Burning the Midnight Oil: Clandestine Behavior, Hard Work, or Strategic Rush in Congressional Voting?

Phillip J. Ardoin and Adam J. Newmark

While the vast of majority voting in Congress occurs during regular working hours, two percent of the recorded votes and eleven percent of Key Votes each session over the last 15 years have occurred late into the evening. The purpose of this research is to examine this unique set of votes that members of Congress cast while burning the midnight oil. Although these late night votes represent only a small percentage of roll-call votes, they are clearly important to members of Congress, or at least their leaders, who are extremely busy. Roll-call votes scheduled late in the evening undoubtedly interfere with members' regular schedules, and no member wants to spend their night on the hill after a long day of Washington work. The results of our analyses indicate the majority of late night voting can be explained by the strategic rush hypothesis which suggests members burn the midnight oil prior to long recesses and also later in the week in order to return to their constituents. We also find late night voting may be the result of an over burdened legislature. Finally, our results confirm the growing power of Congressional leaders, particularly in the House, to utilize and even abuse the legislative schedule to meet their policy and reelection goals.

Of the late night votes, none have garnered as much attention as those taken on Sunday, November 23, 2003 which was the roll call for H. R. 1: Medicare Prescription Drug, Improvement, and Modernization Act (Mann and Ornstein 2006). This legislation represented a critical policy initiative for President George W. Bush and Republican Congressional leaders. While debate regarding H.R. 1 began at 3:41 p.m. on Saturday afternoon, lobbying and maneuvering continued on this legislation for more than 14 hours before the final gavel fell providing President Bush and the Republican leaders in Congress a tough victory early Sunday morning at 5:53 a.m. Prior to the final vote on H.R. 1, several procedural motions were debated and ultimately approved by the majority throughout the evening. The final roll-call vote began Sunday morning at 3:01 a.m. with the presiding officer announcing, "Members will have fifteen minutes to record their votes." While the official time for the roll call ended at 3:15 a.m., at 3:30 a.m. the vote was still open with an official tally of 212 yeas and 214 nays. By 3:48 a.m. the vote was 215 yeas and 218 nays, with opposition to the bill attaining an absolute majority. The roll call remained open for nearly three more tumultuous hours of arm-twisting by the Republican leadership and even a 5:30 a.m. phone call by the president before the leadership was able to muster a

---

PHILLIP ARDOIN is an Assistant Professor of American Politics at Appalachian State University.
ADAM J. NEWMARK is an Assistant Professor of Political Science at Appalachian State University.

The American Review of Politics, Vol. 30, Fall, 2009: 229-250

majority of yea votes and gavel the vote to a close at 5:53 a.m. While Speaker Hastert and Majority Leader Delay were delighted, House Democrats and some Republicans were outraged. For instance, Jerold Nadler (D-NY) remarked:

> They grossly abused the rules of the House by holding the vote open. The majority of the House expressed its will, 216 to 218. It means it's a dictatorship. It means you hold the vote open until you have the votes (Mann and Ornstein 2006).

Surprisingly, when the gavel fell at 5:53 a.m. the House chamber did not conclude their business for the evening or rather morning. After Majority Leader Delay's move to table a Democratic motion to reconsider H.R. 1 was quickly approved by a party line vote at 6:13 a.m., the House Leadership went forward with a completely new issue. This bill, S. 877: Controlling the Assault of Non-Solicited Pornography and Marketing Act of 2003, easily passed with bipartisan support at 6:23 a.m.

Although most Congressional voting takes place during the typical workday, two percent of the recorded votes each session over the last decade and a half have occurred late into the evening. This may not seem like much, but late-night votes account for eleven percent of Congressional Quarterly's Key Votes during that period. These votes are disproportionately controversial, often involve issues of presidential power, and/or are important to the public (CQ Almanac 2006). The purpose of this research is to examine this unique set of votes which members of Congress cast while burning the midnight oil. Though these late night votes represent only a small percentage of roll-call votes, they are clearly important to members of Congress and the leadership who are extremely busy. Late-night roll-call votes interfere with members' schedules and no member wants to spend their night on Capitol Hill after a long day of Washington activity, but participation on voting after midnight is over ninety-five percent, and it has become a rare but persistent practice in both chambers of Congress.

Considering the disincentives for holding late night roll-call votes, why do they occur? Cynics might assume our representatives are trying to hide votes, conducting these roll calls while most Americans are sleeping rather than attentively watching C-Span. An alternative view might suggest late night voting is simply an example of members of Congress working to achieve their legislative and reelection goals. It is widely known that many votes are cast at the end of each congressional session in an effort to put issues to rest prior to recess (Oppenheimer 1985; Oleszek 2004; Yackee 2003; Davidson and Oleszek 2004). Building on this line of research we consider several explanations of late night voting. We examine how leaders schedule late night voting prior to recesses (Yackee 2003)[1] and/or on

Thursdays and Fridays evenings allowing members to return to home for the weekend. We also test whether late night votes are the result of attempts by the minority to dilute legislation through the amendment process and whether late votes are a function of a busy congressional schedule. Finally, structural factors may explain these votes. Our purpose is to describe the nature of these votes and determine why they take place late into the night. This should improve our understanding of this unique and important set of votes, the leadership's scheduling powers, and the congressional voting process.

Vote Scheduling

The literature on how and when members of Congress schedule votes is surprisingly limited, with a few exceptions (cf. Oppenheimer 1985; Cox and McCubbins 1993; Sinclair 1994; Oleszek 2004; Yackee 2003; and Davidson and Oleszek 2004). In many cases, scheduling is used as a strategic advantage for Congressional leaders. Oppenheimer (1985) notes the increase in legislative activity as recesses approach. Over time, the Congressional calendar has become less flexible, so these deadlines are now even more important in vote scheduling. Davidson and Oleszek (2004) note that controversial legislation may pass at the end of session because of the rush to get the legislative agenda completed. Early in the session, members may be reluctant to address controversial issues, while later, bills may pass as a result of the end of session rush.

