0.0008<br>(.0019) | 0.031<br>(.021)           | .0028<br>(.0018)              | 0.0017<br>(.0015) | -.0011<br>(.0008)  |
| N  | 854               | 4213               | 4198               | 4194               | 4194               | 3863                      | 1984                          | 1984              | 1984               |
| Adjusted r-square  | .05               | .001               | .005               | .013               | .014               | .014                      | .015                          | .009              | .009               |
| Range of dependent variable:                                   | 0-45              | 0-1                | 0-1                | 0-1                | 0-1                | 0-100                     | -4 to +4                      | 0-4               | 0-4                |

*Note:* Model is equation 1 in text. Estimation is by OLS or logit, as appropriate, with standard errors of coefficients shown in parentheses. Margin of victory data are from 1980 and 1990; likes/dislikes data are from 1978 and 1986 NES studies; remaining analyses are based on pooled data from the 1978, 1980, 1986, 1988, and 1990 NES surveys. For the five-sample dataset, dummies for year were added to model, though estimates of the dummy coefficients are not shown; the left-out category was 1978. All analyses exclude, on grounds of conceptual ambiguity, cases in which MCs' most recent election was first election to office in a special election.

approach yields results that are close to what others have found,<sup>2</sup> and at the same time – and this is the justification for it – the regression model at the core of my approach makes an excellent vehicle for summarizing a wide variety of evidence in a comparable format, as will be apparent shortly.

Let me, then, return to my substantive argument with this claim: The pattern of results in Figure 1 is strong positive evidence against the view that MCs build up their "personal vote" by dint of the efforts they make to woo individual voters, for this reason: Given the huge size of congressional districts, the first year surge in support is too large in relation to the gains in the next few electoral cycles. If the personal vote really depended on the cultivation of individual voter support, it would develop more gradually over the first several years of an incumbent's service rather than all at once.

A more likely explanation for the observed pattern of "surge and stasis" is as follows: In their initial election to office, MCs face either a sitting incumbent or an open seat race. In either case, their opponent is likely to be skilled and well-funded. But strong challengers appear only intermittently. Hence it is likely that the sophomore surge is the effect of a sudden decline in the average quality of electoral opposition.

To test this argument, I estimated the model in equation 1 for data on campaign spending by both incumbents and their opponents. The data are from 1980 and 1990,<sup>3</sup> with no adjustment for inflation. Incumbent spending refers to either sitting MCs or winners of open seat contests. Challenger spending refers to either opponents of sitting MCs or losers in open seat contests. As shown graphically in the bottom half of Figure 1, there is a large fall in average level of spending at the time of an MC's first reelection – a sophomore slump in which spending by both candidates falls dramatically – and no strong temporal trend after that.<sup>4</sup> Since incumbents can usually spend as much as they need in order to be competitive, the tandem declines in spending should be interpreted to mean the

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<sup>2</sup> Concerning substantive accuracy, I note that my results are quite similar to the far more extensive analysis by Hibbing (1991, Figure 2.3, p. 35). They are also consistent with the analysis of Alford and Brady (1993), which is based on district by district pairings and proves essentially my conclusion by showing that the sophomore surge is nearly equal in magnitude to the "retirement slump." Sophomore surge would not be comparable in magnitude to retirement slump if MCs went on increasing their vote margin year after year. Finally, my result for 1980 alone is 6.1 points (based on a separate regression not shown in Table 2), which is predictably short of but still reasonably close to the Gelman-King estimate of incumbency advantage of about 8 points (1990, p. 1158). My estimate for 1990 alone is 10.6 points, which, surprisingly, is above the Gelman-King estimate of 8 points, as reported by Jacobson (1996, Figure 3.3). Thus, my average for 1980 and 1990 is almost exactly the average of the Gelman-King estimates for these same two years.

<sup>3</sup> These are the only years for which I have seniority codes for all House members, including those not in NES samples.

<sup>4</sup> The sophomore slump in spending is larger in 1990 than in 1980; this is expected since the sophomore surge in MC vote share is also larger in 1990.



absence of a strong opponent at the time of first reelection. It thus appears that the sophomore surge in MC victory margin may be due, in significant part, to a sharp decline in the level of effort or quality of the political opposition.

The spending data in this analysis refer to averages, which, in the case of opposition spending, is especially misleading. If we examine median spending, we find the following: In open seat elections in 1990, the median level of spending by the loser was about \$365,000; in races involving incumbents seeking their first reelection in that year, the median level of challenger spending was about \$36,000, which is a ten-fold difference. For MCs in 1990, these figures were \$640,000 in first elections and \$470,000 in first reelections. It thus appears that, in the typical "sophomore" reelection bid, the typical incumbent is both adequately financed and without a strong opponent – a combination that could easily explain the one-time surge in margin of victory that occurs at that time.<sup>5</sup>

Before accepting this argument, however, let us examine some additional evidence. The notion that MCs build up the "personal vote" by building up credit with individual voters implies, in light of Figure 1, that Congressmen should be substantially better known and better liked at the time of their first reelection than when they first won office. To test this implication, I shall now present data from selected NES surveys on the relationship between "terms of service" and each of several indicators voter attitudes toward their MC, as follows:

- Name recall and name recognition.
- Degree of warmth of ratings on the feeling thermometer
- Likes and dislikes of MC

I begin with the two indicators of cognitive awareness: Whether voters can recall the name of their MC, and whether they recognize the MC in the sense of being willing to rate him or her on a 100-point feeling thermometer. The model used to analyze these indicators is equation 1, including, as before, variables for sophomore surge, number of prior terms served, and prior terms squared. The data are from the set of recent NES surveys unaffected by reapportionment, namely those of 1978, 1980, 1986, 1988, and 1990. Year dummy variables are included to capture any aggregate temporal or survey-related effects.<sup>6</sup>

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<sup>5</sup> Spending data from 1980 substantiate the same general point, though less dramatically. Median opposition spending levels in open seat and first reelection contests in that year were \$120,000 and \$50,000; median spending for MCs in their first elections and first reelections in 1980 were about \$230,000 and \$190,000.

<sup>6</sup> Two types of cases are excluded from the analysis. On grounds of conceptual ambiguity, I excluded cases in which a member had come into office by special election since the last regularly scheduled

The results on the effect of length of service on voter awareness are shown in the second and third columns of Table 1 (see above). The central point to notice is that the sophomore surge, so prominent in the analysis of margins of victory, fails to consistently emerge in these data. For name recall, the sophomore surge appears to run in reverse, and for name recognition, the effect is trivially small. The effects of these coefficients are shown graphically in Figure 2. The main story in these data is that constituents are almost as familiar with their MCs at the time of first election as they are at any subsequent time. This is perhaps unavoidable in the case of name recognition, a low-threshold indicator already showing high levels of awareness at the first reading. But there is plenty of room for gain in name recall, and none occurs..

INSERT FIGURE 2 ABOUT HERE

I turn now to indicators of affect toward the MC. Three measures have been created from open-ended questions about what voters like and dislike about the incumbent MC: The sum of likes on the traditional NES question, the sum of dislikes, and a net score. The results of applying the model in equation 1 are shown in Table 1 and Figure 3. This analysis includes data only from the 1978 and 1986 surveys.

INSERT FIGURE 3 ABOUT HERE

In contrast to the data on political awareness, these indicators exhibit unequivocal evidence of a sophomore surge. The surge variable picks up a decline in dislikes and a spike in likes, leading to a marked change in the indicator of net affect. In subsequent elections, likes continue to grow and dislikes to diminish, thus generating a trend toward greater net liking of the incumbent.

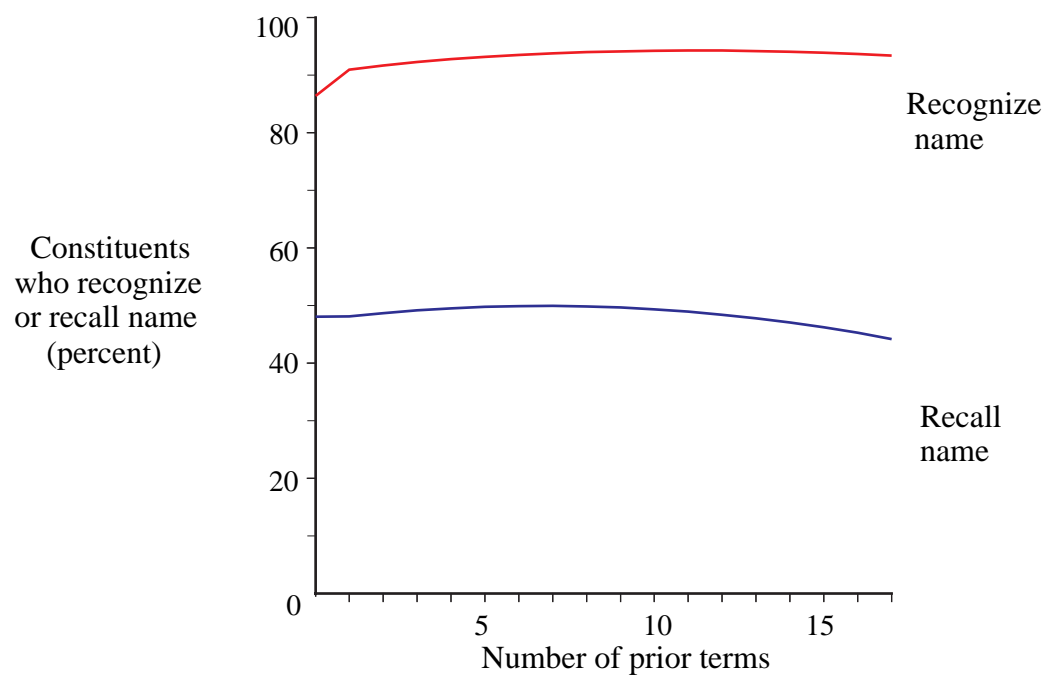
These data articulate nicely with both the sophomore surge effect shown in Figure 1, and with the observational evidence on the continued district-oriented activity of MCs following their first reelections. In short, they appear to constitute confirming evidence for the standard view of the importance of the reelection-oriented activities of MCs.

There are, however, reasons to regard this evidence with reserve. First, the mean number of likes, though constantly rising, never gets very high. It peaks at about 1.5; for an MC who retires after a "mere" 20 years in office, the expected number of likes is just 1.0 – hardly an indication of deep feeling, or in many cases, any feeling at all. There may be, in addition, an important element of social desirability in the expression of even

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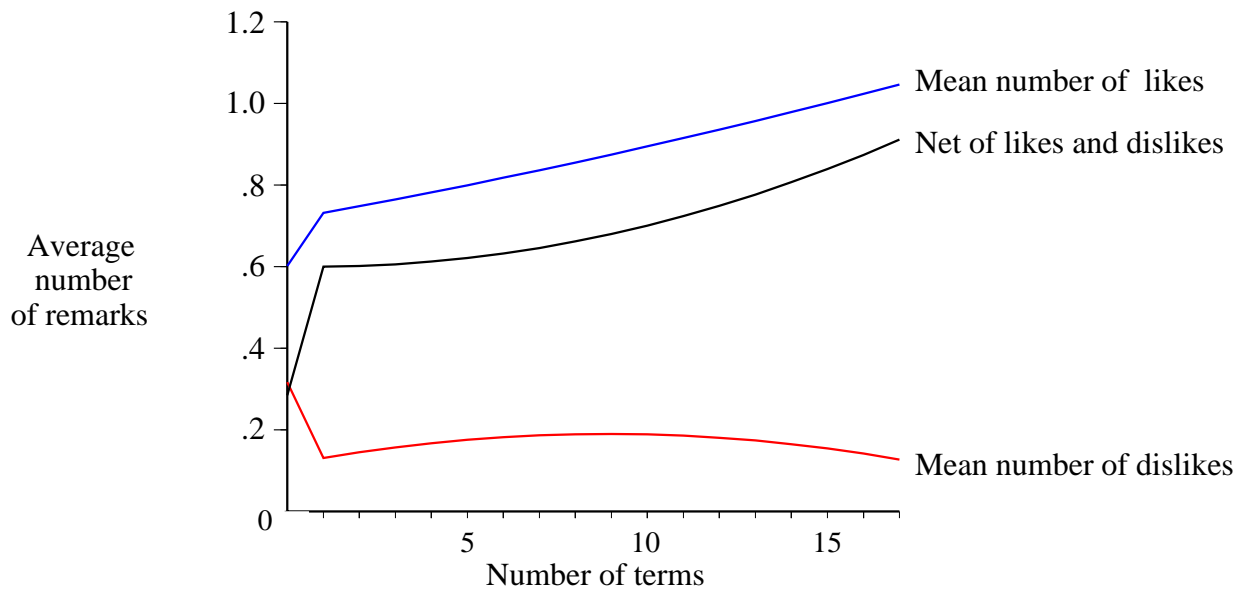
election. Also, owing to the small number of districts represented in each cohort of each survey, I sought, to the extent possible, to make comparisons across the same districts. Accordingly, I excluded winning candidates and first term MCs whose cohorts were not included in an adjacent sample. This meant excluding first-time winners from 1980 and 1990 (since I could not follow their constituents into 1982 and 1992) and first term incumbents in 1978 and 1986 (since I did not have constituents from their open seat contests in 1976 and 1984). This adjustment only slightly affected the results.

