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Dissertation Chapter Draft

Bidirectional Bullying:
The Effect of Challenger Quality on Incumbent's Career Decisions

Abstract: It is commonly assumed that incumbents decide whether or not to seek reelection both before challengers decide if they are going to run against them and without consideration of challenger behavior. It is correspondingly assumed that challengers decide whether or not to enter races only after incumbents, and in response to incumbents' decisions. I argue that incumbents and challengers make these decisions simultaneously, and both consider the possibility that the other might enter. I conduct a test between an "Incumbent First" and a "Simultaneous" model; results indicate that we should reject the Incumbent First model. I further test for several empirical implications of simultaneous decision-making. Results indicate that both incumbents and challengers behave in patterns which are consistent with bi-directional influence. Additionally, results indicate that the incumbency advantage is not impenetrable. In particular, if challengers and incumbents influence one another, sometimes the entry of a strong challenger induces the incumbent to decide not to seek reelection.

Most depictions of the decision to enter the race for a House seat put incumbents in the driver's seat. According to this literature, House incumbents may voluntarily leave their posts but scholars ascribe their departure to job dissatisfaction, (Frantzitch 1978; Cooper and West 1981) the lure of better jobs, (i.e., "progressive ambition," Schlessinger 1955; Black 1972; Rhode 1979), or some combination of the two (Hibbing 1982a, b, Hall and Van Houweling 1995, Kiewiet and Zeng 1993, Brace 1984, Maisel and Stone 1997). Even though incumbents make this decision atomistically, it has wide-ranging implications. Incumbents both determine for themselves whether to run and heavily influence whether quality challengers run, since such challengers are much more likely to run for an open seat than one being defended by an incumbent (e.g., Jacobson 1997). Finally, incumbents also affect their party's fortunes in the district they represent. If they seek reelection, they and their party benefit from a sizable "incumbency advantage;" if they don't, their parties suffer a "retirement slump" at the next House election in their abandoned district (e.g, Gelman and King 1990, Cox and Katz 1996).

In the extant literature, there is no context under which other actors play a role in the incumbent's decision to run for reelection. In this paper I argue that this is an incomplete depiction of incumbents' decision to run, because incumbents consider their prospects for winning reelection when deciding whether or not to run for it. How good these prospects are depends in part on who the incumbent runs against. This implies that the metaphor of a game of Chicken may often better describe many incumbents' decision-making process. In this metaphor the incumbent remains in the driver's seat, but there is another driver (an experienced politician) who is driving straight toward him (coveting his House seat). The first driver to swerve (the first candidate to exit, or never enter, the race) loses the game.

Conventional accounts do not view incumbents as very often, or ever, locked in Chicken games with even the highest quality challengers. Instead, these accounts hold that the incumbent has possession of her seat until she decides to leave of her own accord or is beaten. When deciding whether to run for reelection, the incumbent gets the first move and the challenger responds. Though some challengers will run even if the incumbent seeks reelection, most are willing to try if the incumbent departs the scene. These challengers wait to see what the incumbent does, and enter only if it becomes clear that the seat will be open. This model is embedded in most studies of challenger emergence, in that quality challengers are more likely to emerge when a seat is open, but the probability with a seat is open is not influenced by the whether a quality challenger runs (e.g. Robeck 1982, Bond et. al. 1997, Bianco 1984, Maisel and Stone 1997, Banks and Kiewiet 1989). Similarly, studies of incumbents' entry decisions fail to control for the strength of the incumbent's opponent when estimating decisions to enter or quit a race for reelection (e.g. Hall and Van Houweling 1995, Kiewiet and Zeng 1993, Hibbing 1982 a, b, Rhode 1979).

If, contrary to conventional wisdom, experienced challengers play Chicken games with incumbents, some challengers would be willing to enter a race before the incumbent has made up her mind, hoping that a credible commitment to running forces the incumbent to consider whether reelection is worth persevering through a difficult race. These challengers attempt to get incumbents to "swerve" and thus lose the game of Chicken. A typical scenario – drawn straight from the logic of the Chicken game – could be as follows. An experienced challenger is on the lookout for an incumbent with good alternative career options, perhaps in the form of other offices that they could run for. He thinks this incumbent is more likely than others to opt out of running for reelection if faced with a tough challenge, because of the easily-available alternative.

The challenger runs in this race, as opposed to another; the incumbent, faced with a hard go at reelection, departs the race in favor of the race for another office (which may be equally or more difficult, but which also may be more attractive).

Empirical tests of three types suggest that challengers do, in fact, influence incumbents' decisions. First, tests of predictions generated by a model of entry decisions in which the incumbent moves first and another in which incumbents and challengers move at the same time indicate that the Incumbent First model should be rejected. Second, incumbent behavior suggests that they are influenced by challengers. Third, political challengers act in a manner which suggests that they are aware that they can influence incumbents.

This paper offers three contributions to the literature on congressional elections. First, it advances a model of candidate decision-making in which incumbents and challengers consider entering for elections at the same time, and introduces the notion that challengers can influence incumbents' decisions to run for reelection.

Second, results of empirical tests between a Simultaneous model of candidate decision-making and an "Incumbent First" model force us to reconsider conventional notions of the incumbent advantage which portray it as large and universal to all incumbents. Studies which measure the incumbency advantage (Ansolabehere and Snyder 2002, Ansolabehere, Snyder and Stewart 2001, Cox and Katz 1996, Levitt and Wolfram 1997, Gelman and King 1990) all share at least two characteristics. First, they do not differentiate between incumbents who enjoy more or less of an advantage. (Similarly, studies seeking to identify the nature of the advantage – Fiorina 1989, Burnham 1974, Fiorina 1974 – point to sources which are available to all incumbents.) Second, the studies all estimate the advantage to be sizeable enough to give the incumbent a real advantage at the polls. The Incumbent First model rests on assumptions of the

size and universality of the incumbent advantage; the tests' failure to uphold the model implies that one or both of the conditions does not hold.

Third, the paper is the first to use game theory in the study of candidate entry decisions. Whereas previous studies have studied these as rationally-made decisions, this is the first to consider the decisions to be a result strategic interactions between multiple politicians. This innovation makes it easier to delve into a relatively under-researched questions: what determines the emergence, or lack thereof, of candidates at the primary election level?

The remainder of the paper proceeds as follows. Section 1 discusses the influence incumbents and challengers can have on each other in the entry decision, focusing on the under-studied possibility that challengers can influence incumbent behavior. Section 2 presents the outlines of a game theoretic model in which incumbents and challengers decide at the same time whether or not to enter a race. Section 3 introduces assumptions, common in the literature on congressional elections, which result in the Incumbent moving first in the entry game. Section 4 sets up and conducts a test between the Incumbent First and the Simultaneous Entry models. Section 5 presents some additional empirical evidence that incumbents and challengers move at the same time, and Section 6 concludes the paper.

Section 1 Entry Decisions and Push Outs

Black (1972) was the first to formalize the calculations made by those considering a run at political office. He expressed the expected utility of entering a race as a function of the probability P of winning, the benefits B which accrue from holding the office, and the cost C of running. I add one additional parameter, the benefits q accruing from the candidate's best

alternative should he lose the race. Potential candidate *j*'s expected utility of running for office *I* can be expressed as

$$U_j(\text{seek office}_i) = P_i^j B_i^j + (1 - P_i^j)q^j - C_i^j$$

The super- and subscripts indicate that each term's value varies both by candidate and by office. The potential candidate enters when the expected utility exceeds the value of his next-best alternative should he not run (*b*).[1] The next best alternative might be an additional term in the candidate's current seat, retirement, or a job in the private sector. Adding this new term yields

$$P_i^j B_i^j + (1 - P_i^j)q^j - C_i^j > b^j$$

It is commonly accepted in the literature that incumbents' entry decisions, once made, can change the parameters' values to potential challengers, thus deterring them from entering. It is less well-recognized, however, that incumbents do not deter challenger entry because of the inherent quality of "incumbentness." Rather, incumbents deter challengers because they are almost uniformly formidable opponents and running against them is both risky and costly. Non-incumbent candidates facing an incumbent win with a lower probability and pay higher costs to run than those who do not face incumbents. Given that, incumbents are not the only candidates with entry-deterring potential. Some non-incumbents are also formidable, and can cause concern for their own potential opponents, some of whom are inevitably incumbents. Incumbents' decisions about running for office are determined by the cost of running, the probability of winning, and the benefits of office just as are non-incumbents'. And, just as for non-incumbents, these parameters can change depending on who else is running. A formidable opponent means running is going to be costlier and the probability of winning is lower, regardless of incumbent status. Though it may not happen often, sometimes a strong challenger's entry may make

winning another term so expensive and/or unlikely that it drives the incumbents' expected utility of running below the expected value of his next-best alternative.

Cox and Katz (2002) discuss this phenomenon, labeling it a "pushout" because it describes a challenger's ability to push an incumbent out of his seat. They identify two necessary conditions for an incumbent's declining to run for reelection to be a pushout: the exiting incumbent must believe that he would have faced a formidable challenger if he had run; and the incumbent must have intended to run in the absence of that belief. These conditions make it difficult to identify pushouts, because we cannot look into the candidates' minds to identify the reason she retired. However, at times one of the parameters in the above inequality takes an extreme value and can visibly dominate the decision-making, making variations in the other terms irrelevant.