Some of the literature notes the difference between the House and Senate when it comes to scheduling (Oleszek 2004). Cox and McCubbins (1993) and Yackee (2003) note the ability of the Speaker of the House to use scheduling as a means of manipulating legislation around deadlines. The Speaker uses scheduling to help promote the party's legislative agenda which aids in the members' reelection goals and the party's chances at maintaining control of the chamber. Senate leaders, on the other hand, are constrained by the rules of unanimous consent and institutional tactics such as the filibuster, thereby limiting their ability to use scheduling as a means of controlling the legislative agenda like House leaders (Sinclair 2000; Oleszek 2004).

Perhaps the most direct test of strategic scheduling comes from Yackee (2003), who finds that there are increases in legislation prior to major recesses. These "rushes" exist to a greater extent in the House, where leaders are able to manipulate schedules resulting in increases in legislation as the close of session approaches. Her findings illustrate the importance of scheduling, particularly in the House of Representatives.

Theoretical Approaches to Explaining Late-Night Votes

Since members of Congress are rational, it follows that the leadership will utilize deadlines to help achieve their legislative and reelection goals. Given that it seems counterintuitive that members of Congress would want to burn the midnight oil, we offer several explanations for these votes. The assumption is that scheduling is used for rational purposes to aid the members electorally or because institutional opportunities and constraints make late-night voting necessary. Our first three explanations are clear examples of rational behavior, while the fourth reflects strains of the workload. Our final explanation focuses on the compositional and structural factors that increase the likelihood of these votes.

The Strategic Rush Hypothesis

Several scholars have noted that there is typically a rush to pass legislation just prior to a Congressional recess (Oppenheimer 1985; Davidson and Oleszek 2004). This allows members to return to their districts to claim credit and advertise their activity in Congress, helping them to pursue their reelection goal (Mayhew 1974). The strategic rush hypothesis refers to members attempting to pass a significant amount of legislation before the session ends (Yackee 2003). Members of Congress have busy schedules, and in order to deal with matters that may have been postponed over the course of the session, will vote on bills late into the night before the session adjourns. Controversial votes are often postponed until late in the legislative session for a number of reasons (Davidson and Oleszek 2004). It often takes time to get controversial legislation out of committees as these votes usually require a greater number of hearings, additional bargaining, and rounding up support. Once discharged from committee, negotiations continue, and the leadership may delay these votes until later in the session. Or, sometimes it is simply easier to deal with less controversial legislation first. On more complex bills, members of Congress may more likely pass legislation when the clock is ticking at the end of session, whereas earlier in the session, it is easy to procrastinate. Summarily, we expect late night votes to occur prior to major recesses, which would indicate that scheduling is used to accomplish goals prior to these breaks.

The Tuesday to Thursday Rush

The strategic rush hypothesis can take a second form, however. The second version is much more frequent than the first and refers to the limited amount of time that members spend in Washington D.C. The contemporary

Congress is often referred to as the Tuesday to Thursday club, because most members spend Tuesday through Thursday in the Capitol, while the remainder of their time is spent in their districts. This form of strategy, which we term the *Tuesday to Thursday Rush*, is based on a desire to pass bills, even if it requires late night voting on Thursdays or Fridays in order to return to the district for the weekend. Some of this is related to members' work activities in their districts, and some of it is a desire to return to their families. Greater late-night voting activity on Thursday and Friday nights as opposed to other nights of the week is an indication of the strategic desire to return to districts and is an indication of this rush.

Dilute and Delay

The amendment process can delay votes by pushing them late into the evening. A former member of Congress described a procedure the minority party used a number of years ago, whereby numerous amendments were offered which diluted the content of the legislation and delayed votes on it.[2] Unlike the Senate, debate is limited in the House, but this does not mean that legislation cannot be delayed. Members of the minority party can offer amendments, and although their arguments are limited in time, it is commonplace for members to ask their colleagues to speak on behalf of the amendment as well. Those opposed to the amendments are, of course, allowed to rebut their colleagues, so votes can be delayed. This is one reason why the Rules Committee places limits on the number of amendments offered or prohibits them altogether. Thus, we inquire whether late-night votes are a result of numerous amendments added to proposed bills. While members of the U.S. House may use amendments to dilute and delay legislation, U.S. Senators can also utilize the filibuster as a means of delaying action on legislation which they oppose. According to Oleszek (2001), the use of or threat of a filibuster has been on the increase in recent years, and it may be most effective near the end of the term (Davidson and Oleszek 2004). While members who oppose legislation may use amendments and filibusters to delay voting, congressional leaders, particularly in the U.S. House of Representatives, can hold votes open as long as necessary to cajole those members sitting on the fence to support their position. This procedure was exemplified with the 2003 roll call for H. R. 1: Medicare Prescription Drug, Improvement, and Modernization Act noted in our introduction.

The Overburdened Hypothesis

The overburdened hypothesis acknowledges the growing demands on our nation's lawmakers. Members of Congress represent diverse constituen-

cies with a multitude of issues and concerns, most of which will not be addressed during a given legislative session. Thus, there is simply not enough time to deal with the sheer volume of proposed bills during regular business hours. Therefore, late-night votes may simply reflect the growing demands and long hours which members of Congress work in their efforts to represent their constituents and the nation. A likely indication of this is if late-night votes occur regardless of the time before recess or day of the week. Moreover, late night votes should be more likely to occur when there is a larger legislative agenda. Since Congress is typically more active at various times of the year, the probability of late night votes should increase during periods of greater overall activity in the chambers.

Compositional and Structural Influences on Late-Night Voting

As indicated, we believe late-night voting is largely driven by strategic politicians and the realities of the Congressional calendar. However, partisanship and the nature of the bill in question may also influence the likelihood that a given vote occurs late at night. We already addressed that controversial legislation is likely to occur late in the session (Davidson and Oleszek 2004), and likewise it should more likely occur late at night. Similarly, important legislation should more likely occur after midnight because a greater number of members of Congress will take interest in the bill; thus debate time will increase and more amendments will be offered. Important legislation is often delayed because of the additional time needed to build coalitions.