Figure 2. How Terms of Service Affect Voter Awareness of MC



*Note:* Estimates based on coefficients in Table 1.

Figure 3. How Terms of Service Affect Voter Likes and Dislikes of MC



*Note:* Estimates based on coefficients in Table 1.

this amount of regard for the MC, since it could be embarrassing to be unable to say anything about an official one has just rated on a feeling thermometer. (In both 1978 and 1986, the likes and dislikes questions immediately followed the set of thermometer ratings.)

A final piece of evidence comes from the standard NES feeling thermometers, which elicit constituents' feelings of warmth or coolness toward their MC. The thermometer scores have been recoded to create three alternative versions of the same variable: Whether a person recognizes and rates the MC at 51 degrees or higher; whether a person recognizes and rates the MC at 61 degrees or higher; and the average thermometer rating of those who make a rating. Plots of these indicators are shown in Figure 4.

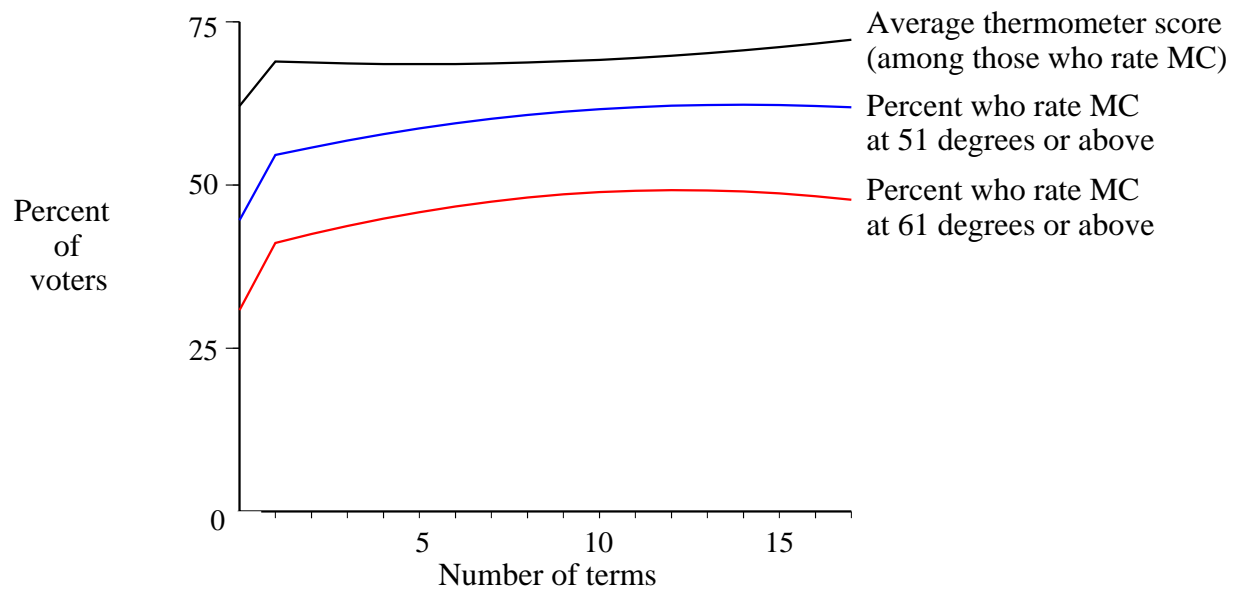
INSERT FIGURE 4 ABOUT HERE

The pattern for these measures falls between that of the cognitive indicators, on one side, and the likes/dislikes measures, on the other – though, as I eyeball the data, they are more similar to the awareness measures. There is a statistically significant sophomore surge on all three affect measures, but it is not large. Thereafter, ratings commence a very slow rise followed by the hint of an even slower decline. At its peak, the expected thermometer score for an MC has risen just 4.4 degrees above what it was at the time of the first reelection. The main story here is that, as in the case of candidate awareness, evaluations of MCs don't change much over the course of a congressional career.

The significance of these effects, small as they are, is by no means obvious. For one thing, some fraction of the increase may be due to selection effects, such that better liked incumbents survive to become senior incumbents while less liked MCs get weeded out – without anyone actually becoming better liked. Another problem is that the gains on the thermometer scores are, as Lowenstein (1992) earlier maintained, completely lacking in durability. In an analysis reported elsewhere (Zaller 1998), I cobble together NES congressional election studies from 1978 to 1994 to find out what happens to incumbents' feeling thermometer scores when they come under heavy electoral challenge. Just before getting a "hard" race, these incumbents had scores on the feeling thermometers that were slightly above the mean of all MCs in the period 1978 to 1994, but their scores fell once they came under pressure in the following election. The average drop was 8.5 points, from 64.4 in one election to 55.8 in the next. What this shows is that the good feeling incumbents painstakingly build up over the years, small as it is, is only fair weather support that vanishes under stress.

If, in addition to all this, we now take account of the fact that, as shown in Figure 2, MCs are hardly better known after 20 or 30 years in office than they were when first

Figure 4 How terms of Service Affect Voter Evaluations of MC



*Note:* Estimates based on coefficients in Table 1. The y-axis, "percent of constituents," also represents "degrees on feeling thermometer."

elected, we must be skeptical that these increases in positive affect toward MCs, however exactly they are generated, have any political importance.

In the end, then, the largest and most portentous of the "sophomore surge" effects remains the huge downward surge in challenger spending. It is easy to imagine this drop, in combination with continued, relatively heavy spending by the MC, could drive all the other indicators of sophomore surge. Of course, it can well be argued that the reason incumbents are able to enjoy a slump in the spending of their opponents is that potential opponents and their backers recognize that the incumbents would be difficult or impossible to beat in a full-out fight. I readily acknowledge this point. But I contend that the reason incumbents seem hard to beat is not because their constituents know and hold them in high esteem. It is more likely for reasons of electoral selection, as I shall now argue.

### **III. A model of electoral selection**

In a seminar at UCLA in 1988, Douglas Rivers formally proved that, in an idealized world in which there were no aging effects and in which challengers always had to beat incumbents in order to gain office, the quality of incumbents would continually be ratcheted upward, until all incumbents would win reelection with probability of one.

More recently, two senior scholars of Congressional elections, Robert Erikson and Gerald Wright (1993), observed that:

The first thing one notices about district-level House races is that when incumbents seek reelection they almost always win...

Although several factors account for incumbents' electoral success, attention tends to focus on one specific reason: incumbents exploiting their "advantages of incumbency" over potential opponents ...

One simple but sometimes overlooked reason incumbents win is that incumbency status must be earned at the ballot box... Strong candidates tend to win and by winning become incumbents. Upon winning they survive until they falter or lose to even stronger candidates...

The process of electoral selection is independent of any incumbency advantage [due to exploiting the status or resources of office], but the two factors may reinforce each other. (p. 99-100)

The existence of electoral selection has been recognized by these and other scholars for some years (Gelman and King, 1990; Jacobson, 1992, p. 45-46), but, except for an unpublished paper by W. Phillips Shively (1995), it has never to my knowledge been

systematically investigated.<sup>7</sup> In this section, I argue that the "overlooked" factor of "electoral selection" is a sufficient explanation for the observed data on "incumbency advantage."<sup>8</sup> Importantly, it makes no assumptions about voter loyalty to MCs.

At the core of this argument is a comparison of the careers of MCs and professional boxers. What makes this comparison illuminating is this similarity: World heavy-weight champions, like MCs, compete in a sequence of contests in which the winner continues for as long as possible to fight new challengers, most of whom have never previously been a champion. Incumbent champions in both professions are thus a much more selected group than their opponents. This structural similarity creates a likelihood that the champions, whether boxers or MCs, will be, in some general sense, "better" competitors than most challengers and may seem to enjoy a special incumbency advantage for this reason alone.

#### INSERT FIGURE 5 ABOUT HERE

Let me begin the analysis with Figure 5, which shows the number of lifetime title victories by each man who became the world heavy-weight champion between 1930 and 1994. The tally of career victories begins at the point at which the boxer first wins an undisputed world championship and continues for the rest of his career.<sup>9</sup> Each time a boxer wins a title fight, whether as a challenger or as the defender of a title he currently owns, he gets credit for another career victory.

As the figure shows, there is a right-hand skew to the distribution of career title victories, with a few "super champions" at the far right and a larger number who have won one or just a few title fights at the left. The two cases at the far right are Joe Louis, who won 26 title fights without a loss, and Mohammed Ali, who suffered setbacks but won a total of 21 title fights.

It is very interesting that, although the modal champion is a "mediocre champ" who wins one championship and is unable to defend his title even once (24 percent of all individual cases), a large majority of title bouts are contested by notable champions. In particular, the 21 title fights won by Ali and the 26 title fights won by Louis constitute 37

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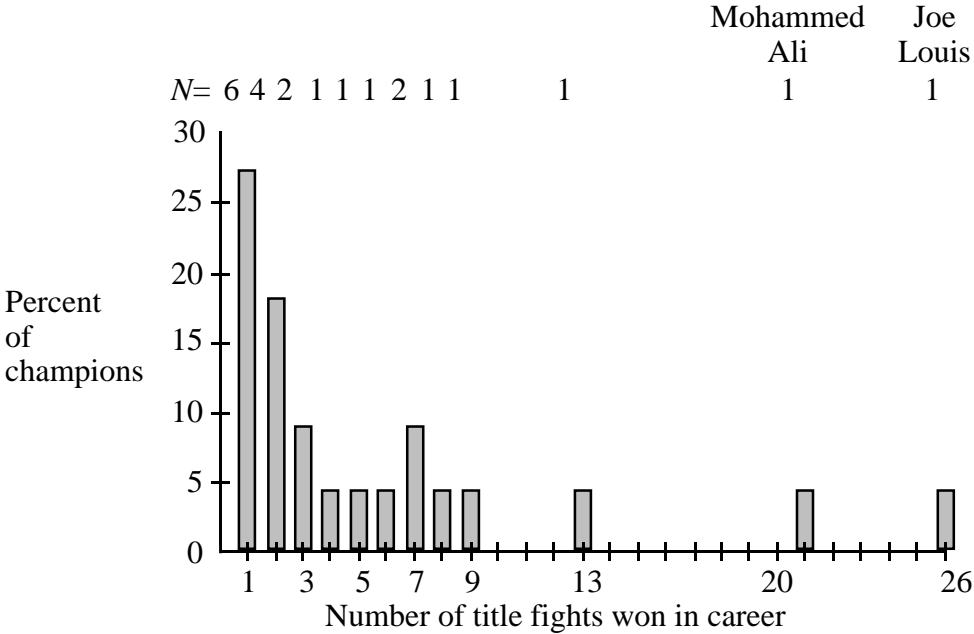
<sup>7</sup> Shively seeks to measure the "quality" advantage of individual MCs and show their effects. Gelman and King (1990) examine a form of electoral selection in their discussion of "incumbency advantage," which they define as a compound of advantage due to incumbency per se and advantage "gained by a party because its candidate is of higher quality than the typical open seat candidate" (p. 1153). However, they do not empirically investigate the effects of selection on candidate quality.

<sup>8</sup> Jacobson (1993, p. 45-46) also suggests that an important selection effect may operate in congressional elections, though one based on willingness to exploit the resources of incumbency rather than, as I will propose, general political skill.

<sup>9</sup> Because disputes do arise in some cases, and because champs are sometimes stripped of their titles without losing a fight, some cases might be coded differently. Appendix A contains a list of the cases used in the analysis as well as notes about difficult ones.



Figure 5. Number of Career Title Fights Won of Heavyweight Boxing Champions, 1930 to 1994



percent of the 127 title fights from 1930 to 1994. If we think of title fights as elections, then 37 percent of all heavy weight elections since 1930 were won by just two super-champions, Ali and Louis. Consider also the career of another extraordinary champion, Rocky Marciano. He won 42 fights without a loss as a light heavy-weight; graduated to the heavy-weight class, in which he won seven world heavy-weight title fights; and finally retired with a lifetime professional record of 49-0. From the data in Figure 5 it can be seen that about 75 percent of all heavy-weight title fights were won by someone at the level of Rocky Marciano or greater, often by knockouts. What this means is that if one were to drop into a randomly chosen heavy-weight title fight sometime in the last 50 years, there would be a 75 percent chance of encountering a champion at the level of Rocky Marciano or higher. Watching such champions fight, one might suspect that the incumbent had some sort of special advantage — or at least many political analysts might. But the main reason that super champions like Louis, Ali, and Marciano won so many fights is that they were simply better than their opponents, usually a lot better.