For instance, an incumbent who do does not run for reelection because she sees the office as offering low benefits is rarely pushed out. Such an incumbent may reject politics in favor of a lucrative life in the private sector, as did Susan Molinari, who gave up her House seat in 1998 to "fulfill a lifelong dream" of becoming a television news commentator. (Elving 1997, p. 1272). Or she might not see career advancement possibilities in their current seat, like Lynn Martin. In 1989 Martin lost a bid to become Republican Conference Chair; the next year, the fifth-term Republican gave up her safe House seat to make a risky run for Paul Simon's Illinois Senate seat, which she ultimately lost. Finally, he might simply value a political career less than a peaceful retirement. In 1980, 76-year-old Tom Steed gave up a 30-year House seat and an Appropriations subcommittee chair even though he won his previous election by 20 points. None of these incumbents anticipated a tough fight for reelection; rather, each chose to do something else with his or her life.

Incumbents are more likely to have been influenced by a challenger if another factor is the driving force behind the decision not to run. One such factor is a low probability of winning reelection. An incumbent may have fallen out of touch with her constituents, allowing another candidate to take advantage of the rift (as described in Fenno 1978). Or, she might have done poorly in the previous election, attracting strong opponents and the attention of the opposing party's money-giving interests. Whatever the reason, these incumbents tend draw the strongest challengers who, by being strong, only exacerbate the incumbent's problem of being unlikely to win reelection. Additionally, an incumbent who is considering a run at higher office may get pushed out of her seat if a strong challenger decides to run for the seat the incumbent currently is holding. The prospect of facing difficulty in winning another term in office, rather than doing so easily, may tilt the balance in favor of seeking the higher office.

One well-documented example of an incumbent responding to a challenger involves the retirement of Georgia Democrat Jack Flynt before the 1978 elections. In 1972, Flynt was an 18-year veteran of the House who regularly won reelection by large margins and had a seat on the Appropriations committee. His seat was safe, politically valuable, and inexpensive to retain. However, the 1972 redistricting gave him a district in which 54% of his constituents were new. Further, many of the new constituents were younger, more upscale, and more suburban than the voters Flynt was used to campaigning for. Although Flynt won reelection with his usual ease in 1972, in 1974 he received a vigorous challenge from history professor Newt Gingrich. Flynt held on to the district, 51%-49%. In 1976, Flynt faced Gingrich again and, despite a redoubling of effort, won by only 52%-48%. Soon after that election, Gingrich announced that he would try again in 1978. At that point, Flynt considered his situation. Gingrich had established in 1974 and 1976 that he was a formidable opponent. For Flynt, running against Gingrich a third time

would mean an uncertain outcome, even if he redoubled his effort (and therefore cost) yet again. As a result, Flynt decided that running against Gingrich would be too costly and uncertain, and retired. (Fenno 2000, 64-81).

Section 2 The Simultaneous Entry Game

In this section, I generalize on the Flynt-Gingrich example. This section presents a game theoretic model which illustrates interaction between incumbents and challengers. It is a one-shot game in which two players, an Incumbent and a Strong Challenger, simultaneously decide whether to run for a single office.[2] Both players must choose to either *Enter* the race or to *Not Enter* the race. The game is built upon the following assumptions (party labels are arbitrary):

1. The incumbent (I) is a Republican
2. There is exactly one strong potential Democratic challenger (D) (i.e., a challenger with a positive chance of defeating incumbent) available to run in the district.
3. The strong challenger is strategic, and will enter the race only if the expected payoff of doing so exceeds that of running again for his current (lesser) seat.
    a. If D does not run, he will run for the seat which he currently holds.
    b. If D runs for his current seat, he will retain it with certainty.
4. If the strong challenger does not run, another (weaker) challenger (d) will. He is
    a. non-strategic (i.e., will run regardless of his probability of winning). and
    b. not expected to win.
5. There is a single potential Republican challenger (r) , who will run if I retires. This candidate is also non-strategic and not expected to win.

Strategies and payoffs are presented in Figure 1. If both the Incumbent and the Challenger choose Enter, then both players receive *Hard Race*, since each must run against the other. If either politician decides to enter the race when the other does not, the entering politician runs an easy race against the non-strategic opponent, and receives *Easy Race.* The politician who opts out of the race receives the payoff of his *Next Best Alternative (NBA)*, which is the value of whatever career path the politician chooses other than seeking this particular office. For the Incumbent this may be to *Retire*, and for the Challenger it might be additional

term in his current seat, though the model does not differentiate between choices. If both players choose Not Enter, then both candidates receive their *NBA*.

As with all simultaneous-choice games, the solution depends on the players' payoff orderings. For exposition, I make one assumption about these orderings, that both players prefer an easy race against a weak opponent to any other outcome (relaxing the restriction does not change the model's predictions). This is the next best thing to running unopposed, almost guaranteeing the experienced candidate a victory. Therefore, the *Easy* race is always the most-preferred payoff for both players. Figure 2 presents the possible payoff ordering combinations. The first three combinations of payoff orderings are dominance-solvable and have unique solutions. In (a), where both players prefer the Hard race to their next best career alternatives (whatever they may be), the dominant strategy equilibrium (DSE) is (In, In). Games (b) and (c) are mirror images of one another. In each case one of the candidates prefers his *NBA* to the *Hard* race, while the other prefers the *Hard* race. Here, the DSE is for whichever candidate most prefers the *Hard* race to enter and the other to not enter; (In, Out) and (Out, In) respectively.

Game (d), in which both players prefer *NBA* to the *Hard* race, is not dominance-solvable. Rather, its payoffs approximate that of a Chicken game. Chicken takes as its metaphor the game played between two people who drive their cars toward each other, each hoping that the other will swerve to avoid a crash. The player who does not swerve "wins" the game, and gets the highest possible payoff. Whoever swerves loses the game, and receives the middle payoff. The lowest payoff goes to both players if neither of them swerves and the cars crash. In the Simultaneous Entry game version (d). Both candidates most want the *Easy* race, but they'll settle for *NBA*. For both, the worst outcome is a "crash," that is, running a *Hard* race against the other quality challenger. Here, there is no dominant strategy. Rather, players employ a mixed

strategy to determine the probability with which they enter the race.[3] That probability is expressed by

$$p= (NBA - Easy)/(Hard - Easy)$$

This is the standard mixed strategy equilibrium in Chicken (e.g., Tsebelis 1990). Like all mixed strategy equilibria, the references to payoffs (*NBA, Easy*, and *Hard*) indicate their value to the player *not* making the decision. That is, when playing (d), players base their entry decisions on how valuable the payoffs are to the other player. This leads to two empirical predictions: As the other player's *NBA* grows more attractive, entry becomes more likely. On the other hand, as the *Hard* race grows more attractive, entry becomes less likely. This is true for both Incumbent and Challenger.

Section 3 An Alternate Model

Most extant literature assumes that the Simultaneous Entry game is erroneous in assuming the two players are on equal footing. Rather, the assumption goes, incumbents need not worry about challengers when deciding whether to run again. This point of view is explicitly expressed in Goldenberg et al., (1986): "Challengers often face a long road to the nomination… For incumbents, on the other hand, the path to renomination is usually completely within their control. They simply have to decide whether or not to run again" (8). Ansolabehere and Snyder (2002) agree that that when it comes to the decision of whether to run for reelection "challenger quality is orthogonal…and may even be exogenous" (329). More broadly, studies of incumbent exit implicitly assume this decision structure when estimating their probabilities of seeking reelection without controlling for the strength of his likely opponent (e.g. Rhode 1979, Kiewiet and Zeng 1993, Hall and van Houweling 1995). Though many studies attempt to proxy for this

strength by controlling for the lagged incumbents vote, this solution fails because it does not account for how opponents of varying strength react to incumbents' marginality (or lack thereof).

This conventional wisdom relies on two assumptions about the incumbency advantage. One is that it is universally available to all incumbents. This is in line with the early literature on the incumbency advantage which assumes that the advantage is based in some resource which is available to all incumbents but no challengers. That resource might be the perquisites of office (Fiorina 1989), media attention (Mayhew 1974), or voters' use of incumbency as a voting cue (Burnham 1974). The second assumption is that the incumbency advantage is so large that challengers perceive their probability of defeating an incumbent as so low that they universally (or nearly so) choose not to run against them. Recent estimations of the incumbency advantage put it at 8-10 points at the polls (Gelman and King 1990, Ansolebehere and Stewart 2002), which is certainly large enough to make any but the hardiest challengers wait for an open seat.[4,5]

If the incumbency advantage both universally applies to all incumbents and is large enough to deter challengers from running, the Simultaneous Entry Game changes. At the root of the change is that when the Incumbent runs, the Challenger all but can't win. At the extreme, the incumbency advantage grows so large that the Challenger can't beat the Incumbent at all; less extreme, but more likely, is that the Challenger's probability winning is low enough to drive the value of the *Hard* race lower than the value of *NBA*. This gives rise to a more static set of payoff orderings: the Challenger now prefers *Hard* least among all of his options. Empirically, given this set of choices challengers should employ a "wait and see" strategy: decide *after* seeing what the incumbent does. As a result, the incumbent always moves first.