Since no two Congresses are exactly alike, the political environment also affects the probability of a late-night votes. Some Congresses can be characterized by large majorities, while others are narrowly divided. Furthermore, party unity varies across Congresses. Our argument is that these factors influence the probability and number of late-night votes. Large majorities, particularly those that are unified, for example, may not need to schedule late night votes because the majority party can effectively control scheduling, limit debate, and block the minority party from diluting or delaying votes. The minority party is more likely to attempt to block legislation if they have some chance of obtaining concessions. Therefore, the greater the size of the majority, the less it becomes necessary to hold votes late in the evening. This is likely more pronounced in the House, where there are greater institutional constraints on debate, and the leadership has greater control over scheduling.

Data and Methods

Data employed for this analysis were attained from a unique database provided by *The Washington Post* online Votes Database which allows readers to examine all votes for the U.S. Congress from 1991 through the present.[3] Included in this database are several subcategories such as key votes, votes decided by narrow or large margins and, most significant for this analysis, late night votes. Late night votes are defined by *The Washington Post* and this analysis as votes taken in Congress between the hours of 12:00 a.m. and 7:00 a.m. For our purposes, we consider a vote that takes place after 12:00 a.m. as a late night vote for the previous day. Over the period of the analysis (1991-2006), this includes 151 late-night votes in the U.S. House of Representatives and 41 late-night votes in the U.S. Senate. While the descriptions and specific times of the late night votes were obtained from *The Washington Post's* Votes Database, the individual vote positions taken by members of Congress and the dates of all non-late votes were obtained from Keith Poole's VoteView.com Data Archive (2007). Finally, Key Votes for each Congress were taken from the Congressional Quarterly Almanac (1991-2006).[4]

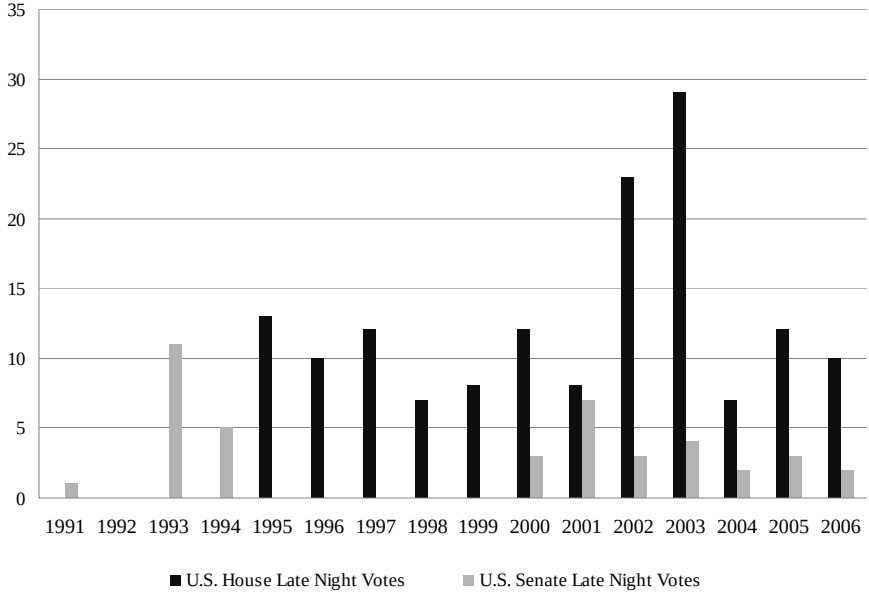
Our analysis proceeds in two parts. First, we address the distribution and type of late night voting that takes place in Congress. Second, we turn to explanations for these late votes.

A Look at Late Night Voting: Their Distribution and Type

We begin by asking several rather simple questions: what do late-night votes look like? That is, we are interested in the characteristics of these bills and how they compare to votes taken during more traditional hours. Has there been an increase or decrease in late night voting? Is either the U.S. House or U.S. Senate more likely to conduct late night votes? When are late-night votes most likely to occur? What are the issues that late night votes address? Finally, are late night votes more partisan or divisive?

Figure 1 presents the distribution of late-night voting over the past 15 years. Both chambers of Congress had several years during the 1990s without any late night votes, but since 2000, late-night voting has occurred in every year in both the House and the Senate. Figure 1 also illustrates that the majority of late night votes occur in the House, as 151 of the 192 votes took place in the lower chamber for the period of our analysis. Additionally, a greater proportion of late night votes out of all votes occur in the House compared to the Senate. These late night votes may be a reflection of the scheduling powers of the House leadership, while in the Senate, late night votes are more inhibited due to institutional constraints.

Figure 1. Number of Late Night Votes by Year



But when do these votes occur throughout the year? Figures 2A and 2B display the distribution of late night and regular votes by month for the House and Senate. In line with the strategic rush hypothesis discussed above, we expect the number of late-night votes to increase prior to major recesses in the Congressional calendar. In addition, considering our over-burdened hypothesis, we expect the number of late-night votes to increase as the overall level of voting in each chamber increases.

The monthly distribution of late-night and regular votes displayed in Figures 2A and 2B provides mixed support for the strategic rush hypothesis, with the plurality of late-night votes occurring in the spring and summer months rather than the latter months of the year and immediately prior to the end of each session. However, the increased number of late-night votes during the summer months precedes the rather long recess in the Congressional calendar that often takes place from the beginning of August to the beginning of September. There also appears to be a significant relationship between the overall number of votes taken each month and the number of late-night votes that occur, suggesting tentative support for our over-burdened hypothesis. The Pearson Correlations between late night and regular votes in U.S. House of Representatives is 0.67 and 0.66 in the U.S. Senate. Clearly, as the amount of voting activity on the floor of each chamber increases the probability of late night voting also increases.