Why, one must wonder, doesn't each of the 435 congressional districts in the U.S. constitute a microcosm of the boxing world in which heavy-weight politicians compete for the title of Member of Congress, with super-champions dominating the competition for years at a time just because they are better than most of their opponents? This, in a nutshell, is the argument I shall now advance.

Let me acknowledge at the outset certain important, but I hope not fatally important, differences between the two professions: In boxing, potential challengers have every incentive to fight reigning champions even if they expect to lose. Their supporting cast of managers and financiers have similar incentives, since everyone makes money if a title fight occurs. This virtually guarantees that the strongest opponents will seek to fight the champion. Champions, for their part, have a right to choose whom to fight and sometimes choose to avoid strong opponents. But the boxing federations, at least until recently, would strip the titles of champions who avoided strong opponents. Hence, although there may be some delay, boxing champions must fairly quickly fight the strongest potential opponents (see Appendix A).

In the case of MCs, by contrast, losing efforts by strong challengers are costly. The challenger must often give up a lucrative post elsewhere; backers must donate money and effort; and even neutral onlookers may have to bear some costs. Hence, strong potential opponents routinely fail to enter the lists against incumbent MCs. But this argument applies in full force only to candidates who would expect to lose; it does not apply to the strongest challengers, who would still be expected to mount serious challenges whenever they judged themselves to have a good chance. They may pick their time carefully

(Jacobson and Kernell, 1981), but there is little reason to hold back from a fight they think they can win. Thus, the incentives of the strongest challengers – those who might actually beat an incumbent MC – are such as to make the dynamics of title defense in politics more similar, in this important respect, to the case of boxing than they might at first seem.<sup>10</sup> Strong challenges may be more carefully timed than in boxing, but they do come.

The other important difference between the two professions is the role of money. In both boxing and congressional elections, incumbent champions have much more money to spend on title defense than do most of their competitors. Boxers use this money to purchase superior training and MCs use it to buy more campaign advertising. But few would argue that the ability of one side to spend more money than the other is as important when two boxers step into the ring as when two congressional candidates duke it out in a battle of 30-second advertisements.

Yet how often do really strong challengers lack adequate funding? Certainly, one can point to many cases, in both professions, in which challengers are hopelessly outspent and lose badly. But many of these challengers would likely lose badly in any case, simply because they aren't very good. And, at the same time, there are also many cases in which the challenger has essentially as much as the incumbent to spend on the contest, either in the form of training or advertising. This has been especially well-documented in the case of congressional elections, in which it has been repeatedly shown that anything that predicts challenger quality also predicts how much money the challenger will be able to raise (Jacobson, 1997b). The claim is not that incumbent MCs have no real spending advantage over even strong challengers, but that this advantage is much smaller than it appears to be at first glance, and, as I now suggest, quite possibly within the range of the advantage in training that an incumbent boxing champion enjoys over his strongest challengers.

My argument, then, is that strong challengers emerge in congressional politics whenever they see an opportunity to win, that when they do they are able to command the resources necessary to mount serious fights, and that, in consequence, *incumbent MCs, like incumbent boxing champions, cannot survive in office much longer than their personal skills actually warrant.*

On this general premise, I now proceed with the analysis. Let us look first at the lifetime victory records of MCs — that is, the total number of congressional elections that

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<sup>10</sup> Because, for the reason just given, strong challengers are likely to appear in intermittent waves, someone wishing to get an accurate measure of incumbent reelection rates, as I will need to do, must examine a sequence of elections long enough to include some years propitious to challengers. See notes 21 and 27 below.

were won — by those who departed the House between 1982 and 1996. These career data are presented in Figure 6 in the same form as the boxing career data<sup>11</sup> and bear a clear resemblance to them. The single most common type of MC career is, as in the case of the boxing champions, a very short one, but some contestants nonetheless manage very long careers, thereby creating a strong skew in the data. From casual inspection, the data from MCs do not suggest any more special incumbency advantage than boxers enjoy.

INSERT FIGURE 6 ABOUT HERE

The strong skew in both the boxing and MC data merits a moment's reflection. If, as I have been suggesting, success in boxing and politics depends on skill, and if, as seems inevitable, skills of any sort have a unimodal or peaked distribution, then the distribution of skill levels of the individuals who become champions ought to resemble the right-hand tail of a peaked distribution. If, further, the number of total career victories is an indication of skill, then the distribution of career victories ought perhaps to resemble the right-hand tail of a peaked distribution — as, in fact, appears to be the case in Figures 5 and 6. I say "perhaps" because this line of argument turns out to be faulty, but it is worth keeping in mind.

The similarity in career patterns between boxers and MCs masks a difference between the two groups: Though some boxers end their careers by retiring, most end through defeat, whereas for MCs it is the reverse — a few are defeated and most voluntarily retire. In order for career length to reveal anything about the skill of MCs, one must assume that most MCs, like most boxing champs, would like to hold onto their office as long as possible and therefore could not last in office much longer than they do.<sup>12</sup> Given this strong assumption, career length is a rough indicator of skill, because the greater an MC's skill, the more victories he or she will be able to achieve before skill or interest fall below the threshold necessary to remain a champion.<sup>13</sup>

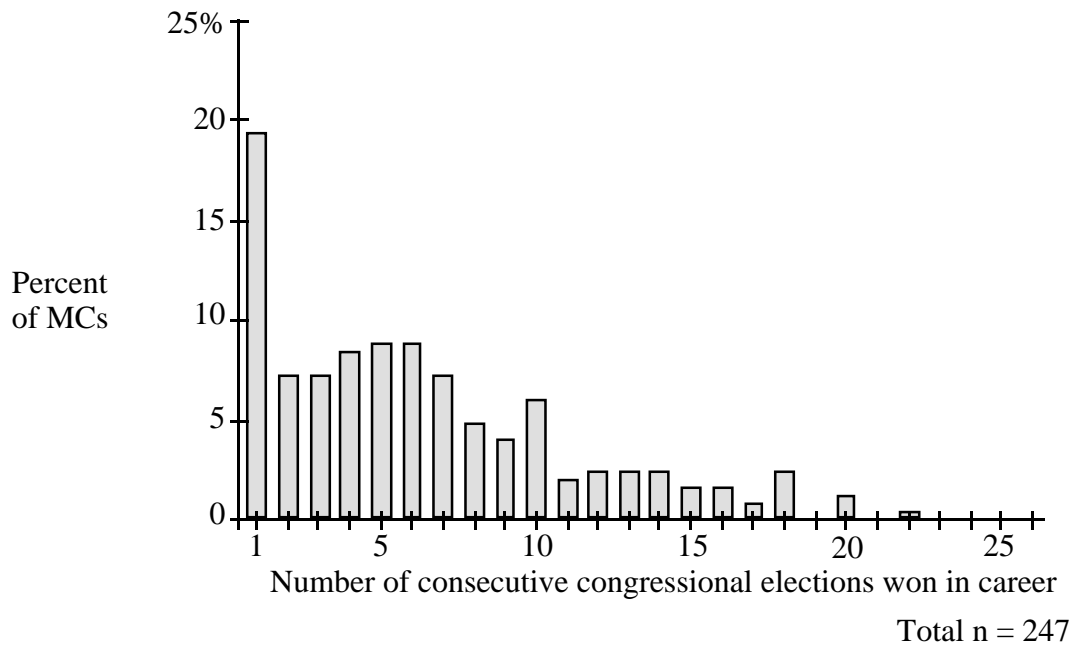
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<sup>11</sup> Except that, in the boxing data, all fights won are counted, whether won consecutively or not. Counting by consecutive wins, Mohammed Ali would have two careers, each ten fights long, plus a third, one-win career. A few other cases are affected, but not in a way that affects the visual impact of Figure 5. It would have been best to count MC careers in the same way as the boxing careers, but I did not have the resources to do so, and don't think it would make an important difference if I did.

<sup>12</sup> In light of this assumption, it is notable that when Joe Louis returned to boxing just two years after voluntary retirement, he was beaten by the new champion, a man few now remember.

<sup>13</sup> It is difficult to say exactly how strong this assumption is. Kiewiet and Zeng (1993: 935) are certainly impressed by the tenacity of incumbents, for whom neither narrow election margins nor being redistricted out of a seat nor getting plum leadership posts much affects the calculus on whether to quit politics. On the other hand, Jacobson and Dimock (1994) show that strategic retirements do occur, sometimes on a large scale, as I discuss below. I would like to have it both ways on this point: To believe that most MCs hang on as long as they can, but then, when their time is up, sometimes retire strategically in order to avoid defeat.

Figure 6 Consecutive Congressional Elections Won by Nonsouthern MCs at Time of Defeat or Retirement, 1982 to 1996



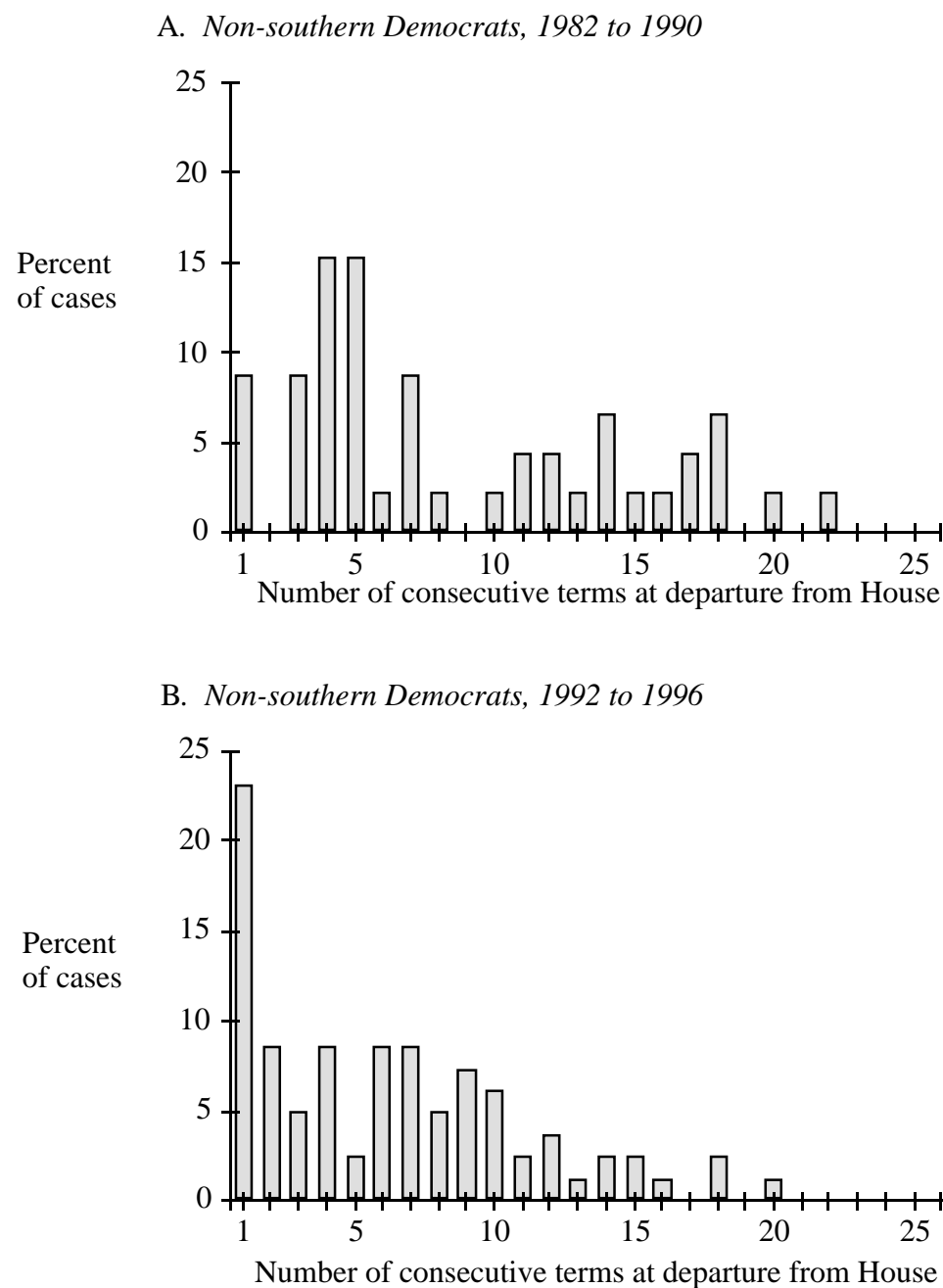
The notion that most MCs want to stay in office as long as possible does not apply very well to Republicans in the 1980s and early 1990s. With opportunities for political careers in the House limited by Democratic control, many Republicans retired after relatively short careers (Ansolabehere and Gerber, 1997). For such persons, length of career provides little information about skill. For Democratic MCs, on the other hand, there was every incentive to stay around as long as possible, and many certainly tried to do so. For Democrats, therefore, career length may be taken as a rough indicator of skill. In light of this, Figure 7 presents data on the careers of Democratic MCs alone. These data are broken out separately for the period 1982 to 1990, a time of unusual electoral tranquillity in Congress, and for the period 1992 to 1996, a time of much more volatility. Because of oddities associated with southern politics in both decades, I have collected career data for non-southern democrats only.