The Incumbent First Model is illustrated in Figure 3. Briefly, first the Incumbent decides whether to enter; next, the Challenger. If the Incumbent enters, the Challenger enters only if

running the *Hard* race more valuable than the challenger's *NBA.* If the Incumbent does not enter, the Challenger runs if the *Easy* race is more valuable than his *NBA*.

Section 4 Comparing the Models

There are two competing models of how entry decisions get made. On the one hand incumbents may enjoy an electoral advantage large enough to give them first-mover status when deciding whether to run for reelection. On the other hand, incumbents' advantage over challengers might be small and/or non-universal, giving challengers equal footing in terms of making entry decisions at least some of the time. In this section I devise and execute an empirical test to arbitrate between the two models.

In the Incumbent First model, the Challenger decides to enter already knowing what the Incumbent has done, and as such bases his choice solely on how much he values his own payoffs: if the Incumbent has entered the race, the Challenger chooses among the *Hard* race and his *NBA;* if the Incumbent has not entered the race, the Challenger chooses among the *Easy* race and his *NBA.* If this model accurately describes the world, in the aggregate challenger entry should correlate only with the how much challengers value those payoffs, after controlling for incumbent entry. Any variables reflecting how much the Incumbent values her payoffs should not correlate with challenger entry. On the other hand, in the Simultaneous model the Challenger sometimes bases his entry decision on how highly the Incumbent values the *Hard* race and how much the Incumbent values her *NBA*. Recall that payoff ordering combination (d) mimics Chicken payoffs, and there is no dominant strategy equilibrium. Rather, players use a mixed strategy and choose Enter with a probability determined by the values of the payoffs to the other player. If this model accurately describes the world, challenger entry should correlate with

variables which reflect how incumbents value their payoffs, even controlling for incumbent entry. The correlations may not be strong or significant for every variable, because payoff orderings (a), (b), and (c) are observationally equivalent with the Incumbent First model. However, they should be identifiable.

These contrasting predictions generate an opportunity to test between the models. I conduct such a test with a series of ordered probit estimations using data from House of Representatives elections from 1976 to 1998.[6] I use two dependent variables: the number of quality challengers of the incumbent's party who enter the race against the incumbent, and the number of quality challengers of the opposing party. Following the above predictions, I separately estimate probabilities of experienced-challenger entry in races in which the incumbent ran for reelection, and those in which the incumbent did not run for reelection.[7] This results in four separate estimations. Following Jacobson (1989, 1997) I assume that challengers who had won elective office prior to running for the House are quality challengers, while others are not.[8] A challenger enters the race if his or her name appears on the primary election ballot of the Democratic or Republican party.

There are test variables; each is associated the incumbent's value of either the *Hard* race or her *NBA*. The value of the Incumbent's *NBA* is determined in part by the availability of other political opportunities. As such, separate dummy variables indicate whether there is an *Open Senate* election being held in the incumbent's state in the election year, and whether there is a *Closed Senate* election (i.e., one in which the incumbent is running for reelection). The same two variables are included for gubernatorial elections.[9] The fifth variable measuring Incumbent's *NBA* is the size of the state: House members from smaller states have an easier time winning higher office since there are fewer House members to compete with (Rhode 1979,

Kiewiet and Zeng 1993). States size is measured by the log of the state's House delegation. The Incumbent First model predicts that coefficients associated with these variables are not significant, while the Simultaneous Entry model predicts that they are significant. Further, since a higher value of the Incumbent's *NBA* is associated with a higher probability of challenger entry in the Simultaneous Model's mixed strategy equilibrium, the model predicts that the coefficients on the dummy variables are positive (since the availability of political office raises the value of *NBA*), while that on state size is negative (since being in a big state means more House members and more competition for other offices, and lowers the value of *NBA*).

The other four test variables reflect how highly the Incumbent values the *Hard* race, which is determined in part by how much the incumbent values his seat. I assume that an incumbent values her seat more highly if she holds a leadership position or if she is chair of a committee. Accordingly, three dummy variables indicate whether the incumbent is a *majority party leader*, a *minority party leader*, or a *committee chair.*[10] Additionally, to capture members' levels of personal satisfaction with their work, I include members' *distance from the chamber median* on the NOMINATE scale; this represents how likely the incumbent's ideal policies are to be enacted into law (e.g., Cooper and West, 1981). Once again, the Incumbent First model predicts that no coefficients are significant. The Simultaneous model predicts that all are significant, that the dummy variables are all positive (each represents an increase in seat value) and that the measure on *chamber median* is positive (because increased distance from the median represents ideological estrangement and thus a lower likelihood of passing policies).[11]

In addition to the key independent variables, several variables capture the values of the other payoffs to the separate actors. These control for other factors which influence challenger entry. Dummy variables indicate whether the incumbent is a member of the *majority party* and

whether the incumbent is a *Democrat*. I include the share of the two-party vote the Incumbent received in her *previous election*. I control for the district's normal vote with the share of the two-party vote received by the incumbent's party's *presidential candidate* in the district that year or two years prior. I also include a dummy variable indicating whether the incumbent is running in a state which had gained or lost a seat due to *redistricting* since the prior election. To control for career effects on retirement (e.g. Fenno 1978) I include the Incumbent's *age* in years, the incumbent's *tenure* in the House in years, and the interaction, *age*tenure*. I control for the size of the pool of potential challengers with the size of the *state legislature* and the *ratio* of the state legislature to the House delegation. Finally, I include the amount of money spent by both the *incumbent party* and the *challenging party*, as well as a variable to capture year-to-year *party tides.* (Jacobson and Kernell, 1981)

Results are summarized in Table 1, which reports which key independent variables are significantly related to challenger entry at $p < .05$ or better, one-tailed test, in the four estimations (the complete models are reported in Tables A1 and A2). There are nine independent variables each in four estimations, resulting in 36 tests. Of the 36 coefficients, seventeen indicate a statistically significant relationship with challenger entry and, of those seventeen, thirteen are in the direction predicted by the simultaneous entry model.

To look at just a couple of examples in detail, in three of the four estimations experienced challengers are less likely to enter a race in districts represented by an incumbent who also a majority leader. The Simultaneous entry model predicts this, as majority leaders have higher-value House seats than other incumbents. Challengers recognize that these incumbents are less likely to give up their House seats in the face of a vigorous challenge than other incumbents, and so do not enter the race when playing Chicken with them. Another example is state size, which

is significantly related to challenger entry in all four estimations. The Simultaneous model predicts this as well, as running for state-wide office is easier for a House member in a small state than in a large one. Challengers recognize this, and in smaller states enter races against the House member, trying to get them to run for Senator or Governor instead of reelection.

Though not every not every variable associated with values of *Easy, Hard* and *Retire* to the incumbent is significantly related to challenger entry, this should not be taken as evidence against the Simultaneous Entry model because it is so often observationally equivalent with the Incumbent First model. On the contrary, the Incumbent First Model cannot account for the statistically significant relationships. They might have occurred by chance; with 36 tests and a threshold of significance at $p < .05$, we would *expect* two variables to be statistically significant by random chance alone. However, chi-squared tests indicate we can reject the hypothesis of seventeen coefficients being significant due to random chance at $p < .001$. Additionally, thirteen of the seventeen variables are in the direction predicted by simultaneous entry model. Though this also could have happened by chance, the probability of this occurring is the same as the probability of accurately predicting a coin flip thirteen of seventeen times; that probability is .02.

Section 5 Challenger Entry and Incumbent Career Decisions

In this section I search for empirical trends which should occur if incumbents and challengers make decisions simultaneously. The first is that incumbents' career decisions should correlate with whether a quality challenger runs for the incumbent's seat. I test for this using a multinomial Logit estimation of House incumbent decisions to run for reelection, retire from politics, or seek another office. There are two key independent variables, both of which should positively correlate with incumbent exit: *ESP Dummy* is coded one if an ***E***xperienced challenger

of the ***S***ame ***P***arty as the incumbent enters, zero if not; and *EOP Dummy* is coded one if an ***E***xperienced challenger of the ***O***ther ***P***arty enters, zero if not.[12] The model includes measures of all independent variables which have previously been found to influence incumbent decision making; these are operationalized as described in the analysis of Section 3. Though I draw from all previous research on incumbent decision making, this model is most similar to that found in Kiewiet and Zeng (1993).[13] The dataset I use for this analysis covers the same time period as that in Section 3, all House primary elections in the period 1976-1998. Although finding a correlation between challenger entry and incumbent exit does not itself that challengers influence incumbent behavior, finding *no correlation* would force us to conclude that challengers do not influence incumbent behavior.