Figure 2A. U.S. House Votes by Month by Type

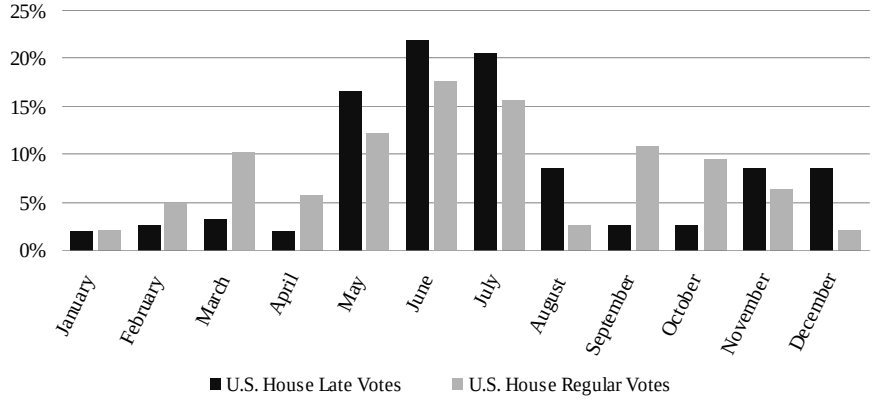
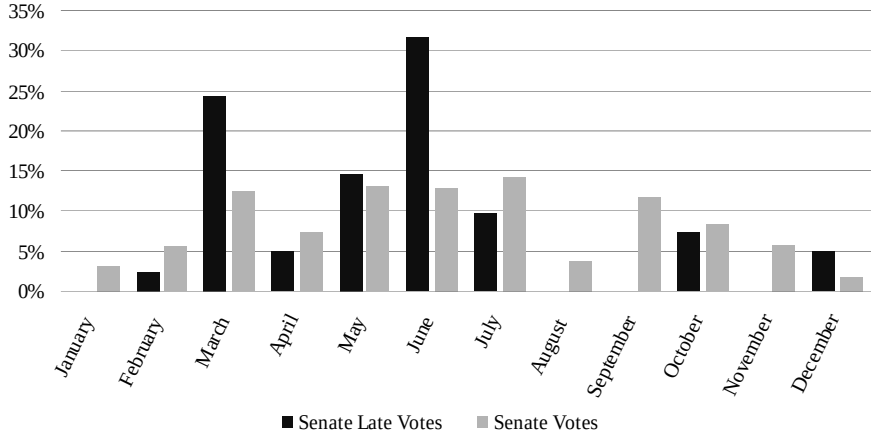


Figure 2B. U.S. Senate Votes by Month by Type



We argued earlier that a variant of the strategic rush hypothesis is the Tuesday to Thursday rush, which reflects scheduling that enables members of Congress to return to their districts. Table 1 indicates that 85 percent of the regular votes in the House occur between Tuesday and Thursday, but the pattern is slightly different for late-night votes. For late-night votes there is a monotonic increase in votes from Monday through Friday. With about 68 percent of late night votes occurring on Thursday and Friday nights (compared to less than 39% for regular votes), there is an indication of a Tuesday to Thursday rush.

Table 1. Type of Vote by Day of Week

Day	U.S. House		U.S. Senate	
	Regular Votes	Late Votes	Regular Votes	Late Votes
Monday	6.30%	6.00%	5.00%	0.00%
Tuesday	21.30%	6.00%	22.10%	7.30%
Wednesday	32.70%	9.90%	26.80%	9.80%
Thursday	31.40%	28.50%	35.50%	39.00%
Friday	7.30%	39.70%	10.10%	39.00%
Saturday	0.70%	8.60%	0.50%	4.90%
Sunday	0.30%	1.30%	0.00%	0.00%
N	8960	151	5389	41

Voting in the Senate reflects a similar pattern to the House (Table 1). For regular votes, there is an increase through Thursday, with about 84 percent of the votes occurring between Tuesday and Thursday (compared to only 56% for late-night votes). For late-night votes, there is a steady increase through Friday with 78 percent of late-night votes occurring on Thursday and Friday evenings alone. The key difference for both chambers is that regular votes are spread throughout the week, while late night votes are concentrated on Thursday and Friday evenings.

In addition to an excess of late-night votes toward the end of the week, the strategic rush explanation should also result in few votes the day after a late-night roll call. That is, if members are staying up late to complete legis-ative work in order to return to their districts, we would expect few if any votes the following day. Table 2 indicates that for the majority of late-night votes this is the case, with no votes the day after a late-night roll call. The data reported in Table 2 support this view with the vast majority of late-night voting sessions in the U.S. House (64.9%) and the U.S. Senate (75.6%) preceding a day with no roll-call votes. Only 29.3 percent and 38.2 percent of regular votes in the House and Senate respectively precede a day with no roll-call votes. This pattern suggests members of Congress are burning the midnight oil in order to head home to their districts rather than returning to the chamber the following day.

Table 2 also reports the percentage of regular and late-night votes cast prior to a recess.[5] Whereas only 11.3 percent and 13.4 percent of regular votes in the House and Senate, respectively, take place prior to a recess, 48.3 percent and 26.8 percent of late-night votes occur prior to a recess in the House and Senate. This indicates that members are willing to stay up late in order to complete work before returning to their districts prior to recesses, offering further support for the strategic rush hypothesis.