INSERT FIGURE 7 ABOUT HERE

From the upper panel of Figure 7, we see that the distribution of Democratic careers in the 1980s is quite different than the career patterns of champion boxers. Nearly 40 percent of Democrats leaving the House in this period had been there 10 elections or more – compared to just 14 percent of boxers (Larry Holmes, Ali and Louis) who won more than 10 title fights. There are also comparatively few one-term MCs. Altogether, then, the MC data are much less skewed than the boxing data and bear little resemblance to the right-hand tail of a peaked distribution. If we take the careers of boxers as the standard for what careers look like in a regime of intense electoral selection, we might conclude from these data that Democratic MCs in the 1980s faced little real competitive pressure, perhaps because of the extra boost that incumbency gave them.

This conclusion seems strengthened by examination of Democratic career patterns in the 1990s, as shown in the lower panel of Figure 7. In a period in which incumbency and even pork barrel politics came into some disrepute – a time, therefore, in which individual political skill was perhaps more important to survival in office – the career patterns of Democratic MCs look much more like those of the boxers and also more like the right-hand tail of a peaked distribution. It is still the case in the 1990s that departing MCs have a good deal of seniority – 23 percent of the departees have been in the House for 10 or more terms – but these long careers were mostly made in the 70s and 80s. One can readily imagine that the "instantaneous" career patterns of Democratic incumbents in the 90s were even more similar to those of the boxers than they appear to be. Perhaps, then, the 80s were a regime of incumbency advantage and the 90s were a regime of political skill.

Figure 7. Length of Careers among Nonsouthern Demorcrats, 1982 to 1996



1982-90  $N = 46$   
1992-96  $N = 82$

One more comparison between boxing and MC data needs to be drawn. As we have seen, House careers in the 1980s were characterized by a strong "sophomore surge." There is, as it happens, a strong sophomore surge among boxers as well, but with a big difference: It runs in reverse. That is, boxing champions tend to have closer contests in their first title defense than in the fight in which they first won the title. After that – and in another contrast to the MCs of the 1980s, who, as we saw, acquire most of their incumbency advantage at the time of their first reelection – senior boxers win by greater and greater margins with each additional fight (i.e., they achieve more knockouts in a smaller number of rounds).<sup>14</sup> (Details of the estimation of sophomore surge and term-by-term effects among boxers are presented in Appendix A.)

It thus appears that the careers of boxers resemble those of MCs in some respects and for some time periods, but not all. In an attempt to understand more clearly the process that has generated these career data, including both similarities and differences across groups and periods, I turn now to computer simulation. I turn, that is, to a stylized model of the competitive process by which boxers and MCs win and maintain their positions. The key event is the assignment of "skill" and "luck" scores to each player through random draws from a lottery. The competitor with the higher net score of skill and luck wins the contest and then goes on to take on new challengers, each of whom gets a fresh draw from the skill lottery. The skill levels that winners draw at the time of their first elections stay with them throughout their careers, but there is a fresh draw of luck for each new contest. Individuals go on winning as long as they can, up to a "term limit," whereupon they retire and open seat elections occur in their districts. The patterns of wins and losses in many thousands of such computer-run election contests constitutes the simulation. By analyzing these patterns and the "careers" they generate, it is possible to learn about the dynamics of the stylized electoral process I have described, which can in turn cast light on the actual electoral process.

More specifically, I conduct the simulation as follows:

- 1) I assume that the skill necessary to become a champion boxer or politician has a unimodal or peaked distribution. The first step in the simulation, then, is to assign "political skill" scores to candidates on the basis of random draws from such a distribution. In the simulations that follow I used the right-hand tail of a (0,1) normal distribution, with a threshold of  $z > 2$ . Limited investigation indicated that the simulation was not sensitive

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<sup>14</sup> This, however, is due mostly to selection: Among champions who have won seven or more fights, there is only a small tendency to improve with experience or age during the first seven fights.



to particular cutoff points; in test runs, I got essentially the same results using cutoffs of 3, 1, and even -2.

2. Each general election involves a luck factor, which is drawn from a normal distribution with a mean equal to 0. Positive luck scores aid the incumbent and negative ones aid the challenger. Luck can be almost any non-skill factor, from an off-night in boxing to a partisan tide in congressional elections. Since I am not sure how important luck is in relation to skill, I vary the amount of luck in the simulations from none to little to high, as I explain in detail below. Differences in the amount of luck have a large effect on career patterns. As would be expected, incumbency domination is much greater when skill rather than luck predominates.

3. Elections are created by matching the skill and luck of two candidates. Incumbents win when their skill minus challenger skill plus luck (which may be greater to or less than zero) sums to a positive number. The winning candidate goes on to the next election, keeping the same level of skill, but drawing a new luck factor and an opponent with a fresh draw of skill.

4. Winning incumbents are forced to "retire" after a specified number of terms, whereupon open seat contests occur in their districts. The term limit I use is 17. There was, of course, no term limit in the period in which my actual data were generated, but no MC can stay in office forever. In the actual data, one MC stays in office for 22 terms, but most begin retiring earlier. In the 1980s, 15 percent of non-southern Democratic MCs left office after 17 terms or more. A limit of 17 is something like a practical maximum – the highest level that most MCs can hope to achieve.

5. For open seat contests, the competing candidates are chosen by means of a party "primary," whereby each party selects the most able of three contenders, each of whose abilities comes from a random draw from the same talent distribution as other candidates. There is no luck in the primaries beyond the random draw of ability scores.

6. The simulation runs for 100 elections in each of 50 districts. To eliminate startup effects and allow an equilibrium to establish itself, I throw out the first 30 elections, using the rest as a basis of inference about equilibrium conditions in the system.<sup>15</sup>

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<sup>15</sup> Some of the defeats and retirements in elections 31 through 100 involve careers that began in the earlier set of elections. In one set of experiments, I used elections 36 through 40 from each of 320 districts (rather than using elections 31 through 100 from each of 50 districts). These results showed the same trends as in my main simulations, except with more chance (because of the smaller number of cases)

The computer program necessary to run this simulation was written in XLISP and SPSS by Scott Desposato, a graduate student at UCLA. It is available upon request on my website homepage. I have saved the particular runs reported in this paper, and they, too, are available on the internet.<sup>16</sup>

In reporting the results of the simulations, I begin with an electoral regime in which there is no luck and then proceed to regimes with increasing amounts of luck. Figure 8 presents the first set of results, in which the luck factor is zero. The data from the Democratic MCs in the 80s have been truncated at 17+ elections, so to make them comparable with results from the simulation, which forces retirement after 17 elections.

INSERT FIGURE 8 ABOUT HERE

The main point to notice in Figure 8 is that the distribution of career lengths in the simulation fails to reproduce the right-hand tail of a normal distribution, from which the skill scores driving the simulation were drawn. Rather, the simulation produces a distinctly bimodal distribution of careers, with one node at one or two elections and the other at the term limit, which is 17 elections. This bimodal distribution is not an artifact of the particular term limit I chose, nor is it dependent on the particular z-score cutoff used in the random assignment of skill. As other simulations (not presented here) show, a bimodal distribution of career lengths arises for a wide range of z-score cutoffs and for any plausible term limit.

The lesson learned from this initial simulation, then, is that electoral selection in a regime of all skill and no luck leads to a situation in which most incumbents enjoy very long careers.

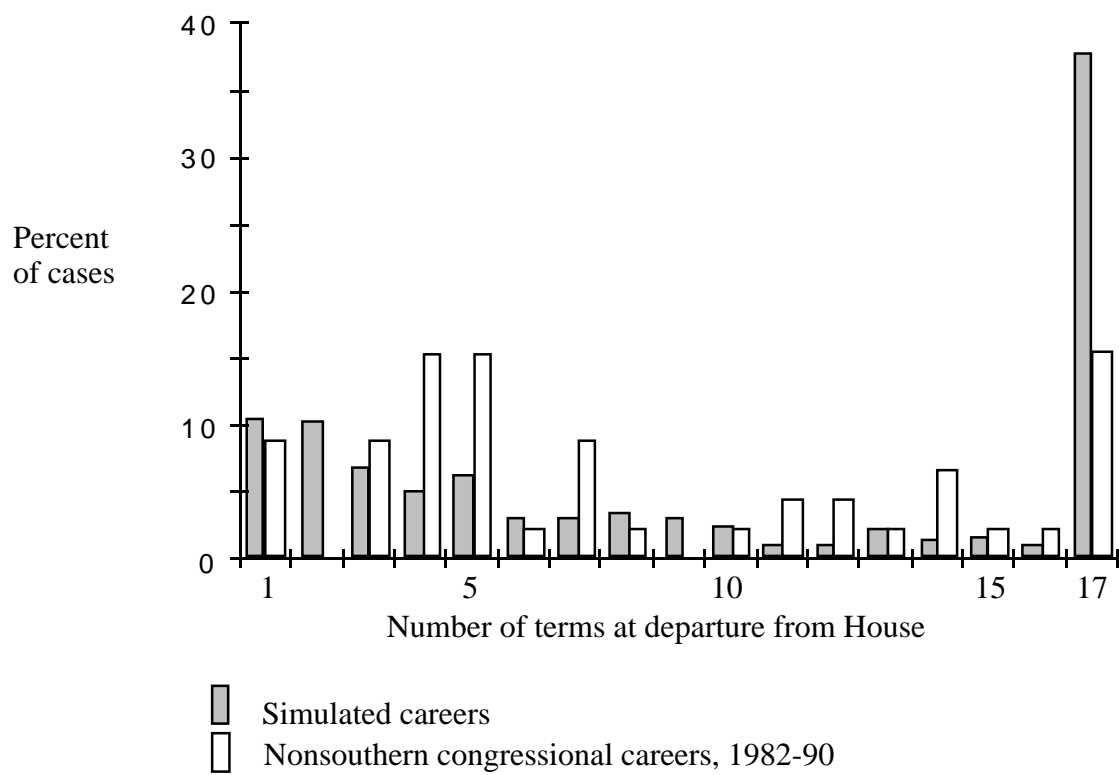
Viewed in this light, the actual careers of Democratic incumbents in the 1980s are, despite initial appearances, not too long to be consistent with electoral selection on the basis of skill alone. Indeed, the career lengths of Democrats from the 1980s fall somewhat short of what might be expected. The reason for this shortfall is not clear from the data. It could be that many Democratic MCs were simply not interested in staying in office for 17 or more terms, and hence retired after a "mere" 10 or 15 terms. Or, alternatively, it could be that, even in the tranquil 1980s, the pressures of electoral competition were driving many Democratic MCs from office, usually in the form of "strategic retirements" to avoid impending defeat, perhaps in a primary (see Jacobson and Dimock, 1994). Most likely, a combination of both processes was at work. This is the first of several indications

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and greater trouble (more cases wasted reaching equilibrium in each district before any results were counted).

<sup>16</sup> The address is [www.sscnet.ucla.edu/polisci/faculty/zaller/](http://www.sscnet.ucla.edu/polisci/faculty/zaller/). A spreadsheet program is required in addition to XLISP and SPSS.

Figure 8 Actual and simulated congressional careers



we shall encounter that the most senior MCs do not have the staying power that a model of electoral selection, which takes no account of possible life cycle effects, expects of them. But whatever the reason for the shortfall, the key point is that the long careers enjoyed by Democratic incumbents in the 1980s seem to be well within the range of what can be explained by a model of electoral selection on the basis of skill.

Having examined congressional careers in a regime of pure skill, let us now see what happens when luck intrudes on the electoral process. This can be done in Table 2, which shows results from seven sets of simulations with varying amounts of luck. These simulations are reported in the first seven columns of the table. Columns eight through 11 of the table contain parallel data from the real world of boxing and congressional elections.