Results are summarized in Table 2, which reports the conditional probabilities of incumbent retirement and seeking higher office, given entry by different combinations of quality challengers (the full estimation is reported in Table A3). Probabilities are obtained via simulations using CLARIFY (Tomz et al 2003). The simulations reveal that both the probability of incumbent exit via retirement and the probability of exit via progressive ambition rise with the entry of an experienced challenger. The relationship is shows up for challengers of either party, though the probability of exit increases more with the entry of a same-party challenger than with an out-party challenger. The probability of exit is highest when at least one challenger of either party enters the race.[14]

Other relationships which we should be able to observe involve the timing of candidate decision-making. To investigate these relationships, I collected two types of data. First, I observe the dates on which political challengers enter a race for office, coded as the date listed

on candidate' Statement of Candidacy form filed with the FEC.[15,16] Second, I observe the dates on which incumbents publicly announce their intentions to retire from their current office.[17]

For one, if challengers influence incumbents, sometimes the challenger must actually decide to run before the incumbent decides to retire; this is the very nature of a "pushout" as discussed in Section 2 and at the heart of the use of the mixed strategy equilibrium in the Chicken game, discussed in Section 3. Table 3 provides some initial evidence that sometimes this occurs. The first column provides the number of challengers who ran in open seat elections in every election year from 1976-1998. The second column indicates the percentage of those challengers who entered the race before the incumbent retired. Overall, just over one third of them did, and the proportion reaches as high as two thirds in redistricting years. Finally, column three shows the percentage of early-enterers who have prior political experience. About one-fifth of them do, indicating that each year, at least some early enterers are quality candidates and might force an incumbent to rethink running for reelection.

To get a closer look at these decisions, Table 4 lists all members of the House who chose not to run for reelection in 1980; ten left after an experienced challenger entered.[18] Though some probably would have won easily if they had ran again, others would have had a difficult time.[19] William Moorhead, Richard Nolan, Harley Staggers, and John Cavenaugh in particular, all won with tight margins in 1978, and Morgan Murphy retired under the cloud of scandal.[20] Perhaps any or even all of them could have won reelection again against weak opposition, but they knew they would not have that luxury. As a group, the group of early-entering challengers did quite well in the ensuing elections. Seven of the ten won House seats, and all won at least one election that year. The 70% overall success rate is far above that for the year's other experienced open-seat candidates (27%; 17 of 63).

I conduct more systematic tests by looking for aggregate relationships between the timing of incumbents' and challengers' decisions.[21] If incumbents respond to early-entering quality challengers as depicted in (d) above, then early challenger entry should be correlated with a higher probability of incumbent exit. Here I replicate the models reported in Tables A3 and A4 but include only incumbents running in districts in which an experienced challenger entered. The key independent variable is Timing of Entry, which is the number of days between an experienced challenger's entry into the race and the state's filing deadline.[22] Here I conduct two separate estimations: one for those in which an experienced challenger of the incumbent's party entered the race, and one for those in which an experienced challenger of the other party entered. At least one challenger from each party ran in 218 cases, giving the groups some overlap.

Results indicate that the timing of entry by experienced challengers is not associated with any significant change in the probability of incumbent exit via retirement. However, it is associated with a higher probability of incumbent exit via progressive ambition.[23] Figure 4 displays the results of simulations using CLARIFY (Tomz et al 2003) estimating the probability of incumbent exit via progressive ambition given variation in the timing of experienced challengers' entry into races. (The full models are reported in Tables A5 and A6) Experienced challengers entered races as late as several days past the filing deadline, and as early as 288 days before it. As entry by a challenger of either party grows earlier (i.e., as *Timing of Entry* rises), the probability of incumbents' running for another office increases dramatically. In the case of challengers of the opposite party, the probability rises from p=.02 to p=.04 over the range of the variable, a 100% increase. In the case of challengers of the same party as the incumbent, the probability rises from p=.05 to p=.16, which is just over a 300% increase.

These probabilities indicate that incumbents are responding not only to the entry of challengers, but signals sent by *early* entry of specific challengers – those who are potentially dangerous political opponents. This gives rise to one final question, do these dangerous opponents attempt in their own right to influence incumbent behavior? If so, they should enter races earlier than other challengers, as they attempt to signal incumbents about their intent to run for office. I estimate an OLS model in which the dependent variable is the date on candidates' Statement of Candidacy forms; the population includes all non-incumbent, major-party House candidates who appeared on their state's primary ballot between 1976 and 1998. The key independent variable is *Experience*, a dummy variable coded one if the challenger held elective office at any time prior to the House primary, zero if not. Its coefficient should be positive.

Other independent variables are control variables. To control for the relationship displayed in Figure 3, I include *Incumbent Exit,* a dummy variable coded 1 if the incumbent chose not to run for reelection; zero if not. *Filing Deadline* is the number of days between the state's filing deadline and the general election, and controls for how early in the election cycle the filing deadline is. *Lagged Incumbent Vote* is the percent of the two-party vote received by the districts' incumbent in the election two years prior. *Incumbent Age* is the incumbent's age in years at the time of the election, and *Incumbent Tenure* is the number of years served in the House at the time of the election. *Democrat* is a dummy variable set to 1 if the challenger is a Democrat, and 0 if she is a Republican. *Same Party* is a dummy variable set to 1 if the challenger is of the same party as the incumbent, 0 if she is the opposite party. I used fixed-effects to capture national trends which vary by year, and robust standard errors to capture relationships between challengers who run within states. Results appear in Table 5, and the

hypothesis is supported. Experienced challengers enter races over one month earlier than other challengers, on average.

Section 5 -- Conclusion

It is not the purpose of this paper to claim that interactions between incumbents and challengers are always, or even usually, driven by challenger action. Rather, the purpose of this paper is to put forth the idea that, when making entry decisions, incumbents and challengers move are on more equal footing than has previously been suggested in the literature. One hallmark of simultaneous action is that it is possible for the actions of any candidate to influence the behavior of any of the others. While it is already is well-known that incumbents influence challengers, the notion that challengers influence incumbents has received substantially less attention in the literature. It is with this inequality in mind that I devote the empirical section of this paper to the search for evidence that challengers influence incumbent behavior.

Empirical tests of three types suggest this influence exists. First, tests of predictions generated by the Incumbent First model indicate that it should be rejected. That model predicts no correlation between challenger entry and variables which reflect incumbent incentives; such correlation was found in 17 of 36 test variables. At the same time, the tests provide a good deal of evidence that the Simultaneous model accurately describes candidate behavior: thirteen of the seventeen significant variables are in the direction predicted by the Simultaneous Entry model. Second, incumbents' behavior suggests that they are influenced by challengers. Incumbents are more likely to retire and more likely to pursue another office if an experienced challenger enters the race than if none do, and the effects exist for challengers of either party. Furthermore, incumbents react to *when* strong challengers enter: as entry gets earlier, exit via progressive

ambition grows more likely. Third, political challengers act in a manner which suggests that they are aware that they can influence incumbents. Strong challengers (those most likely to get incumbents to exit a race) sometimes enter before the incumbent decide to retire and, in the aggregate, before other challengers.

This paper offers three contributions to the literature on congressional elections. First, incumbents do not always make entry decisions before challengers despite the assumptions of numerous studies. Rather, both actors consider the decision to enter contemporaneously and each considers the possibility that the other might enter when making up her own mind. Relatedly, challengers can influence incumbents in the decision to run for reelection. Though ample scholarship details the influence incumbents can have on challenger entry, little if anything has been written on the opposite direction of causality. Extant literature on candidate entry usually focuses on incumbent decisions to run or exit, but fails to account for whether the incumbent is going to face a strong challenger. Some studies, in fact, claim that the two are entirely separate issues. This study shows that the quality of challenger who run against the incumbent in her bid for reelection is often endogenous to the incumbent's decision to seek reelection, retire, or pursue higher office.

Second, challenger influence on incumbent decision-making forces us to reassess the conventional interpretation of the incumbency advantage. Empirical tests lead us to reject the Incumbent First model of candidate entry, which indicates that one or both of the assumptions underpinning the model does not hold -- either the incumbency advantage is not universal to all incumbents, or it is not (always) large enough to deter quality challengers from running against the incumbent. Either way, it suggests that incumbents are vulnerable to electoral challenge, which challenges the notion that incumbents are universally safe (e.g, Ansolabehere and Snyder

2002, Ansolabehere, Snyder and Stewart 2001, Levitt and Wolfram 1997). Normatively, it implies that American democracy is in reasonably good health, at least where candidate selection is concerned. If incumbents are vulnerable to defeat, they must constantly take pains to make sure that enough constituents favor them to ensure their reelection (e.g, Arnold 1990, Jacobson 1987**,** Fenno 1978).

Finally, this paper offers two conceptual improvements for the study of candidate entry decisions. One of these is to suggest that the decisions of potential candidates for the same office are interrelated. Previous studies have assumed decisions are rational (e.g. Black 1972, Rhode 1979, Hall and Van Houweling 1993), but do not account for the possibility of strategic behavior among the actors. This study uses game theory to incorporate the idea that politicians are not acting in isolation, but instead consider the implications of others' actions and base their own decisions on what others are likely to do. Second, this is one of only a handful of studies to look at challenger emergence. Most previous studies of candidate entry focus on either the decisions made by incumbents (e.g, Hall and Van Houweling 1995; Kiewiet and Zeng 1993, Hibbing 1982 a, b) or the overall level of quality in general-election challengers (e.g., Jacobson and Kernell Bond et. al 1985, McAdams and Johannes 1987). Few look at challenger emergence in the primary election because of the difficulty of identifying potential candidates who ultimately decide not to enter the race. Though a strong research program uses detailed case studies to get at the question of who runs for office (e.g., Kazee, ed. 1994**,** Fowler 1993, Fowler and McClure 1989) few large-N projects have approached the subject. Two recent projects have used surveys of political elites (Maisel and Stone 1997) and professionals in careers which produce large numbers of politicians (Fox and Lawless 2004) to identify potential candidates, and then observe which of them runs This paper adds to the nascent literature, but approaches the problem from a

different point of view. Rather than exogenously identifying potential candidates, I assume that some quality challenger(s) considers running for each office, and observe those who actually do.