Table 2. Voting After a Late-Night Vote and Before Recesses, by Chamber

Chamber	Type of Vote	No Votes Day After Vote	Votes Day After Vote	Total Number of Votes	Pearson Chi-Square
U.S. House	Regular Votes	29.3%	70.7%	8960	89.531***
	Late-Night Votes	64.9%	35.1%	151	
U.S. Senate	Regular Votes	38.2%	61.8%	5389	25.411***
	Late-Night Votes	75.6%	24.4%	41	

Chamber	Type of Vote	Pre-Recess Voting	Voting Within 5 Days	Total Number of Votes	Pearson Chi-Square
U.S. House	Regular Votes	11.3%	88.7%	8960	194.04***
	Late-Night Votes	48.3%	51.7%	151	
U.S. Senate	Regular Votes	13.4%	86.6%	5389	8.235**
	Late-Night Votes	26.8%	73.2%	41	

*=p<0.05; **=p<0.01; ***=p<0.001

We next examine how late-night votes were distributed throughout the evening and early morning hours. While we define late-night voting as any vote which occurs between 12:00 a.m. and 7:00 a.m., there is clearly a difference between a vote which occurs a few minutes after midnight and one which keeps members on the chamber floor until early the next morning. Table 3 provides an hourly distribution of late-night voting for the House and Senate. For each chamber the majority of late-night votes occur between midnight and 2:00 a.m., with a plurality occurring between 12:00 a.m. and 1:00 a.m. in both chambers. Still, these votes do occur later in the evening, as 35.5 percent of the votes in the House took place after 2:00 a.m.

What types of issues are keeping members in the chamber until the wee hours of the night? For both chambers we find domestic issues make up a large majority of late-night votes. Specifically, we find 63 percent of the House and 79 percent of the Senate's late-night votes address domestic issues. The remaining late night votes in the House represent foreign policy (29%) and administrative issues (8%), while the remaining late-night votes in the Senate represent votes on foreign policy (14%) and presidential nominations (7%). Considering the numerous disincentives for forcing members to spend their evening on the hill after a long day of Washington work, we expect congressional leaders would only hold late night roll call for legislation which they view as critical.

Table 3. Late-Night Votes by Hour

Time	U.S. House	U.S. Senate
12:00 AM	34.9%	59.5%
1:00 AM	29.6%	19.0%
2:00 AM	14.5%	9.5%
3:00 AM	11.2%	2.4%
4:00 AM	3.9%	0.0%
5:00 AM	1.3%	2.4%
6:00 AM	4.6%	7.1%
N	151	41

Table 4. Type of Vote by Chamber by Late-Night/Regular Voting

Chamber	Type of Vote	Key Votes	Party Unity	Close Votes	N
U.S. House	Regular Votes	2.3%	53.8%	6.3%	8960
	Late-Night Votes	11.3%	69.5%	19.9%	151
	Chi-Square	51.317***	14.735***	44.887***	
U.S. Senate	Regular Votes	4.0%	58.3%	22.1%	5389
	Late-Night Votes	9.5%	61.9%	11.9%	41
	Chi-Square	3.297*	0.228	2.509	

*=p<0.05; **=p<0.01; ***=p<0.001

Using Congressional Quarterly's Key Votes (1991-2006) as a measure of legislative importance, we find late-night votes in both chambers are more likely to be important than votes taken during the day (see Table 4). While only 2 percent of day-time votes in the U.S. House are defined by Congressional Quarterly as Key Votes, 11 percent of the late-night votes have this designation. For the U.S. Senate, the results are similar with 3 percent of day-time votes defined as Key Votes and 10 percent of late-night votes designated as Key Votes.

Finally, as an indirect means of examining whether late-night roll calls were more likely to be divisive and or the result of partisan strategies to delay the legislative process, we examine the proportion of party line votes and close votes taken after midnight as compared to regular hours.[6] First, we find late-night votes in the U.S. House were significantly more likely to be partisan votes, while in the U.S. Senate late-night votes were only slightly more partisan. Furthermore, we find a significantly greater number of close votes in the U.S. House, while in the U.S. Senate, close votes were actually

less likely to occur during late night sessions. This may reflect the scheduling powers of the House leadership, while in the Senate, procedural maneuvers like the filibuster might make a late-night vote a waste of the majority's time.

Explaining Late-night Votes in Congress

We now consider several multivariate models which examine the factors that are hypothesized to influence the probability of late night votes. Since we have multiple units of analysis, we present the variables for each model followed by the analysis for that model.[7]

To begin, we consider the probability that a given vote in Congress from 1991 to 2006 occurred between 12:00 a.m. and 7:00 a.m. For this model, the unit of analysis is the individual vote. Thus, our first dependent variable is a variable coded 0 for non late night votes and 1 for late night votes. We have constructed this variable for both the U.S. House and the U.S. Senate and perform our analyses on each chamber separately. Late-night roll call votes account for 151 (1.7%) of the 9,111 votes cast in the U.S. House and 41 (0.8%) of the 5,430 votes cast in the U.S. Senate. Given the skewed distribution of our dependent variable, we employ a weighted LOGIT procedure developed by King and Zeng (1999) which allows us to estimate the predicted probabilities associated with the two outcomes reflected in a skewed dichotomous dependent variable. Given the parameter values obtained by the LOGIT model, it is possible to estimate the probability that each roll-call vote was held after midnight.

Several independent variables are included in our model to test the hypotheses discussed earlier in this paper. To test the strategic rush hypothesis, we include a dummy variable if a vote occurs prior to a recess. To examine the Tuesday to Thursday rush hypothesis, we include a dummy variable for votes that took place on either Thursday or Friday evenings. In each of these cases, the variables were coded 0 if they did not occur before a recess or on a Thursday or Friday, and 1 if they did. The size of the legislative agenda is designed to test our overburdened hypothesis. Thus, we use the number of votes taken throughout the calendar week of a given vote to gauge the amount of work that is conducted on the chamber floor. To consider whether important votes are more or less likely to be delayed, we also include Congressional Quarterly's (1991-2006) Key Votes. This is a dichotomous variable coded 1 if the vote is a Key Vote and 0 if it is not. We also include variables that serve as rudimentary tests of our dilute and delay hypothesis. We include a dichotomous measure of the competitiveness of each roll-call vote with those decided by a margin of less than five percent coded as 1 and those decided by 5 percent or more coded as 0. We also

include a dichotomous variable measuring whether the vote was along party lines with roll-call votes which a majority of Democrats voted against a majority of Republicans coded as 1 and all other votes coded as 0. Finally, we consider the size of the majority party to gauge whether smaller majorities are forced to resort to unusual tactics such as scheduling votes late at night. We expect that larger majorities do not have to resort to such scheduling tactics and are less likely than smaller majorities to schedule late votes.