#### INSERT TABLE 2 ABOUT HERE

I will first describe the simulations, then the real world data. As indicated, the seven sets of simulations differ in the amount of luck in the election process. In the first simulation, shown in column 1, there is no luck at all. Figure 8 has already shown the full distribution of career lengths produced by this simulation, but the first column of Table 2 provides additional information about it. The second column shows results when a small amount of luck is added in. Luck scores for the simulation in column two have been drawn from a normal distribution with mean 0 and a variance equal to one-eighth the variance in the distribution of skill<sup>17</sup>; in the third column, luck scores have come from a distribution having one-fourth the variance in skill. Moving from left to right, each column increases the amount of luck in the electoral process, until, in the seventh column, the variance in luck is four times greater than the variance in skill. Thus, simulations show the effects of electoral selection in a range of conditions, from a regime of pure skill in column one to a regime of mostly but not entirely luck in column seven.

After reviewing the results of the simulations, I will discuss what the abstract entities of skill and luck may consist of, but at this point, I note in passing that a ratio of luck variance to skill variance of four-to-one is high but not obviously implausible. We really have little idea what the luck-to-skill ratio is like in different domains of life, including congressional elections. Recall that incumbents, especially senior incumbents, are, virtually by definition, a highly selected group. Hence variation among them in political skill will be small, at least compared to variance in political skill in the population at large. But the selection process for chance factors in election contests is likely to be less severe.

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<sup>17</sup> The variance of the ability scores, as determined empirically from random draws from the right-hand tail of a normal distribution for  $z > 2$ , is about .12. Variances for the distributions from which luck scores are drawn are set as multiples of this figure.

Table 2. Simulated and actual effects of electoral selection

| Column number                                     | (1)   | (2)  | (3)  | (4)  | (5)  | (6)  | (7)  | (8)                          | (9)                             | (10)                          | (11)                         |
|---|---|------|------|------|------|------|------|------------------------------|---------------------------------|-------------------------------|------------------------------|
|   | Simulation under specified ratio of "luck" to "skill" |      |      |      |      |      |      | MCs<br>1982-1990             | Swing<br>districts<br>1982-1990 | MCs<br>1992-1996              | Boxing<br>champions          |
| Ratio "chance"<br>variance to<br>"skill" variance | No<br>Luck  | 1/8  | 1/4  | 1/2  | 1/1  | 2/1  | 4/1  |                              |                                 |                               |                              |
| First term<br>reelection rate                     | 90.0  | 83.4 | 80   | 79.6 | 71.4 | 61   | 54.3 | 93.2                         | 84.1<br>(n=63)                  | 85.6                          | 67                           |
| Overall<br>reelection rate                        | 92.9  | 92.2 | 90.5 | 88.7 | 85.6 | 76.4 | 67.4 | 96.5                         | 94.2<br>(n=382)                 | 88.9                          | 81                           |
| % of departees<br>who reached<br>10+ terms        | 47  | 45   | 37   | 32   | 26   | 12   | 7    | 39 <sup>a</sup>              | -                               | 23 <sup>a</sup>               | 15                           |
| % of departees<br>who reached<br>17+ terms        | 35  | 33   | 27   | 22   | 17   | 7    | 3    | 15 <sup>a</sup>              | -                               | 4 <sup>a</sup>                | 10                           |
| Sophomore surge<br>(coefficient)                  | .25   | .24  | .19  | .18  | .01  | -.21 | -.48 | 10.8 <sup>b</sup><br>(p<.01) | -                               | 7.20 <sup>c</sup><br>(p<.01)  | -.84 <sup>d</sup><br>(p<.01) |
| Term effect<br>(coefficient)                      | .023  | .025 | .030 | .031 | .05  | .07  | .08  | .07 <sup>b</sup><br>(n.s.)   | -                               | .475 <sup>c</sup><br>(p <.01) | .06<br>(<.01)                |

<sup>a</sup> Based on departures from office among non-southern Democrats only, because of early retirements among Republicans.

<sup>b</sup> Based on 1990 only.

<sup>c</sup> Based on 1996 only.

<sup>d</sup> See Table A1, Appendix A for calculation of regression coefficients for surge and year-to-year gains.

Incumbents try to foresee and guard against chance factors, such as electoral tides, but their ability to do so is imperfect. Hence incumbents may have to withstand a fairly large fraction of the natural variance in luck factors, whatever that natural variance may be.

I turn now to the results of the simulations, beginning with figures for sophomore reelection rate. These rates are quite high in a regime of pure skill, (90.0 percent), as shown in column one of Table 2, but only somewhat better than chance (54.0 percent) in the regime in which chance variance is four times greater than skill variance, as shown in column seven.<sup>18</sup> As Figure 9 shows, however, reelection rates improve with each subsequent reelection, heading for plateaus around 95 percent. Obviously, this improvement has nothing to do with any "experience" MCs might gain from their earlier elections, since experience is not represented in the model. The explanation is purely selection: As the weaker incumbents are gradually weeded out, the surviving group is stronger and hence collectively more successful.

INSERT FIGURE 9 ABOUT HERE

Overall reelection rates – combining results from all cohorts in whatever proportions they occur in the population – are shown in the second row of Table 2. They range from 92.9 percent in a regime of pure skill to 67.4 percent in a regime of mostly luck. Yet as long as skill is more important than luck, incumbents do pretty well, and even when luck variance equals skill variance (column 5), the overall reelection rate for incumbents is 85.6 percent.

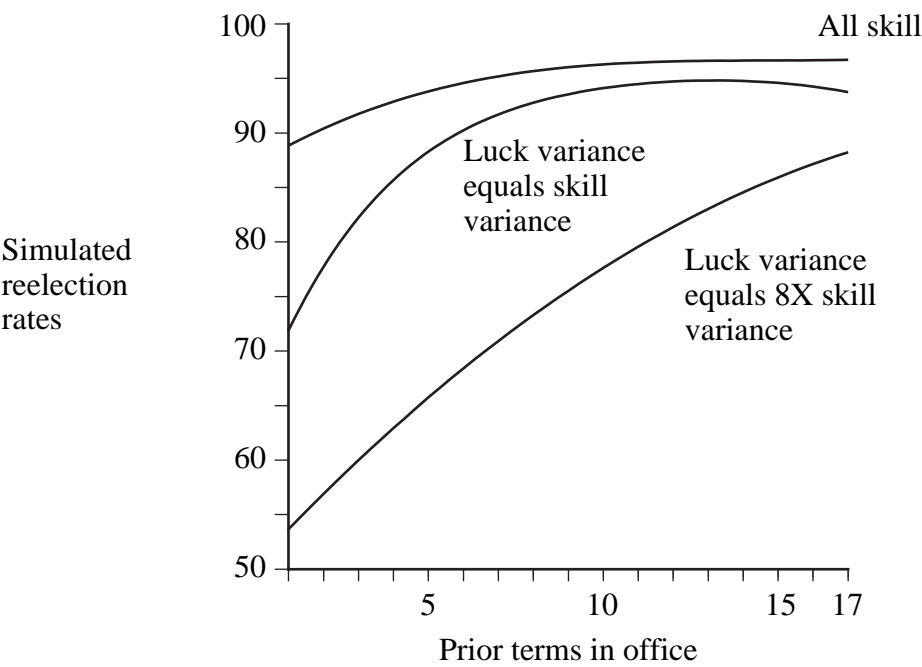
That such a high rate of reelection can occur in a regime in which luck is equal to skill is, I believe, both notable and surprising. The result comes about because, even though the sophomore reelection rate is only 71.4 percent in this regime, stronger incumbents survive longer than weaker ones, thereby dominating the calculation of incumbent reelection rates. An 85.6 percent reelection rate in contests involving so much luck feeds the impression that incumbents have some special advantage, but there is none. It is all a matter of selection.

Given high rates of reelection in simulations in which there is some but not an overwhelming amount of luck, many incumbents enjoy long careers. In the no luck regime, 47 percent survive in office for 10 or more terms, and 35 percent make the mandatory retirement limit of 17 elections. When luck is equal to skill, 26 percent last ten or more terms, and 17 percent reach the limit of 17 elections.

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<sup>18</sup> There is some chance instability in these figures. I did not attempt to estimate it, but my impression from watching many simulations is that the standard error of these figures is about one or two percent.

Figure 9. The Simulated Effect of Luck and Prior Terms on Reelection Rate





Again, these rates are notably high. When luck is low or non-existent, more than a third of all MCs can, if they wish, stay in office for the mandatory retirement age of 34 years in office, solely on the basis of superior skill.

The final two rows of Table 2 are, as I shall now explain, especially important. The table entries are regression coefficients intended to capture the effects of prior election on "Winning Margin," which is computed by subtracting the challenger's skill from the incumbent's skill and adding in luck. I use two variables to capture the effects of prior elections: A "Sophomore Surge" variable that takes the value of 0 in an MC's first election and 1 in all reelection contests; and a "Term " variable, which counts the number of prior elections, ranging from 0 to 16.

Thus, to be clear, I have run regressions in which Winning Margin is the dependent variable and Surge and Term are the two independent variables. Coefficients for the Surge and Term variables, as estimated for each set of simulations, are reported in the bottom two rows of Table 2.

The notable feature of these results is the effect of luck on the Sophomore Surge and Term coefficients. In the regime of pure skill (column 1), the Surge coefficient has more impact in one election (.25) than the Term coefficient has in ten elections (.023 X 1=.23). But as luck increases, the Surge coefficient diminishes and eventually turns hugely negative, while the Term coefficient becomes steadily larger.

It is essential to understand why these opposing trends occur. I begin with the effect of Term. With each election, selection weeds out the weaker candidates, leaving the survivors a stronger group that then tends to win by larger margins. The Term coefficient captures this selection effect.

The Sophomore Surge, which is positive at low luck and negative at high luck, is driven by two opposing forces. The first is a selection effect. A candidate's first election is fought against either a reigning incumbent or the winner of a party primary, so that, in either case, the opponent is likely to be very good. But all reelections, including the first, are fought against candidates who are each merely "the best of one" draw from the skill lottery. Opponents in the first election are thus a more select group than opponents in the first reelection. Given this, MCs are very likely to have a greater skill advantage in the first reelection than in their first election, and this skill advantage should, all else equal, boost their victory margin at the time of their first reelection. "Regression to the mean" is the second, countervailing part of the Surge dynamic: All else equal, first-time winners are likely to have better than average luck, since luck is part of what has enabled them to win. Their skill (whatever it is) carries over to their first reelection, but their luck does not, tending to "regress" to zero and thereby lowering their victory margin at the time of

first reelection. As the luck variance becomes greater, the (negative) regression effect becomes greater too, gradually catching and surpassing the (positive) selection effect, leading to a net negative surge, or sophomore slump.<sup>19</sup>

But this is all simulation. Let us now compare the simulations to actual data, beginning with reelection rates for MCs, as shown in columns 8, 9 and 10. Reelection rates in Table 2 are based on all incumbents who seek reelection. They also include primary election defeats, which may be considered the real elections in districts in which there are one-sided partisan majorities. They do not, however, include incumbents who were defeated in 1982 by virtue of having been paired against another incumbent, which is a factor outside the simulation.<sup>20</sup>

The first point to notice is that the reelection rate in Congress in the period 1982 to 1990 is 96.4 percent, which is higher than what the selection model can explain, even in a regime of pure skill. The sophomore reelection rate is also too high for the simulation to explain, 93.2. These results could be seen as an embarrassment to the model, but only if primary elections are considered a fully adequate substitute for general elections in cases in which districts have lopsided partisan majorities. Yet it would be hard to argue that this is the case. Because party elites like to avoid attacks on their own incumbents, even in safe districts, primary elections are at best a partial substitute for general elections.

What this suggests is that if we want a clean test of the effects of electoral selection, we must look to districts in which the partisan balance is roughly even. In such districts, the skill of incumbents will be at least intermittently tested by the best challengers the other party can put up.<sup>21</sup>

To make this test, I have calculated House reelection rates in the period 1982 to 1990, controlling for the underlying partisanship of the district. The control is the average of the district vote for Democratic candidates in five federal elections, the three presidential contests of the 1980s and two Senate elections (per district) in the period 1978 through

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<sup>19</sup> This regression effect is the same as the one identified by Gelman and King (1990) as the bias inherent in many measures of incumbency advantage.

<sup>20</sup> Reelection rates do, however, include cases in which incumbents were thrown into uncongenial districts as part of the reapportionment, which seems to me a type of (bad) electoral luck and hence within the simulation.

<sup>21</sup> "Intermittently" is an important qualifier here. Talented challengers do not contest incumbents randomly, but choose their time to capitalize on partisan tides and other non-skill — in my terms, luck — factors, such as reapportionment and economic climate, as Jacobson and Kernell (1981) and Jacobson (1989) have shown. Hence, to get an accurate idea of the amount of competition incumbents face, one must take care to include at least some elections in which the luck factors are such that the best potential challengers are willing to come forth and do battle with the reigning champion. This problem does not arise in boxing, where the non-skill factors that affect outcomes are not national tides that can be forecast months before the contest. See note 10 above.