Appendix -- The Simultaneous Entry Game

This appendix describes the Simultaneous Entry Game in detail. The players are the Incumbent *I,* strong challenger *D,* and nonstrategic players Weak Republican *r* and Weak Democrat *d.* It is a one-shot, simultaneous choice game in which both players have perfect and complete information. Players *I* and *D* must simultaneously decide whether to enter a race for an office which the incumbent currently holds. The political conditions surrounding the race are as stated in the text. If both candidates enter, then each must run against the other. If one enters and the other does not, then the candidate who enters runs against a nonstrategic weak opponent. If both opt out of the race, then both nonstrategic candidates run against each other. Here, I calculate payoffs to the incumbent and the strong challenger. The value to the incumbent of entering the race is

$$P(D)U(\text{run}|D) + (1\text{-}P(D))U(\text{run}|d)$$

which can be read "The probability of the strong Democrat entering, times the utility of running against the strong Democrat, plus the probability of the strong Democrat not entering, times the utility of winning against the weak Democrat." Inserting incumbent's utility functions of running against either opponent, the value of entering to the incumbent becomes

$$P(D)(P_D B^I + [1\text{-}P_D]\ q - C_D) + P(d)(P_d\ B^I + [1\text{-}P_d]\ q - C_d)$$

The utility to the Incumbent of running against a given candidate is a function of the probability P_i of winning against candidate i, the benefits B^I of accruing to the incumbent should he win the office, the benefits q accruing to the incumbent should he lose, and the cost C_i of running a race candidate i. For exposition, and without loss of generality, I set $q = 0$. Rewriting this term as an inequality, I specify the conditions under which the incumbent enters:

$$P(D)(P_D B^I - C_D) + P(d)(P_d\ B^I - C_d) > b$$

where b represents the value of the Incumbent's next-best-option, should he decide not to run. (For reasons discussed in the text, $b \geq q$.) This states that the incumbent enters the race if the utility of running (the summed expected utility of running against both candidates) exceeds the value of the his next-best alternative. Using the same logic developed above, the value of entering the race to the strong challenger D is

$$P(R)(P_R B^C + [1\text{-}P_R]\ q - C_R) + P(r)(P_r\ B^C + [1\text{-}P_r]\ q - C_r)$$

and the strong challenger will enter the race if

$$P(R)(P_R B - C_R) + P(r)(P_r\ B - C_r) > b$$

Now I can define payoffs to the candidates, which are as follows:

		Incumbent	
		Enter	Not Enter
Strong Challenger	Enter	$P_DB + (1-P_D)\ b - C_D$ $P_RB + (1-P_R)\ b - C_R$	b_R $P_rB + (1-P_r)\ b - C_r$
	Not enter	$P_dB + (1-P_d)\ b - C_d$ b_D	b_R b_D

Note that $P_D = 1- P_R$. P_D is the probability, conditional on the strong Challenger entering, of the incumbent winning the office, while P_R is the probability, conditional on the strong Challenger entering, of the challenger winning the office. I assign a name to each payoff, reflecting the intuition behind it. If both the Incumbent and Challenger enter, then each receives the payoff of running in a *Hard Race* against an experienced opponent. If one enters and the other does not, then the entering candidate receives the payoff of running a relatively *Easy Race* against a weak opponent. The politician who chooses not to run has been scared off; this candidate chooses his next best alternative. Here I assume that the Incumbent's next best alternative is to *Retire*, and the potential Challenger's next best alternative is to retain his *Current Seat.* If both opt out of the race, they both attain their next-best option, but do so knowing that an opportunity was *Missed*. Thus, the payoffs described mathematically above can be recast intuitively.

		Incumbent	
		In	Out
Strong Challenger	In	Hard Race Hard Race	Retire Easy Race
	Out	Easy Race Current Seat	$Miss_I$ $Miss_C$

Following the text, I assume that both players prefer *Easy Race* to all other payoffs. An additional assumption must be made regarding candidates' regret. One alternative is to assume that only tangible payoffs matter, and regret does not give either player any disutility. This assumption would render two pairs of outcomes equivalent, since the tangible portions of *Current Seat* and $Miss_C$ are equivalent and the same is true for *Retire* and $Miss_I$. I could fold those pairs into a single payoff. The other alternative is to assume that candidates do consider regret over lost opportunity. Thus, as I allude to in the text, players experience more regret over not running when the other player has also not run, then when the other player has run. Under this assumption, the pairs of payoffs are not equivalent. Here, $U(Retire) > U(Retire^*)$ for the Incumbent, and $U(Current\ Seat) > U(Current\ Seat^*)$ for the challenger. For simplicity, I ignore players' regret. leaving only three different outcomes; I rename the outcomes to reflect this.

		Incumbent	
		In	Out
Strong Challenger	In	Hard Hard	Retire Easy
	Out	Easy Old Seat	Retire Old Seat

A player choosing *In* might run in an *Easy* race against a weak opponent or in a *Hard* race against the other player. A player choosing *Out* simply receives his next best alternative to running. The structure of the game and the assumptions allow for four unique combinations of preference orderings, as presented in Figure 2. In (a), both the incumbent and the challenger value running in any race over not running. The easy race is the most-preferred option, followed by the hard race, and each players' respective next-best opportunity is the least-preferred. In (b), the incumbent retains the preference ordering of (a), but the challenger prefers retaining his old seat to running a difficult race against the incumbent. In (c), the challenger prefers the difficult race to retaining his old seat, but the incumbent prefers to retire, rather than running a difficult race against a strong incumbent. Finally, (d) holds that both candidates prefer opting out of the race to running a difficult one against the other player.

The first three games are dominance-solvable and have unique solutions. In (a), the outcome (In, In) is a dominant-strategy equilibrium (where outcomes read (Challenger, Incumbent). In (b), (Out, In) is a dominant-strategy equilibrium, while in (c), (In, Out) is a dominant-strategy equilibrium. The final game is not dominance-solvable. However, there are two weak Nash equilibria: (In, Out) and (Out, In).

What can we say more globally about the probability of incumbent and challenger entry? To answer that question, I analyze the value of the different outcomes to the Incumbent. I set *Easy* = 1, and assume (*Hard, Retire*) $\in$ { (x,y): $1 \geq x \geq 0$ $1 \geq y \geq 0$}. Fixing *Hard* at some $z \in [0, 1]$ allows us to examine the effect of variations of *Retire* on the probability of a pushout

For all *y* where *z* > *y*, *Hard* is more attractive than *Retire*. In such cases, the incumbent enters with probability of 1. Consider *y* = 0. If the Incumbent chooses *Out*, he receives *Retire* with certainty, and obtains a payoff of 0. If the Incumbent chooses *In*, he receives *Easy* with positive probability P(*d*), and he gets *Hard* with probability 1- P(*d*). Since *Easy* = 1 and *Hard* is nonnegative, the Incumbent's payoff is positive with certainty. Given these values, then, *In* dominates *Out.* The same is true for all cases where *z* > *y*: *Retire* is worth less than *Hard*, and by the same logic *In* still dominates *Out.* Thus, when *z* > *y*, the incumbent does not run.

For all *y* where 1 > *y* > *z*, the Incumbent values *Retire* more than *Hard* but less than *Easy.* Here, the probability with which the Incumbent chooses *Out* increases monotonically with y until *y* = 1. Consider z = 0. We can make the following statements about the incumbent's strategies: if the Challenger's dominant strategy is *In*, then the Incumbent chooses *Out*. If the Challenger's dominant strategy is *Out*, then the Incumbent chooses *In*. If the Challenger does not have a dominant strategy, then the Incumbent plays a mixed strategy. Thus, the probability that the Incumbent exits is the probability that the Challenger has dominant strategy *In*, plus the probability that the incumbent exits in a mixed strategy.

Easy remains set to one, and I now set Hard = *z* = 0. Let *a* represent the value of the Incumbent's next best alternative, and let *c* represent the value of the Challenger's next best alternative. Solving for mixed strategies, I assume the Challenger chooses *In* with some probability Π. If the incumbent chooses *In* he gets 1- Π, and if he chooses *Out* he gets *a*. In equilibrium, these strategies are equivalent to each other as follows

$$1 - \Pi = a$$

and simple algebra gives us

$$\Pi = 1 - a$$

which tells us that, given equilibrium mixed strategies, the Challenger's probability of entering is $1 - a$. Since payoffs are symmetric, I can also say that the Incumbent's probability of entering $\Delta = 1 - c$. Solving the integral

$$\int_{c=0}^{c=1}(1-c)dc$$

gives one half. This is positive and a constant. As a result, the probability of incumbent exit increases monotonically with *c* as it goes from zero to 1.

Where *Retire* is more attractive than either *Hard* or *Easy*, the Incumbent chooses *Retire* with certainty. Also note the relationship between *y* and the probability of retirement: *y* approaches 1, space in which the incumbent runs with a positive probability shrinks. Thus, as the value of *Retire* increases, the Incumbent is less likely to run.