Overall the results of this model support several of the hypotheses for explaining the occurrence of roll-call votes after midnight. First, we find late night votes are significantly more likely to occur in the House toward the end of the week and prior to a recess lending substantial support to our strategic rush hypothesis (see Table 5). Notably, a pending recess in the House has the most substantial impact of all of our independent variables, increasing the likelihood a late-night roll call by 3.35 percent. Similarly, we find late night voting in the U.S. Senate is significantly more likely to occur toward the end of the week (a 3% increase), while the impact of a pending recess in the Senate only borders on statistical significance. The size of the legislative agenda is also significant for understanding the occurrence of late-night voting in both chambers. Specifically, an increase of two standard deviations in the number of votes cast in a week increases the likelihood of a late-night vote in the House by 1.6 percent and in the Senate by 0.5 percent.

Our last set of variables indirectly examines the dilute and delay hypothesis. As noted above, the dilute and delay hypothesis suggests legislators use amendments[8] and parliamentary tactics to dilute and delay legislation which they do not support or for which the majority leadership needs time to cajole members sitting on the fence to support their position. As an indirect measure of this hypothesis, we examine whether late night votes are more likely to be votes on critical and or contentious legislation. For the House of Representatives, we find all three of our variables (Key Votes, Competitive Votes, and Party-line Votes) are significant and in the expected direction with Key Votes being the most likely to occur as late-night roll calls increasing the probability of a late-night vote by 1.8 percent (see Table 5). For the Senate, Party-line Votes are not significant, but Key Votes and Competitive Votes do have a significant impact on the likelihood of a roll-call vote occurring after midnight. As with the House, Key Votes have the most substantial impact of the three variables increasing the likelihood of a late-night vote by 1.3 percent in the Senate. Finally, considering the scheduling of votes is determined by the leadership of the majority party, we examine the impact of majority party size on the occurrence of late night votes. As the majority party's size increases, we would expect the need to delay votes for cajoling would decrease and therefore decrease the likelihood of late-night roll calls. Conversely, smaller majorities indicate a greater need

Table 5. The Probability of Late-Night Votes

Independent Variable	House Votes	Senate Votes
Pending Recess	2.148***	0.617•
	(0.205)	(0.376)
Thursday/Friday Vote	0.523***	1.230***
	(0.209)	(0.410)
Legislative Agenda Size	0.053***	0.032***
	(0.007)	(0.007)
Key Vote	1.533***	1.233**
	(0.300)	(0.547)
Party-line Vote	0.407*	0.200
	(0.201)	(0.034)
Competitive Vote	0.556*	-1.006*
	(0.259)	(0.495)
Majority Size	-0.084***	-0.022
	(0.010)	(0.115)
Constant	12.692***	-5.127
	(2.169)	(6.236)
Log likelihood	-604.757	-227.556
LR Chi-Square(8)	328.16	36.97
Prob > Chi-Square	0.000	0.000
Pseudo R-Square	0.213	0.08
N	9111	5430

•=p<0.10; *=p<0.05; **=p<0.01; ***=p<0.001

for late-night voting, as they are more likely to lack the numbers to attain a clear victory and/or force an earlier vote. While majority size is highly significant and in the hypothesized direction for our model of late night votes in the House, it is not significant for our Senate model. Again, this is reflective of the differences in leadership powers, size of the majority, and institutional constraints in the two chambers.

Although the results of our model confirm several of our hypotheses, the impact of the variables included is small. However, we note it is important to remember the highly skewed nature of the data and that late night votes only represent a very small proportion of votes in each chamber. Given the disincentives for members to remain in the chamber at such late hours, these influences may be subtle, but they are also important.

We now examine the factors that predict whether or not there was a late-night vote on a given day that Congress was in session. Our dependent variable is measured as a dichotomous variable with days in which a late night roll call was conducted coded as 1 and all other days coded as 0. The

U.S. House of Representatives was in session for 1,682 days during the period of our analysis and conducted late-night roll calls on 58 separate days. The U.S. Senate was in session for 1,620 days and conducted late-night rolls on 24 separate days. As with our first model, we employ a weighted LOGIT procedure developed by King and Zeng (1999) because of the skewed distribution of our dependent variable. Our independent variables replicate those employed in our model of individual votes, except for the Key Vote variable which is coded differently where 1 indicates all days in which a Key Vote was cast and 0 for all other days. In addition, we drop two variables (Party-line Vote and Competitive Vote) which cannot be properly measured for this unit of analysis (since some days have zero votes and others have more than one).

In general, the results of this model confirm our earlier findings (see Table 6). For both the House and Senate models, late-night roll calls are significantly more likely to occur on Thursday and/or Fridays. As with the previous models, a pending recess significantly increases the probability of a late-night roll call vote in the House suggesting that members will stay up late in order to return to their districts a day earlier (the variable is only significant at the 0.10 level in the Senate model). Members of Congress also

Table 6. The Probability of a Late-Night Vote on a Given Day

Independent Variable	House Votes	Senate Votes
Pending Recess	1.659***	0.765•
	(0.322)	(0.512)
Thursday/Friday Vote	0.693*	1.408**
	(0.319)	(0.513)
Legislative Agenda Size	0.143***	0.053***
	(0.036)	(0.012)
Key Vote	1.161***	0.440
	(0.320)	(0.535)
Majority Size	-0.084***	-0.234*
	(0.014)	(0.117)
Constant	14.035***	6.589
	(3.153)	(6.177)
Log likelihood	-197.167	-108.715
LR Chi-Square(4)	110.25	32.39
Prob > Chi-Square	0.000	0.0002
Pseudo R-Square	0.219	0.130
N	1682	1620

•=p<0.10; *=p<0.05; **=p<0.01; ***=p<0.001

appear to remain in their chambers late in the evening because of the burden of their workload. In both the House and the Senate, we find an increased probability of late night voting as the size of the legislative agenda increases. The variable is positive and significant for both the House and the Senate models. As expected, majority size is estimated to have a negative effect on the probability of a late-night vote occurring on a given day in both chambers. In either chamber, the scheduling powers of the leaders become more important when they control an assembly with smaller majorities. Finally, key votes are estimated to increase the probability that a late night vote will occur on a given day in the House.