1982.<sup>22</sup> The average of the Democratic vote across these elections was 48.7. Because, however, this estimate is based in part on two Reagan landslides and a big Bush victory, it understates the true level of Democratic partisanship in the country and in most districts.<sup>23</sup> To correct for this tilt, I have added 4.3 points to each district vote, thereby bringing average partisanship to 53 percent Democratic, which seems to me a plausible value. I then calculated reelection rates for MCs in districts that were, by this adjusted measure, between 47 percent and 53 percent Democratic in their underlying partisanship. The results are shown in column 9 of Table 2.

Note, first of all, how high the MC reelection rates remain even in districts in which there is essentially no underlying partisan advantage – 94.2 percent overall and 84.1 percent in sophomore elections. These figures are quite notable in themselves. But of the two, the latter figure should be considered more valid indicator of incumbent success, for this reason: The overall reelection rate undoubtedly misses some strategic retirements among senior incumbents, which would lead to an upward bias. Since, by contrast, scarcely any incumbents ever strategically retire prior to their sophomore reelections, the sophomore reelection rate suffers no such bias. It is also well within range of my simulation.<sup>24 25</sup>

It would obviously be useful to estimate the actual rate of strategic retirement among more senior MCs rather than, as I have done, simply assert that it probably occurs with enough frequency to cover the shortfall in my simulation. Consider, in this regard, the following argument: Jacobson and Dimock (1994) report that of the 27 MCs who had 200 or more overdrafts in 1992, 33 percent retired<sup>26</sup>; this compared to a 15 percent retirement rate among those with 100 to 199 overdrafts (n=20), an 11.9 percent retirement rate

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<sup>22</sup> The Senate vote totals and the 1980 presidential election results are based on "constant districts" – that is, the population base that became the House districts of the 1980s after the 1982 reapportionment – as reported in *Congressional Districts in the 1980s* by Congressional Quarterly.

<sup>23</sup> For example, the average Democratic vote in non-southern districts in 1980 was 44.7 percent, which is a clear underestimate of Democratic partisanship at the subpresidential level.

<sup>24</sup> If I adjust underlying district partisanship to 52 percent Democratic rather than 53 percent (by adding 3.3 points rather than 4.3 points to the average vote in five federal elections), the overall and sophomore reelection rates are 95.3 and 85.5 percent. If I adjust instead to 54 percent Democratic, these rates are 93.6 and 88.5.

<sup>25</sup> A caveat: The overall reelection rate in the simulations is somewhat sensitive to the specific value of the term limit, which is a parameter in the model. The reelection rate is higher with higher term limits, since high term limits permit the strongest incumbents to stay in the game longer, thus driving up the overall reelection rate. Hence, if I raise the term limit from 17 to 22 elections in a regime in which luck variance is one eighth of skill variance, the overall reelection rate rises slightly, to 93.1 from 92.4. If I lower the term limit to 12 elections, the overall reelection rate falls to 90.6. Sophomore reelection rates are unaffected by this manipulation.

<sup>26</sup> Thirty-nine percent of the rest (7/18) were defeated in the primary or general election.

among those with one to 99 overdrafts (n=219), and an 8.9 percent retirement rate among those with no overdrafts (n=168). The difference between an 8.9 percent retirement rate in the no overdraft group and the retirement rates in the overdraft groups amounts to 14 individuals, or 3.2 percent of the House membership who showed up as retirements but could well be considered defeats. This level of strategic retirement, though not especially high, is high enough to bring the "real defeat rate" among MCs – that is, the rate that would be observed if incumbents did not retire strategically – into range of my simulations. In another study, Peters and Welch (1980) find that, in the period 1968 to 1978, incumbents faced with scandal also tended to retire at slightly elevated rates. Herrnson (1998, p. 32) also maintains that senior incumbents retire strategically in order to avoid defeat, but does not provide a numerical estimate.

My point here is not simply that scandals lead to a certain amount of strategic retirement, since scandals are too rare to have much effect on overall election statistics. The point is more general: That some incumbents facing a high danger of defeat decide to quit rather than fight. Scandals are important to this argument only because they constitute a reliable way of identifying a few cases of threat for the sake of observing the effect of the threat. By far the greatest number of strategic retirements undoubtedly occur in response to threats not so readily detectable, at least from my academic distance. But such retirements may nonetheless occur regularly, perhaps taking the form of what seem like openseat victories by "quality" or "experienced" challengers who have, in reality, scared a senior incumbent into strategic retirement.

If, then, we return to the sophomore reelection rate and take it as the most valid, currently available estimate of electoral risk, an examination of Table 2 suggests that the risk faced by incumbents in marginal districts is roughly what would be expected in an electoral regime in which the variance in luck is perhaps a little less than an eighth of the variance in skill (column 2).<sup>27</sup>

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<sup>27</sup> I would like at this point to acknowledge a discrepancy between the simulation and the data. I do so in a footnote because I judge the discrepancy to be, despite appearances, an unimportant one.

Reelection rates vary by party, by year, and by decade. The most important variations are the reelection rates for Democrats in the 80s, which are 96.5 percent overall and 93.29 percent in sophomore elections. Both figures – especially the former, which is probably inflated by strategic retirement – are notably above what even a model of pure skill can explain. If, however, there were any partisan tides (luck) that favored the Democrats in the 1980s, both figures would be within range of the simulation. This is because the simulation, as presented, assumes that luck has a mean of zero in all cases; if there were a group (Democrats in the 80s or Republicans in the 90s) for which luck was generally positive for an election or series of elections, reelection rates would be higher in those groups. But because the simulation estimates reelection rates for all cases, not subsets of cases for which luck seems to be positive, its estimates ought to be evaluated in light of overall reelection rates.

But suppose that the high reelection rates of Democrats in the 80s cannot be satisfyingly explained in this way. How much too high, then, would the actual rates be? For districts, such as the ones we are

The data in Table 2 on the actual percent of MCs who reach 10 or more terms (39 percent, as shown in column eight) also look reasonably similar to what would be expected in a regime in which luck variance is one eighth of skill variance (47 percent, as shown in column 2). The simulation and the actual data are, however, far apart for the percent of MCs who reach 17 terms – a repetition of the earlier observation of under-performance by very senior MCs. I shall return to this under-performance issue in a moment.

Partisan tides in the elections from 1982 to 1990 were within the normal range. Not so in the elections of 1992, 1994, and 1996, which included an unusually disruptive reapportionment and the so-called "Revolution of 1994." Thus, as column 10 of Table 2 shows, reelection rates for MCs in these elections are notably lower than in the earlier set, 88.9 percent overall and 85.6 percent in sophomore elections. As column 11 further shows, the title defense (reelection) rates for boxers are still lower: 81 percent overall and 67 percent in sophomore elections. These lower rates are not, in themselves, illuminating, but they do create the conditions for a challenging test of the selection model, as follows: Lower reelection rates indicate higher levels of luck, and higher levels of luck indicate, in turn, a decrease in the magnitude of the Surge coefficient and an increase the magnitude of the Term coefficient, as explained above. The expectation, then, is that the Surge coefficient should be larger for MCs in 1990 than in 1996, and that the Term coefficient should be smaller among MCs in 1990 than in 1996. The model further implies that the Surge coefficient among boxers should be lower than among MCs, and possibly negative. And finally, the model implies that the Term coefficient should be larger among the boxers than among the MCs. As Table 2 shows, the first three of these implications are supported by the data, while the last cannot be easily evaluated owing to differences in the scaling of the dependent variable.

This pattern of effects, especially the negative Surge coefficient among boxers, seems to me strong support for the electoral selection model. The support is not, however,

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considering, in which underlying partisanship is virtually even, the expected reelection rate ought to be around 50 percent. Hence anything much above this level requires special explanation. According to column two of Table 2, a simulation involving mostly skill but some luck can explain why the overall reelection rate in such districts might be as high as 92.2 percent and the sophomore rate might be as high as 83.4 percent. As indicated, these actual rates for Democratic incumbents in the 80s are 97 and 93 percent. The difference might be attributed to other factors, including the special value of incumbency. Although, as I argued in the first two sections of this paper, there is little strong evidence that the value of incumbency is large, it may not be zero either.

But the first argument is, I think, the more important: Results of the simulation ought to be evaluated in light of reelection rates for the population as a whole, not rates for subgroups known to be doing especially well in a particular period. This argument would lose force if the advantaged group seemed to enjoy a permanent edge, but experience in the 90s suggests that this is not the case. See notes 26 and 40 above.

unblemished. I should add that, in conducting the regressions just described, I did not include a variable for Terms Squared, even though I did include this variable in my earlier analysis of the effect of terms of service on vote margin (see Table 1). The reason is that, in the earlier analysis, I had a clear theoretical reason for including Terms Squared, while in the present analysis, I do not. Nonetheless, and in contrast to data from the 1980 and 1990 elections, the 1996 data exhibit pronounced non-monotonicity, such that a Terms Squared variable attracts a significant negative coefficient if included in the analysis.

Why non-monotonicity might exist in the electorally turbulent 90s but not in the more tranquil 1980s is not clear. Perhaps it reflects Fenno's observation that, late in their careers, MCs become Washington-oriented and hence more electorally vulnerable. Or, even more simply, it may indicate that incumbents are less energetic or skillful near the end of their careers. This vulnerability remains invisible in politically tranquil times, such as the 1980s, but appears in more turbulent ones when strong challengers are emboldened to take them on.

Still on the subject of imperfect support for the model, I should also note that, as shown in Figure 1, there is essentially no term-by-term increase in winning margins by incumbents in the "low luck" period of the 1980s, despite the existence of a skill-driven selection process that, as I claim, is quite relentless. This virtually flat trend in the data is thus something of a puzzle, not only for my argument on electoral selection but for the standard argument that MCs build voter support at least during their first several terms in office. Putting these two arguments somewhat inelegantly together, however, can render intelligible the data from the 1980s: If, over time, incumbents become increasingly oriented toward Washington work at the expense of district work, and are also an increasingly selected group, the effects of these opposing processes could yield a flat trend in electoral support, as observed.

These explanations all invoke factors outside the model of electoral selection – essentially, some sort of life cycle-related diminution of political skill – to account for weaker-than-expected showings by the most senior MCs in both the 1980s and 1990s. The need to do so points up a real shortcoming of the model and an area where modification might prove fruitful. But the limitation is not so great as to undermine the main implications of the model, which are that electoral selection is a more powerful mechanism than has generally been recognized, and further, that in combination with district partisanship, it can provide a sufficient if general account of many important aggregate features of the data on congressional careers, most especially the appearance of special incumbency advantage.

#### IV. Conclusion

My argument is that the interaction of luck and skill can explain the most salient aspects of congressional career data. Such an argument is admirably general, yet it risks, despite its ability to explain important details, being overly abstract. What, after all, are "luck" and "skill," as theorized in the selection model? And how do they relate to existing literature on congressional elections?

A simple answer to the latter question is that, while most congressional scholars have focused on what MCs do to insure reelection, my argument focuses on how well they do it. The omitted question in conventional scholarship is: But how well do MCs do what they do? And the omitted question in my argument is: But what do MCs do well?

Let me, then, discuss my omitted question. Unlike the existing literature, which focuses on a handful of district-specific MC behaviors, my model, because so general, is open to the possibility that what MCs do to get themselves reelected is a wide variety of things: They raise campaign contributions, take stands on issues with a view to how constituents will respond, develop ties to interest groups, make TV ads, give speeches at citizen assemblies, impress potential challengers and other elites with their political skill – and, finally, they provide particularistic services of many types to individual citizens and the district as a whole. Although such particularistic service certainly has some importance, the claim that it is more important than the other activities in which MCs engage is by no means established. As recent work shows, many congressmen achieve electoral success without making district work their main selling point, probably because many constituencies are not primarily interested in particularistic services (Sellers, 1997). In view of this, little seems lost by neglecting the specific activities that MCs undertake and focusing instead on how well they perform a broad range of activities whose details are entirely open.

The conception of skill implicit in my model follows directly from this argument: Political skill, like many other kinds of ability, is probably not any one thing. It is many different skills, which different individuals possess in different amounts and combinations. One politician is good at casework, another is good with donors, another with local party officials, another at making TV ads, another at the arts of bamboozlement. What exactly counts as political skill probably varies by district, depending on local interests and culture, as suggested by the work of Sellers (1997). It probably also varies by historical era. But political skill, though variable in content across place and time, would tend to have a set and definite distribution in each particular place and time -- some individuals would have a lot, some very little, and so forth -- and this would give rise to a distribution of skills within each district, as hypothesized in my simulation.