Parallel analysis holds for the Challenger, and generates similar findings. Assume that if the value of the *Hard* race to the Challenger is fixed at a certain point *h* between 0 and the *Easy* race (set arbitrarily to 1). By the same logic as described above, the Challenger bows out of the race only if the value of the next-best alternative to running is greater than h. Thus, the probability of Challenger entry increases as the value of the challenger's next-best-alternative declines. Furthermore, as *h* moves, the point at which a Challenger is willing to enter the race, or not moves with it. Thus, as the value of *Hard* race increases, the Challenger is more likely to enter.

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Table 1
Variables Indicating Incumbents' Incentives
Significantly Correlated With Experienced Challenger Entry*

	Incumbent Sought Reelection		Incumbent did not Seek Reelection	
	Same-Party Challengers	Other-Party Challengers	Same-Party Challengers	Other-Party Challengers
Incumbent is majority leader	●		●	●
Incumbent is minority leader			●	
Incumbent is committee chair	●			
Distance from chamber median	X			
Open Senate Race	●			●
Closed Senate Race		●		
Open governor's Race	X	X		●
Closed governor's Race		X		
State size	●	●	●	●

● Coefficient significant at $p<.05$ or better, 1-tailed test, and is in direction predicted by symmetric entry model.

X Coefficient significant at $p<.05$ or better, 1-tailed test, and is in direction opposite that predicted by symmetric entry model.

*For the full models, see Tables A1 and A2

Table 2
Probability of Incumbent Career Choices Given Entry by Experienced Candidates

Experienced challenger entry…	Probability of incumbent…	
	…retirement	…seeking higher office
Neither party	.006	.002
Other party	.02	.004
Same party	.16	.09
Both parties	.32	.15

Probabilities obtained using CLARIFY (Tomz et al 2003). For the full models used in the simulations, see Tables A3 and A4

Table 3
Relative Timing of Challenger Entry and Incumbent Retirement

	Number of open seat candidates	Percent who entered before incumbent announced retirement	Percent of early-enterers who had won elective office
1976	409	21.8	21.9
1978	331	16.6	23.6
1980	232	34.9	22.1
1982	355	63.9	22.8
1984	142	9.2	31.6
1986	232	25.4	28.0
1988	169	24.3	12.8
1990	152	23.0	18.6
1992	491	67.0	22.4
1994	364	24.2	12.9
1996	388	28.9	7.4
1998	204	24.0	10.9
total	3469	34.0	20.2

Table 4
1980 House Retirees

			Experienced Challenger Entered Before Incumbent Retired	Experienced Challenger	How well did the challenger do?
CA	41	Wilson, Robert			
CO	4	Johnson, James			
CT	2	Dodd, Chris	X	Sam Gedjenson	won seat
CT	3	Giaimo, Robert			
GA	2	Mathis, Dawson			
IA	3	Grassley, Charles	X	Cooper Evans	won seat
ID	1	Symms, Steven	X	Larry Craig	won seat
IL	2	Murphy, Morgan	X	Gus Savage	won seat
IL	16	Anderson, John			
IL	2	Abdnor, James			
IN	4	Quayle, J. Danforth			
KS	1	Sebelius, Keith			
KY	5	Carter, Tim Lee			
MI	14	Nedzi, Lucien			
MN	6	Nolan, Richard	X	Vin Weber	won seat
MO	8	Ichord, Richard			
ND	1	Andrews, Mark	X	James Smykowski	lost general
NE	2	Cavenaugh, John	X	Harold Daub	won seat
NH	2	Cleveland, James			
NJ	15	Patten, Edward			
NY	5	Wylder, John			
NY	16	Holtzman, Elizabeth			
NY	30	McEwen, Robert			
NY	32	Hanley, James			
OH	6	Harsha, William			
OH	22	Vanik, Charles			
OK	4	Steed, Tom	X	James Townsend	lost runoff
PA	14	Moorhead, William	X	Stan Thomas	lost general
SC	1	Davis, Mendel			
TX	4	Roberts, Ray			
TX	14	Wyatt, Joe			
VA	3	Satterfield, David			
WV	2	Staggers, Harley	X	Cleveland Benedict	won seat

Table 5
The Timing of House Challengers' Entry into the Race, 1976-1998 [a]

(Year Dummies Not Shown)

Challenger experience	37.2*** (4.52)
Incumbent Exit Dummy	20.9*** (4.97)
Filing Deadline	-.452*** (.067)
Incumbent's lagged vote share	-.649*** (.095)
Incumbent's age	-.206 (.258)
Incumbent's tenure (years)	.037 (.348)
Democrat	-16.9*** (4.38)
Same party as incumbent	-.120 (4.22)
constant	223*** (23.0)
N	9153
Adj R^2	.0510

*** p < .001
Robust standard errors in parentheses; clustered on state

*** p < .001, *p < .05
Standard Errors in Parentheses

Figure 1

Outcomes to players in Simultaneous Entry Game

		Incumbent	
		Enter	Not Enter
Strong Challenger	Enter	Hard Race Hard Race	Retirement Easy Race
	Not Enter	Easy Race Current Seat	Retirement Current Seat

Figure 2

Possible payoff ordering combinations in Simultaneous Entry Game
Incumbent's preference ordering first

(a) Easy > Hard > Retire
Easy > Hard > Old Seat

(b) Easy > Hard > Retire
Easy > Old Seat > Hard

(c) Easy > Retire > Hard
Easy > Hard > Old Seat

(d) Easy > Retire > Hard
Easy > Old Seat > Hard

Figure 3

The Incumbent First Model

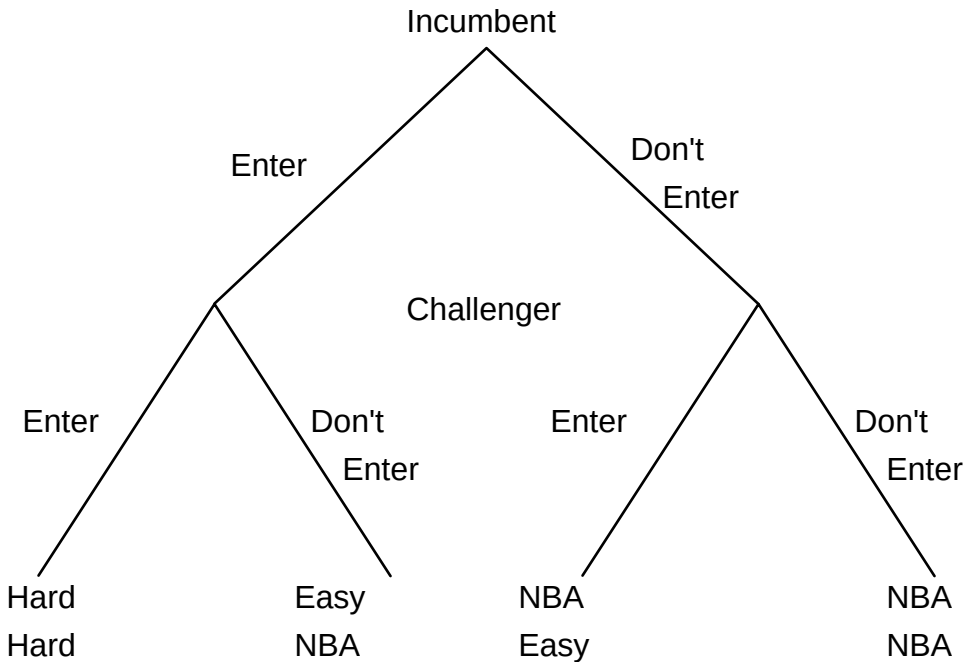
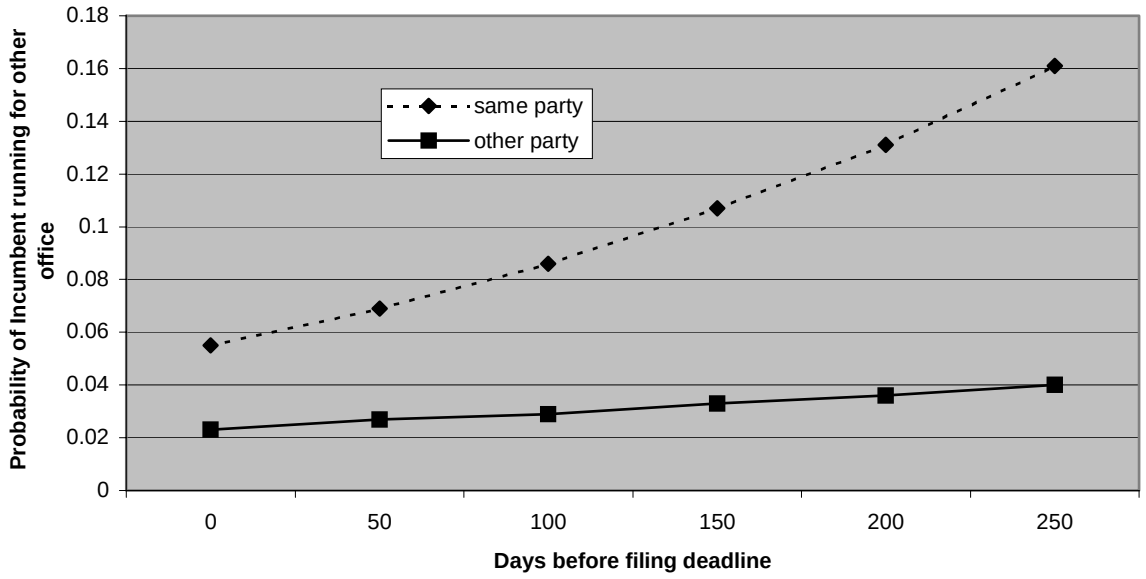