Our last set of models estimates the factors explaining the number of late-night votes on a given day (Table 7). Thus, the dependent variable is the number of late-night votes on a given day for each chamber. Since we use count data, and diagnostics reveal over dispersion, we estimate each model using negative binomial regression (cf. Cameron and Trivedi 1998). The independent variables replicate our earlier models. We also include the number of amendments on a given day as a direct test of our dilute and delay

Table 7. Negative Binomial Estimates of the Factors Explaining the Number of Late-Night Votes on a Given Day

Independent Variable	House Votes	Senate Votes
Pending Recess	2.146***	1.819***
	(0.317)	(0.518)
Thursday/Friday Vote	0.525*	0.610
	(0.316)	(0.525)
Legislative Agenda Size	0.443***	-0.007
	(0.051)	(0.063)
Key Vote	0.753*	-0.466
	(0.337)	(0.777)
Amendment	0.205*	3.163***
	(0.154)	(0.660)
Majority Size	-0.084***	-0.089
	(0.027)	(0.107)
Constant	14.253*	-0.460
	(6.219)	(5.706)
Log likelihood	-211.512	-114.808
LR Chi-Square(6)	294	75.85
Prob > Chi-Square	0.000	0.000
Pseudo R-Square	0.41	0.25
N	1682	1620

*=p<0.05; **=p<0.01; ***=p<0.001

hypothesis, since the number of amendments likely increases the number of late-night votes. Again, we omit party-line votes and competitive votes since they are inappropriate given our unit of analysis. As with the previous models, we find that pending recesses are estimated to increase the number of late-night votes in both the House and the Senate. For instance, holding all other variables in our model constant, a pending recess in the Senate increases the rate ratio of late-night votes by a factor of 6.9, and for the House, we find the rate ratio increases by a factor of 10.2. We also find evidence of a Tuesday to Thursday rush in the House given the positive and significant coefficients for this variable; however, no such relationship exists in the Senate. The size of the legislative agenda is also found to significantly increase the number of late-night votes in the House but not in the Senate. In the House, key votes are found to increase the number of late-night votes, while the size of the majority is found to decrease the number of late-night votes; neither variable influences late-night voting in the Senate. Finally, the number of amendments is found to significantly increase late-night votes in both chambers. Notably, we find for every additional amendment offered in the U.S. Senate the rate ratio for late night votes increases by a factor of 12, thus offering additional support for our dilute and delay hypothesis.

Discussion and Conclusion

Our analysis supports several explanations of late night voting in Congress. We find consistent evidence of a strategic rush of late night voting prior to legislative recesses, but we also note that these votes occur more often later in the week, particularly late in the evenings (early mornings) on Thursdays and Fridays. Thus, the Tuesday to Thursday club appears to work late in order to return to their districts to campaign and provide constituency services. We also note there is a spike in late-night voting during the summer months that precede the long August recess. It is widely known that scheduling is important to members of Congress (Oppenheimer 1985; Yackee 2003; Davidson and Oleszek 2004), and our findings indicate the lengths that members will go to ensure their ability to get back to their constituencies.

The explanation that members of Congress work late because they are overburdened is less definitive, however. On one hand, members do work late when the legislative agenda is larger; thus, when they have more work to do, they stay up to complete it. This is consistent in all of our House models and in two of the three Senate models. Thus, members are likely burdened by their workload. However, our analysis of when members burn the midnight oil suggests that these votes do not occur evenly throughout the session, nor are they evenly spaced throughout the week. This uneven

scheduling offers substantial support that leaders of Congress are strategic in scheduling late-night votes. Given their busy schedules and the desirability to return to their districts, the results could hardly be different.

We also have some preliminary support that amendments are responsible for late night votes in both the House and the Senate. This influence is present even in the Senate, where scheduling tactics are not used as often as in the House. This could be an example of dilute and delay strategies, though a more thorough analysis of the individual votes each week would be necessary to determine this with greater confidence. At the very least it suggests there is a burden of the congressional workload. Whether this burden is created for political purposes to thwart the majority is a question worthy of further study.

There are alternative explanations for late night voting that might offer some insight into why the public often views Congress negatively. Approval ratings of Congress as an institution frequently drop below 40 percent, and at times have dropped below 20 percent (Durr, Gilmour, and Wolbrecht 1997; Anderson and Newmark 2002). Among the factors that influence congressional approval are scandals, which may paint the legislative branch as corrupt, or at least self-serving. Although all Congressional votes are recorded, it is possible that some controversial bills or roll-call votes are dealt with late at night in order to avoid increased scrutiny from the media and public. As a preliminary test, we examine key votes and find that they increase the likelihood of late-night votes in all three of our House models and in one of the Senate models. Ideally, we would like to know the level of controversy surrounding these votes. Obviously, Congress will not call a vote on a controversial abortion ban or legislation to increase their salaries in the middle of the night since it would likely draw even greater attention to the attempted clandestine behavior. Instead, the controversial nature of these actions is likely more subtle. Thus, a more detailed analysis of the individual votes would determine whether earmarks are cleverly added to late-night legislation.

Another possibility is that the majority party attempts to pass legislation that is not supported by the minority party. However, our results were fairly consistent (at least in the House) that larger majorities do not need to schedule votes late into the night. Nonetheless, regardless of majority size, it is likely that the more robust results for our House models are driven in part by the greater ability to schedule late-night votes in that chamber by the leadership. Further analysis is needed to ascertain whether in cases of conditional party government (Rhode 1991; Aldrich 1995; Aldrich and Rhode 2001), where there is majority party homogeneity and interparty discord, there is a great deal of deference to the majority leadership. If this is the case, the leadership may schedule votes later in the evening to lessen

minority party attempts to quash legislation, while at the same time, the rank-in-file members of the majority party will fall in line.