It is hard to say what exactly the shape of the distribution of political skill would be. My initial intuition was that political skill is formed from the sum of numerous discrete and somewhat independent talents. If so, the Central Limit Theorem would suggest that the overall distribution of talents in nature would be normal, which would justify my use of the right-hand tail of a normal distribution as the foundation of my simulations. However, my colleague, Jim DeNardo, points out that a politician who was deficient in any important aspect of political skill would tend to fall abruptly out of the competitive game, in which case the distribution of political talent in nature might be more like a log normal distribution. In view of this uncertainty, I am pleased to be able to report that simulations do not seem to be highly sensitive to this issue, since I have obtained similar results doing runs with the whole normal distribution.

In sum, political skill is a type of ability and, as such, it is most appropriately conceptualized as an aggregate (whether additive or multiplicative) of numerous, somewhat discrete talents. This implicit conception articulates well with Jacobson's (1997) account of the multiple activities in which MCs routinely engage. It also fits well with Jacobson and Kernell's work (1981; also Jacobson, 1989, 1996) on the importance of challenger quality, and with Cox and Katz's (1996) finding that increases in the importance of candidate quality are the key reason for the increase in incumbency advantage since the late 1960s.

This last point bears amplification. As Cox and Katz argue, the massive redistricting forced by the Supreme Court's "one person, one vote" rulings of the 1960s was unusually disruptive to congressional politics. When the new, often oddly shaped but always equal-population districts came into existence in the late 1960s, they rendered party organizations that were organized along county lines useless for contesting many congressional elections. As a result, individual candidates who once relied on the parties to run their campaigns were suddenly forced into the business of campaign management. This, in turn, put a greater premium on candidate "quality" than had previously existed, and it was at this point that incumbency advantage suddenly took on heightened importance. An argument that stresses candidate quality as the basis of incumbency advantage is obviously a very close fit with my own.

My own argument would, of course, be stronger if I could make "political skill" more concrete and measure its effect in relation to the effect of incumbency, independent of skill. It is, as it happens, possible to do something like this for a special sample of cases. Between 1982 and 1996, there were 43 pairs of elections in which the same candidates faced each other in successive elections and in which one of the candidates was a non-



incumbent in the first election and an incumbent in the second.<sup>28</sup> For these pairs, the difference between the loser's vote in the first election and his or her vote in the second is a measure of the power of incumbency, controlling for the skill of the opponents. The results are that repeaters win 44.1 percent of the vote in the first race in the pair and 43.0 percent in the second, for a mean shift of -1.1 percent. These results are nearly identical to those of Squire and Smith (1984), who found a mean difference of -1.3 percent for 38 comparable pairs between 1962 and 1980. Thus, the effect of incumbency, controlling for the skill of the opponents, seems to be small. One can imagine important factors that might bias this test either way, so I do not place great emphasis on it.<sup>29</sup> But the results seem worth reporting nonetheless.

A last point about the nature of political skill: Although skill is, as I have stressed, probably a composite of many small skills, it seems likely that a good number of these skills bear in some fairly direct way on electioneering, since, as seems likely, most constituents are too disengaged from congressional politics to give MCs much credit for activities that never become issues in the electoral arena. Given the infrequency of strongly contested House elections, it may be difficult to learn much about electoral skill from them, but Senatorial, gubernatorial, and other state-level contests would seem to offer excellent opportunities (Alvarez, 1997).<sup>30</sup>

The conception of luck implicit in my simulation of electoral selection is any kind of randomly occurring event that helps or hurts a candidate. National partisan swings are probably the most important form of luck – tides that sweep otherwise weak candidates into office and defeat even strong ones. An MC may also be lucky enough to be able to claim credit for bringing scheduled airline service to a regional airport, or unlucky enough to have a spouse divorce him or her in a media extravaganza. In boxing, a great champion is one who is good enough to survive even off-nights and biased judges, and the same is presumably true of champion politicians. Example: In 1992 Senator Arlen Specter, a

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<sup>28</sup> This data is available upon request.

<sup>29</sup> Repeat challengers might be a more determined group than average, which would bias the test against finding an incumbency effect. On the other hand, repeat challengers, having lost once, might find it more difficult to raise money for a second try, which would bias the test in favor of finding an incumbency effect. The latter confound could, in principle, be controlled for, along with other factors, such as partisan tides. I have not been able to do this analysis.

<sup>30</sup> Among the most neglected aspects of MC activity in the agenda-setting literature is use of the mass media, both within and between elections. Fenno's (1978) classic study mentions it only incidentally, focusing instead on meetings between MCs and relatively small groups. The mass media, to the extent they are noted, are often simply the name for a variable in a regression model. An exception is Westlye, 1991, who emphasizes the importance of media decisions to cover or ignore challenges to incumbents. See also Cook (1989).

proven champion, defeats Lynn Yeakel, a novice, even in the Year of the Woman and despite Specter's questioning of Anita Hill in the Clarence Thomas hearings.

One final but important point. Although my empirical analysis emphasizes the limited attention of voters to MC activities and my theoretical analysis of electoral selection focuses entirely on candidates and their skills, it does not follow that voters are irrelevant to the dynamics of congressional elections. To the contrary, voters drive the whole process: "Political skill," more elaborately stated, is really "skill at finding out what voters want and convincing them that you have given it to them." Voters do not need to follow everything politicians do on a day-to-day basis in order to choose the better politicians; they need only pay attention at election time to what the incumbent has done and what the challenger promises to do.

Thus, what candidates do and promise to do – whether the provision of particularistic service, issue representation, or some other bundle of services – is by no means irrelevant to understanding the politics of congressional elections. But it is not what candidates do that explains incumbency advantage; it is how well they do it.

## APPENDIX A

### **Trends in careers of heavy-weight boxers**

The purpose of this appendix is to describe the estimation of the effect of "incumbency" on the "margin of victory" for heavy-weight boxing champions, as reported in Table 2. I constructed three indicators of victory margin. The first, called KNOCKOUT, takes into account whether a knockout has occurred. A knockout by the champion is scored as +2, a judge's decision for the champion as +1, a decision against the champion as -1, and a knockout of the champion as -2. In the second, more elaborate measure, I take account of how long it took for a knockout to occur. A first-round knockout in a fifteen round fight is scored as +16 for the victor, a second-round knockout as +15, and so on down to a 15th round knockout as +2 and a victory by decision as +1. Losses by a champion are given corresponding negative values; thus, a first round knockout of the champion by a challenger is scored as -16 and a loss by decision as -1. This variable is called ROUNDS. Finally, to accommodate nonlinearity, I created a compressed version of ROUNDS by taking logs. This variable is called LOGROUNDS.

In most cases, fighters have only one run as champion, such that if they loose, they never win again. But a few had two separate runs, and Mohammed Ali had two runs of ten fights and a third title victory besides. In my scoring of the Term variable, I count each string of victories as a separate career, including its own Surge term. Fights in which a champion is defeated are counted twice, once as the last fight in the string of the outgoing champion and once as the first fight in the string of the new champion.

Results for each form of the dependent variable are shown in Table A1. A negative Surge coefficient and a positive Term coefficient are obtained for each scoring rule, though results are considerably stronger for the simplest form of the scale. Given the results of the simulation, I report one-tailed significance tests, all six of which exceed the .05 level. Table A2 shows the data on which these calculations were made.

INSERT TABLE A1 AND A2 ABOUT HERE

The boxing career data through 1986 were taken from *The World Sports Record Atlas* (Emery and Greenberg, 1986). For title fights from 1986 through 1994, my research assistant, Mark Hunt, consulted newspapers. In cases of disputed titles, the rule was to recognize the most important champion. After 1994, feuding among competing confederations made it impossible to specify who the champion was.

*Table A1.* Title Fight Wins and Victory Margin among Heavy-Weight Boxing Champions.

|  | KNOCKOUT<br>(-2 to +2) | ROUNDS<br>(-16 to +16) | LOGROUNDS<br>(-1.2 to +1.2) |
|--|------------------------|------------------------|-----------------------------|
| Sophomore Surge<br>(range 0-1)                   | -.84<br>(.29)          | -2.92<br>(1.74)        | -.29<br>(.15)               |
| Number of title<br>fights won<br>(range 1 to 26) | .06<br>(.02)           | .26<br>(.12)           | .028<br>(.01)               |
| Intercept  | 1.61                   | 6.71                   | .60                         |
| Adjusted r-square                                | .06                    | .02                    | .03                         |
| N of cases 149                                   |                        |                        |                             |

Note. Standard errors appear in parentheses. Measures described in Appendix A.

*Table A2. Careers. of heavy-weight boxing champions*

| Champion  | Opponent  | Date     | Consecutive | Total  | Total  | KO  | Win              | Case            |
|-----------|-----------|----------|-------------|--------|--------|-----|------------------|-----------------|
|           |           |          | Prior title | Prior  |        |     |                  |                 |
|           |           |          | Wins        | Titles | Rounds |     |                  |                 |
| Schmeling | Sharkey   | 6/12/30  | 0           | 0      | 4      | No  | Yes <sup>1</sup> | 1               |
|           | Stibling  | 7/3/31   | 1           | 1      | 15     | Yes | Yes              | 2               |
|           | Sharkey   | 6/21/32  | 2           | 2      | 15     | No  | No               | 3               |
| Sharkey   | Schmeling | 6/21/32  | 0           | 0      | 15     | No  | Yes              | 4               |
| Sharkey   | Carnera   | 6/29/33  | 1           | 1      | 6      | Yes | No               | 5               |
| Carnera   | Sharkey   | 6/29/33  | 0           | 0      | 6      | Yes | Yes              | 6               |
|           | Uzcudun   | 10/22/33 | 1           | 1      | 15     | No  | Yes              | 7               |
|           | Loughran  | 3/1/34   | 2           | 2      | 15     | No  | Yes              | 8               |
| Carnera   | Baer      | 6/14/34  | 3           | 3      | 11     | Yes | No               | 9               |
| Baer      | Carnera   | 6/14/34  | 0           | 0      | 11     | Yes | Yes              | 10              |
| Braddock  | Braddock  | 6/13/35  | 1           | 1      | 15     | No  | No               | 11              |
|           | Baer      | 6/13/35  | 0           | 0      | 15     | No  | Yes              | 12              |
|           | Louis     | 6/22/37  | 1           | 1      | 8      | Yes | No               | 13              |
| Louis     | Braddock  | 6/22/37  | 0           | 0      | 8      | Yes | Yes              | 14              |
|           | Farr      | 8/30/37  | 1           | 1      | 15     | No  | Yes              | 15              |
|           | Mann      | 2/23/38  | 2           | 2      | 3      | Yes | Yes              | 16              |
|           | Thomas    | 4/1/38   | 3           | 3      | 5      | Yes | Yes              | 17              |
|           | Schmeling | 6/22/38  | 4           | 4      | 1      | Yes | Yes              | 18              |
|           | Lewis     | 6/25/39  | 5           | 5      | 1      | Yes | Yes              | 19              |
|           | Roper     | 4/17/39  | 6           | 6      | 1      | Yes | Yes              | 20              |
|           | Galento   | 6/28/39  | 7           | 7      | 4      | Yes | Yes              | 21              |
|           | Pastor    | 9/20/39  | 8           | 8      | 11     | Yes | Yes              | 22              |
|           | Godoy     | 2/9/40   | 9           | 9      | 15     | No  | Yes              | 23              |
|           | Paycheck  | 3/29/40  | 10          | 10     | 2      | Yes | Yes              | 24              |
|           | Godoy     | 2/9/40   | 11          | 11     | 8      | Yes | Yes              | 25              |
|           | McCoy     | 12/26/40 | 12          | 12     | 6      | Yes | Yes              | 26              |
|           | Burman    | 1/1/41   | 13          | 13     | 5      | Yes | Yes              | 27              |
|           | Dorazio   | 2/17/41  | 14          | 14     | 2      | Yes | Yes              | 28              |
|           | Simon     | 3/21/41  | 15          | 15     | 13     | Yes | Yes              | 29              |
|           | Musto     | 4/8/41   | 16          | 16     | 9      | Yes | Yes              | 30              |
|           | Baer      | 5/23/41  | 17          | 17     | 7      | Yes | Yes              | 31              |
|           | Conn      | 6/18/41  | 18          | 18     | 13     | Yes | Yes              | 32              |
|           | Nova      | 9/29/41  | 19          | 19     | 6      | Yes | Yes              | 33              |
|           | Baer      | 1/9/42   | 20          | 20     | 1      | Yes | Yes              | 34              |
|           | Simon     | 3/27/42  | 21          | 21     | 6      | Yes | Yes              | 35              |
|           | Conn      | 6/19/46  | 22          | 22     | 8      | Yes | Yes              | 36              |
|           | Mauriello | 9/18/46  | 23          | 23     | 1      | Yes | Yes              | 37              |
|           | Walcott   | 12/5/47  | 24          | 24     | 15     | No  | Yes              | 38              |
|           | Walcott   | 6/25/48  | 25          | 25     | 11     | Yes | Yes              | 39 <sup>2</sup> |
|           | Charles   | 6/22/49  | 0           | 0      | 15     | No  | Yes              | 40              |
|           | Lesnevich | 8/10/49  | 1           | 1      | 7      | Yes | Yes              | 41              |
|           | Valentino | 10/14/49 | 2           | 2      | 8      | Yes | Yes              | 42              |