Figure 4

The Effect of the Timing of Same-Party Challenger Entry on Incumbent Career Decisions*



* Probabilities derived from model presented in Tables A5 and A6

Table A1
Ordered Probit: Experienced Challengers in House Elections, 1976-1998
Districts in Which the Incumbent Sought Reelection

	Incumbent Party Challengers		Out Party Challengers	
	Coef.	S.E.	Coef.	S.E.
Majority Leader	-8.28***	.669	.157	.361
Minority Leader	.152	.358	-.051	.264
Committee Chairman	-.377**	.149	.143	.178
Ideological Distance from Chamber Median	-.490*	.232	.180	.174
Open Senate seat	.200*	.117	.095	.087
Closed Senate Seat	.023	.089	.082*	.043
Open Governorship	-.240**	.010	-.147*	.084
Closed Governorship	-.110	.084	-.163***	.046
State size	-.232***	.047	-.199**	.078
Lagged incumbent Vote	-.003	.003	-.010***	.001
Presidential Vote	.024***	.004	-.024***	.004
Redistricting	.750***	.119	.660***	.093
Incumbent's Age	.011*	.006	-.005	.004
Incumbent's Tenure	-.018	.029	-.046***	.052
Age*Tenure	.0002	.0004	.0005*	.0002
Incumbent in Majority	.250*	.114	-.414***	.085
Challenger Party Spending ($10,000's)	.001	.018	.077***	.016
Incumbent Party Spending ($10,000's)	.022	.015	.014	.009
State legislature size	.002**	.0006	.0008	.001
Ratio state legislature :: House delegation	.412	.405	.042	.465
Democrat	.298***	.079	-.055	.064
Party Tides	.011	.011	.023**	.009
Cut point 1	3.46	.405	-1.65	.302
Cut point 2	4.34	.405	-.45	.307
Cut point 3	4.79	.425	.183	.298
Cut point 4	5.04	.496	.940	.340
Cut point 5	5.44	.556	--	--
N	4602		4602	
Pseudo R^2	.085		.1202	
Log likelihood	-937		-2003	

*** p < .001, **p < .01, *p < .05, one-tailed test
Robust standard errors in parentheses; clustered on state
Dependent Variable: Number of Experienced Challengers Entering Race

Table A2
Ordered Probit: Contestedness in House Elections, 1976-1998
Districts in Which the Incumbent Did Not Seek Reelection

	Incumbent Party Challengers		Out Party Challengers	
	Coef.	S.E.	Coef.	S.E.
Majority Leader	-7.89***	.184	-8.38***	.183
Minority Leader	-.785***	.206	.270	.248
Committee Chairman	-.263	.198	.250	.329
Ideological Distance from Chamber Median	.379	.347	-.384	.326
Open Senate seat	-.023	.137	.264*	.132
Closed Senate Seat	.005	.155	.127	.124
Open Governorship	.002	.157	.287*	.143
Closed Governorship	.081	.156	-.016	.094
State size	-.230**	.080	-.370***	.081
Lagged incumbent Vote	.009**	.003	-.007**	.003
Presidential Vote	.012*	.007	-.033***	.007
Redistricting	-.433**	.172	-.143	.177
Incumbent's Age	-.007	.008	-.009	.008
Incumbent's Tenure	-.021	.034	.014	.034
Age*Tenure	.0004	.0005	.00003	.0004
Incumbent in Majority	.378*	.184	-.397*	.199
Challenger Party Spending ($10,000's)	.031**	.011	.022	.019
Incumbent Party Spending ($10,000's)	.057***	.019	-.041*	.019
State legislature size	.002*	.001	.001	.0008
Ratio state legislature :: House delegation	.604	.581	1.71***	.513
Democrat	.057	.180	-.232*	.140
Party Tides	.038*	.018	-.003	.022
Cut point 1	.556	.642	-3.33	.709
Cut point 2	1.54	.655	-2.25	.702
Cut point 3	2.43	.643	-1.40	.660
Cut point 4	3.11	.653	-.821	.675
Cut point 5	3.74	.663	-.193	.798
Cut point 6	4.17	.665	--	--
Cut point 7	4.41	.666	--	--
N	495		495	
Pseudo R^2	.059		.098	
Log likelihood	-681		-475	

*** p < .001, **p < .01, *p < .05, one-tailed test
Robust standard errors in parentheses; clustered on state
Dependent Variable: Number of Experienced Challengers Entering Race

Table A3
Effect of Experienced Challenger Entry on Incumbents' Career Decisions

	Retire		Higher Office	
	Coef.	S.E.	Coef.	S.E.
EOP -- Dummy	1.05***	.224	.917***	.258
ESP -- Dummy	3.51***	.171	4.19***	.214
Majority Leader	-.952	1.35	-30.2***	1.16
Minority Leader	-1.77**	.694	-2.03**	.768
Committee Chairman	-.811*	.397	-811	.772
Ideological Distance from Chamber Median	-.402	.540	-.141	.615
Open Senate seat	.033	.225	1.18***	.261
Closed Senate Seat	-.190	.192	-.385	.234
Open Governorship	.038	.215	1.05***	.278
Closed Governorship	-.204	.195	.611**	.206
State size	-.180	.137	.282	.196
Lagged incumbent Vote	-.004	.005	.0009	.009
Presidential Vote	-.004	.009	-.023	.014
Redistricting	.413	.289	-.041	.289
Incumbent's Age	.060***	.014	.005	.016
Incumbent's Tenure	.260***	.041	.480***	.093
Age*Tenure	-.003***	.0006	-.008***	.002
Incumbent in Majority	-.793**	.290	-.908**	.308
Challenger party Spending ($10,000's)	.168*	.087	.182*	.096
Incumbent party Spending ($10,000's)	-.046	.044	-.042	.060
State legislature size	.0006	.001	-.004**	.002
Ratio state legislature :: House delegation	.180	.869	.011	1.10
Democrat	.242	.239	-.266	.274
Party Tides	-.079***	.025	.003	.031
Constant	-8.34***	1.04	-2.72**	1.00
N	5144			
Pseudo R^2	.456			
Log likelihood	-1070			

*** p < .001, **p < .01, *p < .05, one-tailed test
Robust standard errors in parentheses; clustered on state
Dependent variable: 0=run for reelection; 1=retire; 2= seek other office

Table A4
Incumbents' Career Decisions without Experienced Challenger Entry

	Retire		Higher Office	
	Coef.	S.E.	Coef.	S.E.
EOP -- Dummy	--	--	--	--
ESP -- Dummy	--	--	--	--
Majority Leader	-3.22	2.61	-42.1***	2.31
Minority Leader	-1.25***	.346	-1.30	.947
Committee Chairman	-.848***	.274	-.891	.702
Ideological Distance from Chamber Median	-.500	.475	-.321	.517
Open Senate seat	.225	.238	1.46***	.210
Closed Senate Seat	-.147	.182	-.250	.200
Open Governorship	-.094	.157	.791***	.205
Closed Governorship	-.273	.177	.525**	.170
State size	.145	.108	.656***	.137
Lagged incumbent Vote	-.006*	.033	.006	.007
Presidential Vote	.008	.007	-.003	.013
Redistricting	.895***	.178	.397*	.240
Incumbent's Age	.083***	.013	.015	.014
Incumbent's Tenure	.260***	.041	.543***	.090
Age*Tenure	-.002***	.0006	-.009***	.002
Incumbent in Majority	-.318	.218	-.502*	.232
Challenger's Spending ($10,000's)	.238***	.072	.263***	.079
Incumbent's Spending ($10,000's)	-.036	.041	-.062	.052
State legislature size	.003**	.001	-.0005	.001
Ratio state legislature :: House delegation	.260	.599	1.08	.778
Democrat	.212	.166	-.058	.161
Party Tides	-.037*	.017	.044	.028
Constant	-8.68***	.954	-3.77***	.929
N	5144			
Pseudo R^2	.189			
Log likelihood	-1595			

*** p < .001, **p < .01, *p < .05, one-tailed test
Robust standard errors in parentheses; clustered on state
Dependent variable: 0=run for reelection; 1=retire; 2= seek other office

Table A5
Multinomial Logistic Estimation:
Effect of Challengers' Timing on Incumbents' Career Decisions
Challengers of the Incumbent's Party

	Retire		Seek Higher Office	
	Coef.	S.E.	Coef.	S.E.
Timing of Challenger Entry	.0016	.0012	.005***	.001
Majority Leader^	--	--	--	--
Minority Leader	-2.44*	1.31	-1.50*	.909
Committee Chairman	-.968*	.443	-.747	.965
Ideological Distance from Chamber Median	-.815	.725	.851	1.09
Open Senate seat	-.203	.397	.986**	.368
Closed Senate Seat	-.065	.309	-.365	.424
Open Governorship	.497	.389	1.55***	.366
Closed Governorship	-.032	.329	1.10***	.324
State size	-.274	.191	.199	.301
Lagged incumbent Vote	.0002	.007	.017*	.009
Presidential Vote	-.026*	.015	-.039*	.019
Redistricting	-1.31***	.333	-1.72**	.593
Incumbent's Age	.015**	.019	.008	.026
Incumbent's Tenure	.274***	.084	.559***	.155
Age*Tenure	-.003*	.001	-.009***	.003
Incumbent in Majority	-1.35***	.429	-1.06**	.420
Challenger's Spending ($10,000's)	.145	.182	.213	.181
Incumbent's Spending ($10,000's)	-.022	.058	-.095	.079
State legislature size	.0006	.002	-.003	.003
Ratio state legislature :: House delegation	-.241	1.27	-.478	2.15
Democrat	-.211	.333	-.699	.334
Party Tides	-.062	.048	.003	.039
Constant	-2.11	1.41	.380	1.63
N	559			
Pseudo R^2	.312			
Log likelihood	-417			

*** p < .001, **p < .01, *p < .05, one-tailed test
Robust standard errors in parentheses; clustered on state
Dependent variable: 0=run for reelection; 1=retire; 2= seek other office

^ No experienced challenger of the incumbent's party ran against a majority leader.