While our results indicate that leaders of Congress are strategic in when they schedule votes both within a week and throughout the year, we are also confident that lawmakers remain in the chamber late, in part, because of their workload. Whether members engage in dilute and delay tactics is less certain, as we lack a more direct test of this behavior. We are, however, confident that members of Congress are rational in their scheduling behavior, and they will likely continue to burn the midnight oil so long as it suits their goals. Much of our analysis takes place during periods of Republican control of Congress, and our findings are consistent with some of the unorthodox leadership tactics noted by Mann and Ornstein (2006). While our analysis concludes with the 109th Congress and the end of the Republican Party's majority status, it should be noted that the Democratic Party during the 110th Congress continued to schedule late night votes as the majority party.

NOTES

[1]Yackee (2003) called the increased number of recesses the "Strategic Rush Hypothesis."

[2]The "dilute and delay" tactic was described during an interview we had with a former member of Congress.

3The Washington Post Votes Database can be accessed at the following URL: http://projects.washingtonpost.com/congress/.

[4]Each year, Congressional Quarterly's criteria for choosing Key Votes include "matter(s) of major controversy," "matter(s) of presidential or political power," or "matter(s) of potentially great impact on the nation and lives of Americans" (CQ Almanac 2006, C-3).

[5]We define a recess as any congressional break greater than 5 days. Additional definitions of recess were examined, and we found similar results in both our bi-variate and multi-variate analyses. However, from a theoretical perspective we believe breaks greater than 5 days are most appropriate for our analysis. The greater than 5 days definition includes short recesses for Holiday weekends when most members return to the district and boast of the good work they are accomplishing on Capitol Hill.

[6]Party votes are measured as a dichotomous variable with roll-call votes which a majority of Democrats voted against a majority of Republicans coded as 1 and all other votes coded as 0. Close votes are also measured as a dichotomous variable with roll-call votes decided by a margin of less than 5% coded as 1 (close or rather competitive) and those decided by 5% or more coded as 0.

[7]Given the potential for correlated errors across Congresses, we estimated our models using robust, cluster-corrected standard errors. However, since we were unable to estimate the models with RELOGIT including the robust standard errors, we can only report that the models had been estimated with LOGIT (with robust standard errors), and the results did not vary substantively from the original models. We believe that the

skewed data in our models is a bigger issue, so we used RELOGIT. Since the LOGIT models with robust standard errors were not substantively different from the RELOGIT models, we are reasonably confident that correlated errors were not a substantial problem. We also considered this issue for the negative binomial models.

[8]Amendments are not included in this model because their inclusion would be inappropriate given the unit of analysis. We do, however, include them in later models.

REFERENCES

Aldrich, John H. 1995. *Why Parties? The Origin and Transformation of Political Parties in America*. Chicago: University of Chicago Press.

Aldrich, John H., and David W. Rhode. 2001. The Logic of Conditional Party Government: Revisiting the Electoral Connection. In *Congress Reconsidered*, 7th ed., eds. Lawrence C. Dodd. and Bruce I. Oppenheimer. Washington DC: Congressional Quarterly.

Anderson, Jennifer L., and Adam J. Newmark. 2002. A Dynamic Model of U.S. Senator Approval, 1981-2000. *State Politics and Policy Quarterly* 2:298-316.

Cameron, Colin A., and Pravin K. Trivedi. 1998. *Regression Analysis of Count Data: Econometric Society Monographs*. Cambridge, UK: Cambridge University Press.

Congressional Quarterly, Inc. 1991-2006. Congressional Quarterly Almanac. Washington, DC: Congressional Quarterly News Features.

Cox, Gary W., and Mathew McCubbins. 1993. *Legislative Leviathan*. Los Angeles, CA: University of California Press.

Davidson, Roger H., and Walter J. Oleszek. 2004. *Congress and Its Members*, 9th ed. Washington DC: Congressional Quarterly Press.

Durr, Robert H., John B. Gilmour, and Christina Wolbrecht. 1997. Explaining Congressional Approval. *American Journal of Political Science* 41:175-207.

King, Gary, and Langche Zeng. 1999. Logistic Regression in Rare Events Data. Department of Government, Harvard University.

Mann, Thomas E., Norman J. Ornstein, Annenberg Foundation Trust at Sunnyland, and Annenberg Public Policy Center. 2006. The Broken Branch: How Congress is Failing America and How to Get It Back on Track. Oxford, NY: Oxford University Press.

Mayhew, David R. 1974. *The Electoral Connection*. New Haven, CT: Yale University Press.

Oleszek, Walter J. 2004. *Congressional Procedures and the Policy Process*. Washington DC: Congressional Quarterly Press.

Oppenheimer, Bruce I. 1985. Changing Time Constraints on congress: Historical Perspectives on the Use of the Cloture. In *Congress Reconsidered*, 3rd ed., eds. Lawrence C. Dodd. and Bruce I. Oppenheimer. Washington, DC: Congressional Quarterly Press.

Poole, Keith T. 2007. Voteview Website 2007 [cited July 1 2007]. Available from http://www.voteview.com/.

Rhode, David W. 1991. *Parties and Leaders in the Postreform House*. Chicago: University of Chicago Press.

Sinclair, Barbara. 1994. House Rules and the Institutional Design Controversy. *Legislative Studies Quarterly* 19:477-494.

Sinclair, Barbara. 2000. *Unorthodox Lawmaking. New Legislative Processes in the U.S. Congress*. Washington DC: Congressional Quarterly Press.

Yackee, Susan Webb. 2003. Punctuating the Congressional Agenda: Strategic Scheduling by House and Senate Leaders. *Political Research Quarterly* 56:139-149.