|           |              |          |   |   |    |     |                 |                 |
|-----------|--------------|----------|---|---|----|-----|-----------------|-----------------|
|           | Beshore      | 8/15/50  | 3 | 3 | 14 | Yes | Yes             | 43              |
|           | Louis        | 9/27/50  | 4 | 4 | 15 | No  | Yes             | 44              |
|           | Barone       | 12/5/50  | 5 | 5 | 11 | Yes | Yes             | 45              |
|           | Oma          | 1/12/51  | 6 | 6 | 10 | Yes | Yes             | 46              |
|           | Walcott      | 3/7/51   | 7 | 7 | 15 | No  | Yes             | 47              |
|           | Maxim        | 5/30/51  | 8 | 8 | 15 | No  | Yes             | 48              |
|           | Walcott      | 7/18/51  | 9 | 9 | 7  | Yes | No              | 49              |
| Walcott   | Charles      | 7/18/51  | 0 | 0 | 7  | Yes | Yes             | 50              |
|           | Charles      | 6/5/52   | 1 | 1 | 15 | No  | Yes             | 51              |
|           | Marciano     | 9/23/52  | 2 | 2 | 13 | Yes | No              | 52              |
| Marciano  | Walcott      | 9/23/52  | 0 | 0 | 13 | Yes | Yes             | 53              |
|           | Walcott      | 5/15/53  | 1 | 1 | 1  | Yes | Yes             | 54              |
|           | LaStarza     | 9/24/53  | 2 | 2 | 11 | Yes | Yes             | 55              |
|           | Charles      | 6/17/54  | 3 | 3 | 15 | No  | Yes             | 56              |
|           | Charles      | 9/17/54  | 4 | 4 | 8  | Yes | Yes             | 57              |
|           | Cockell      | 5/16/55  | 5 | 5 | 9  | Yes | Yes             | 58 <sup>3</sup> |
|           | Moore        | 9/21/55  | 6 | 6 | 9  | Yes | Yes             | 59              |
| Patterson | Moore        | 11/30/56 | 0 | 0 | 5  | Yes | Yes             | 60              |
|           | Jackson      | 7/29/57  | 1 | 1 | 10 | Yes | Yes             | 61              |
|           | Rademacher   | 8/22/57  | 2 | 2 | 6  | Yes | Yes             | 62              |
|           | Harris       | 8/18/58  | 3 | 3 | 12 | Yes | Yes             | 63              |
|           | London       | 5/1/59   | 4 | 4 | 11 | Yes | Yes             | 64              |
|           | Johansson    | 6/26/59  | 5 | 5 | 3  | Yes | No              | 65              |
| Johansson | Patterson    | 6/26/59  | 0 | 0 | 3  | Yes | Yes             | 66              |
|           | Patterson    | 6/20/60  | 1 | 1 | 5  | Yes | No              | 67              |
| Patterson | Johansson    | 6/20/60  | 0 | 5 | 5  | Yes | Yes             | 68              |
|           | Johansson    | 3/13/61  | 1 | 6 | 6  | Yes | Yes             | 69              |
|           | McNeeley     | 12/4/61  | 2 | 7 | 4  | Yes | Yes             | 70              |
|           | Liston       | 9/25/62  | 3 | 8 | 1  | Yes | No              | 71              |
| Liston    | Patterson    | 9/25/62  | 0 | 0 | 1  | Yes | Yes             | 72              |
|           | Patterson    | 7/22/63  | 1 | 1 | 1  | Yes | Yes             | 73              |
|           | Ali          | 2/25/64  | 2 | 2 | 6  | Yes | No <sup>4</sup> | 74              |
| Ali       | Liston       | 2/25/64  | 0 | 0 | 6  | Yes | Yes             | 75              |
|           | Liston       | 5/25/65  | 1 | 1 | 1  | Yes | Yes             | 76              |
|           | Patterson    | 11/22/65 | 2 | 2 | 12 | Yes | Yes             | 77              |
|           | Chuvalo      | 3/29/66  | 3 | 3 | 15 | No  | Yes             | 78              |
|           | Cooper       | 5/21/66  | 4 | 4 | 6  | Yes | Yes             | 79              |
|           | London       | 8/6/66   | 5 | 5 | 3  | Yes | Yes             | 80              |
|           | Mildenberger | 9/19/66  | 6 | 6 | 12 | Yes | Yes             | 81              |
|           | Williams     | 11/14/66 | 7 | 7 | 3  | Yes | Yes             | 82              |
|           | Terrell      | 2/6/67   | 8 | 8 | 15 | No  | Yes             | 83              |
|           | Folley       | 3/22/67  | 9 | 9 | 7  | Yes | Yes             | 84 <sup>5</sup> |
| Frazier   | Ellis        | 2/16/70  | 0 | 0 | 4  | Yes | Yes             | 85              |
|           | Ali          | 3/8/71   | 1 | 1 | 15 | No  | Yes             | 86              |
|           | Foster       | 11/18/71 | 2 | 2 | 2  | Yes | Yes             | 87              |

|         |             |          |    |                |    |     |     |                  |
|---------|-------------|----------|----|----------------|----|-----|-----|------------------|
| Foreman | Daniels     | 1/15/72  | 3  | 3              | 4  | Yes | Yes | 88               |
|         | Strander    | 5/25/72  | 4  | 4              | 4  | Yes | Yes | 89 <sup>6</sup>  |
|         | Foreman     | 1/22/73  | 5  | 5              | 2  | Yes | No  | 90               |
|         | Frazier     | 1/22/73  | 0  | 0              | 2  | Yes | Yes | 91               |
|         | Roman       | 9/1/73   | 1  | 1              | 1  | Yes | Yes | 92               |
|         | Norton      | 3/3/74   | 2  | 2              | 2  | Yes | Yes | 93               |
| Ali     | Ali         | 10/30/74 | 3  | 3              | 8  | Yes | No  | 94               |
|         | Foreman     | 10/30/74 | 0  | 10             | 8  | Yes | Yes | 95               |
|         | Wepner      | 3/24/75  | 1  | 11             | 15 | Yes | Yes | 96               |
|         | Lyle        | 5/16/75  | 2  | 12             | 11 | Yes | Yes | 97               |
|         | Bugner      | 7/1/75   | 3  | 13             | 15 | No  | Yes | 98               |
|         | Frazier     | 10/1/75  | 4  | 14             | 14 | Yes | Yes | 99               |
|         | Coopman     | 2/20/76  | 5  | 15             | 5  | Yes | Yes | 100              |
|         | Young       | 4/30/76  | 6  | 16             | 15 | No  | Yes | 101              |
|         | Dunn        | 5/24/76  | 7  | 17             | 5  | Yes | Yes | 102              |
|         | Norton      | 9/28/76  | 8  | 18             | 15 | No  | Yes | 103              |
|         | Evangelista | 5/16/77  | 9  | 19             | 15 | No  | Yes | 104              |
|         | Spinks      | 2/15/78  | 10 | 20             | 15 | No  | No  | 105              |
| Spinks  | Ali         | 2/15/78  | 0  | 0              | 15 | No  | Yes | 106              |
|         | Ali         | 9/15/78  | 1  | 1              | 15 | No  | No  | 107              |
| Ali     | Spinks      | 9/15/78  | 0  | 21             | 15 | No  | Yes | 108              |
| Ali     | Holmes      | 10/2/80  | 1  | 22             | 10 | Yes | No  | 109              |
| Holmes  | Ali         | 10/2/80  | 0  | 0 <sup>7</sup> | 10 | Yes | No  | 110              |
|         | Berbick     | 4/11/81  | 1  | 1              | 15 | No  | Yes | 111              |
|         | Spinks      | 6/12/81  | 2  | 2              | 3  | Yes | Yes | 112              |
|         | Snipes      | 6/12/81  | 3  | 3              | 11 | Yes | Yes | 113              |
|         | Cooney      | 6/14/82  | 4  | 4              | 13 | Yes | Yes | 114              |
|         | Cobb        | 11/25/82 | 5  | 5              | 15 | No  | Yes | 115              |
|         | Rodriquez   | 3/27/83  | 6  | 6              | 12 | No  | Yes | 116              |
|         | Witherspoon | 5/20/83  | 7  | 7              | 15 | No  | Yes | 117              |
|         | Frank       | 9/10/83  | 8  | 8              | 5  | Yes | Yes | 118              |
|         | Frazier     | 11/25/83 | 9  | 9              | 1  | Yes | Yes | 119              |
|         | Smith       | 11/9/84  | 10 | 10             | 12 | Yes | Yes | 120              |
|         | Bey         | 3/15/85  | 11 | 11             | 10 | Yes | Yes | 121              |
|         | Williams    | 5/20/85  | 12 | 12             | 15 | No  | Yes | 122              |
|         | Spinks      | 9/20/85  | 13 | 13             | 15 | No  | Yes | 123              |
| Spinks  | Holmes      | 9/20/85  | 0  | 1              | 15 | No  | Yes | 124              |
|         | Holmes      | 4/19/86  | 1  | 2              | 15 | No  | Yes | 125 <sup>8</sup> |
| Tyson   | Tucker      | 8/1/87   | 0  | 0              | 12 | No  | Yes | 126              |
|         | Biggs       | 10/16/87 | 1  | 1              | 7  | Yes | Yes | 127              |
|         | Holmes      | 1/22/88  | 2  | 2              | 4  | Yes | Yes | 128              |
|         | Tubbs       | 3/20/88  | 3  | 3              | 2  | Yes | Yes | 129              |
|         | Spinks      | 6/27/88  | 4  | 4              | 1  | Yes | Yes | 130              |
|         | Bruno       | 2/25/89  | 5  | 5              | 5  | Yes | Yes | 131              |
|         | Williams    | 7/21/89  | 6  | 6              | 1  | Yes | Yes | 132              |
|         | Douglas     | 2/10/90  | 7  | 7              | 10 | Yes | No  | 133              |

|           |           |          |   |   |    |     |     |     |
|-----------|-----------|----------|---|---|----|-----|-----|-----|
| Douglas   | Tyson     | 2/10/90  | 0 | 0 | 10 | Yes | Yes | 134 |
|           | Holyfield | 10/25/90 | 1 | 1 | 3  | Yes | No  | 135 |
| Holyfield | Douglas   | 10/25/90 | 0 | 0 | 3  | Yes | Yes | 136 |
|           | Foreman   | 4/19/91  | 1 | 1 | 12 | No  | Yes | 137 |
|           | Cooper    | 11/24/91 | 2 | 2 | 7  | Yes | Yes | 138 |
|           | Holmes    | 6/19/92  | 3 | 3 | 12 | No  | Yes | 139 |
|           | Bowe      | 11/13/92 | 4 | 4 | 12 | No  | No  | 140 |
| Bowe      | Holyfield | 11/13/92 | 0 | 0 | 12 | No  | Yes | 141 |
|           | Dokes     | 2/6/93   | 1 | 1 | 1  | Yes | Yes | 142 |
|           | Ferguson  | 5/22/93  | 2 | 2 | 2  | Yes | Yes | 143 |
|           | Holyfield | 11/6/93  | 3 | 3 | 12 | No  | No  | 144 |
| Holyfield | Bowe      | 11/6/93  | 0 | 5 | 12 | No  | Yes | 145 |
|           | Moorer    | 4/22/94  | 1 | 6 | 12 | No  | No  | 146 |
| Moorer    | Holyfield | 4/22/94  | 0 | 0 | 12 | No  | Yes | 147 |
|           | Foreman   | 11/5/94  | 1 | 1 | 10 | Yes | No  | 148 |
| Foreman   | Moorer    | 11/5/94  | 0 | 3 | 10 | Yes | Yes | 149 |

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<sup>1</sup> Sharkey disqualified in fourth round for foul.

<sup>2</sup> Lewis retired undefeated as champion.

<sup>3</sup> Marciano retired undefeated as champion.

<sup>4</sup> Liston listed as having "retired" from fight--he failed to answer the bell for the 7th.

<sup>5</sup> Ali stripped of title by WBA and New York State Athletic Commission for refusal to submit to draft process.

<sup>6</sup> Stander failed to answer bell for 5th.

<sup>7</sup> Holmes had won eight fights under WBC banner, but I don't count him as champion until he beats Ali.

<sup>8</sup> Spinks stripped of title in February, 1987 for failing to defend within 6 months; subsequent fight with Cooney not counted as title fight.



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