Table A6
Multinomial Logistic Estimation:
Effect of Challengers' Timing on Incumbents' Career Decisions
Challengers of the Out Party

	Retire		Seek Higher Office	
	Coef.	S.E.	Coef.	S.E.
Timing of Challenger Entry	.0001	.001	.002**	.0008
Majority Leader	-38.5***	.851	-.7.4***	.798
Minority Leader	.892	.701	.022	1.01
Committee Chairman	-.506	.603	-36.4***	.738
Ideological Distance from Chamber Median	-.420	.818	-.996	.846
Open Senate seat	.470	.290	1.55***	.364
Closed Senate Seat	.157	.258	-.234	.312
Open Governorship	.550	.408	1.29***	.326
Closed Governorship	.168	.260	.71***	.231
State size	.163	.206	.712***	.189
Lagged incumbent Vote	.014**	.006	.012	.009
Presidential Vote	.010	.017	.011	.021
Redistricting	-.676*	.398	-.672*	.405
Incumbent's Age	.082***	.022	.035	.026
Incumbent's Tenure	.317***	.080	.698***	.190
Age*Tenure	-.003**	.001	-.011***	.004
Incumbent in Majority	.155	.567	0048	.453
Challenger's Spending ($10,000's)	.226*	.136	.198*	.089
Incumbent's Spending ($10,000's)	-.192**	.082	-.168**	.068
State legislature size	.003	.002	-.0007	.001
Ratio state legislature :: House delegation	.917	1.18	3.56***	1.07
Democrat	-.165	.391	-.133	.295
Party Tides	-.08*	.043	.142**	.052
Constant	-9.20***	1.66	-5.30**	1.84
N	859			
Pseudo R^2	.268			
Log likelihood	-452			

*** p < .001, **p < .01, *p < .05, one-tailed test
Robust standard errors in parentheses; clustered on state
Dependent variable: 0=run for reelection; 1=retire; 2= seek other office

Notes

[1] The alternatives represented by *q* and *b* might be the same, but they need not be. For example, the next-best-alternative available to a politician who wants to run for higher office might be his current seat. But if he gives up that seat in order to run, it cannot be his next-best alternative upon losing.

[2] Substantively, I do not mean to describe a situation in which the actors literally decide at the same time. Rather, I intend to convey that both consider the possibility of running over the same period of time, and that each makes a decision with some uncertainty as to what the other intends to do.

[3] There are also two weak Nash equilibria (In, Out) and (Out, In).

[4] Other studies (Ansolebehere et al. 2000, Levitt and Wolfram 1997) focus on the portion of the incumbency advantage which is attributable to the personal characteristics of the incumbent herself. These estimate the advantage at four to five points. However, (a) the narrowly personal advantage which these studies estimate is not the sum total of the incumbency advantage that challengers must run against, and (b) even if it were, 4-5 points is still a sizeable advantage at the polls.

[5] Recent literature has offered reasons to doubt the two assumptions underpinning the Incumbent First model. Jacobson (1987) challenges the notion that the incumbency advantage is substantively large. He shows that incumbents' large margins of victory don't translate into electoral security because of large year-to-year vote swings. Similarly, Cox and Katz (2002) argue that the incumbency advantage is not resource-based, and thus possibly not universal. They find that a substantial portion of the "incumbency advantage" is an artifact of strategic exit: When incumbents think they're going to lose, they just save themselves the trouble of running. The majority of races which involve incumbents thus involve them winning safely; this artificially drives up their aggregate vote margins and inflates the incumbency advantage.

[6] I choose ordered probit because even though the Simultaneous Entry Game involves only two players, in any given district there may be several potential candidates considering a run at a House seat. Ordered probit allows me to assume that there are several games in each district, and that all of them are similar. It also incorporates the assumption that the entry of three strong challengers in a district is stronger evidence of the Simultaneous Entry than is entry of one strong challenger.

[7] Incumbents who ran for reelection but lost in the primary are coded as having run for reelection. Incumbents who were involuntarily removed from their races (primarily because of death or legal action) are coded as missing data.

[8] I obtained data from *Congressional Quarterly Weekly Report,* which reported primary candidates' vocation between 1976 and 1998. Any candidate listed as being a current or former officeholder in this capacity is coded as experienced.

[9] Between 1976 and 1980, 206 sitting House members sought other elective office; 192 (93%) ran for either a Senate seat (148) or a governorship (44).

[10] An incumbent is coded as a minority party leader if she is the Minority Leader, the Minority Whip, or the Minority Conference/Caucus Leader. An incumbent is coded as a majority leader if she holds any of the same positions in the majority party, or was Speaker of the House.

[11] Unfortunately, I am limited in the independent variables I can employ. First, the other element in how much the incumbent values the *Hard* race is the probability of defeating a quality opponent. That probability cannot be a test variable because the probability of an incumbent's

victory is the inverse of the probability of a challenger's victory and thus also reflects how much the challenger values the *Hard* race. Second, all of the variables which measure the value of the incumbent's next best career opportunity actually measure the value of his next best *political* career opportunity. Unfortunately, we can't observe how much incumbents value private-sector career opportunities, or even, ex ante, whether or not they have such opportunities.

[12] Results are substantively similar if the key independent variables are continuous, and measure the number of experienced challengers of each party entering the race.

[13] The only major measure included in previous literature which I lack is the presence of political scandal.

[14] Another strategy for estimating the effect of challenger entry on incumbent careers is to compare the estimation in Table A3 to one which is the same in all respects but does not include the challenger entry variables; this is reported in Table A4. Substantial differences between the two models in the coefficients and standard errors indicate that the model in A4 – which is fully specified according to the most recent progressive ambition literature – suffers from omitted variable bias. For example, the coefficients associated with being in the majority party nearly double in size when the challenger entry dummies are included. Additionally, adding the challenger entry variables more than doubles the pseudo-R-Squared, from .19 to .46. This indicates that by themselves, these variables explain more of the variance in the dependent variable than all of the others combined.

[15] Federal law requires that every candidate submit this form to the Federal Election Commission as soon as he has raised $5,000 (FEC, 1999).The FEC allows candidates to spend for pre-campaign activities without contributing to the $5000 limit, so the amount raised or spent by some candidates before filing might be somewhat higher.

[16] Though incumbents' statements of candidacy are also on file with the FEC, their dates are not reliable indicators of the when the incumbents decided to run for office, because incumbents who exited filed reports on approximately the same dates as incumbents who ran for reelection.

[17] I collected this data from a variety of sources, including *Congressional Quarterly Weekly Report, The National Journal*, and local newspaper accounts obtained via Lexis-Nexus.

[18] The year is chosen arbitrarily. Four incumbents who did not seek reelection that year, but whose choice was not entirely their own, are excluded. Harold Runnels (NM 2) died. The House expelled Michael Myers (PA 1) after a jury convicted him of accepting bribes for House votes. Harold Diggs (IL 13) retired in the face of an impending jail sentence. Robert Drinan (MA 4), a Jesuit priest, retired after being ordered to by the Church.

[19] Christopher Dodd, Charles Grassley, Steven Symms, and Mark Andrews all ran for the Senate and all won. Tom Steed's retirement seems to have been a "true" retirement: the 76 year-old member won his previous election with by 20 points despite being outspent 3-1.

[20] Murphy's House electronic voting card was found to have been in use while he was in Chicago.

[21] The best methodological tool to sort this out would be simultaneous equations , since the evidence that challengers influence incumbents' decisions requires estimating the determinants of two interrelated variables – the entry decisions of incumbents and challengers who run in the same district. However, there are two issues preventing its use. The first is data availability. The equation estimating challengers' decisions would require data on all strong potential challengers, not just those who enter. The second problem is methodological: finding an appropriate instrument is prevented by the fact that the same variables effect challengers' and

incumbents' decision to enter. This prevents finding an instrument for this system of equations. See Cox and Katz (2002, footnote 4).

[22] Where more than one experienced challenger from a single party entered a single race, I use the FEC date from the challenger who performed best in the primary elections.

[23] There are at least two possible explanations for this discrepancy. It could be that, like social scientists, political challengers have better information about incumbents' public sector job opportunities than their private sector job opportunities, and as such primarily target incumbents with public sector job opportunities. Or, it could be that challengers target any incumbents they can, but those who respond by exiting are not ready to leave politics altogether and thus choose to seek another office.