The Stability Of Party Identification Among U.S. Representatives: Political Loyalty, 1789-1984

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The political party identification of American citizens is among the most thoroughly and systematically studied subjects in modern political science. Though its importance in relation to candidate, issue, and other factors has ebbed and flowed over time, the nature and strength of the voter's tie to party has nearly always proved a major determinant of his or her behavior in most electoral contests (Campbell et al., 1960; Asher, 1984). In addition, popularly reported changes in aggregated levels of party identification in the population -- the relative strength of the Democratic and Republican parties and particularly the propensity of voters to link themselves to a party rather than remain independent -- has come to be regarded as a sort of fever chart for the political system, an indicator of its health and an early warning signal of potential changes or partisan realignments.[1] Of course, partisanship is consequential in legislative organization at every level. It is well established, too, that partisan cues are strong referents in the voting decisions of members of congress and legislators in many states and localities (Clausen, 1973; Matthews and Stimpson, 1975; Kingdon, 1981). There also exist many useful measures and analyses of party cohesion and party voting in legislatures.[2]

However even with all this research, considerably less is known about the origin and durability of partisan commitments of legislators than of the general citizenry. And though patterns of stability and change in the party identification of citizens is a closely watched indicator of the health of the political system, similar attention has not been paid to patterns in partisan change among leaders that may be indicative of systematic crisis or change. Yet there is overwhelming reason to believe that party ties are more important to elected political leaders than to others.

Clearly, for the elected official a change in political partisanship is not a decision to be taken lightly. Yet it is a decision that some do make: For example, Phil Gramm is now a Republican United States Senator from Texas. In 1981, he was a Democratic member of the House of Representatives and was a leader of a group of conservative Southerners known as the "Boll Weevils." When the Democratic leadership of the House responded to Gramm's 1981 behavior by

denying him reappointment to the prestigious Budget Committee in 1982, the congressman resigned his seat. He then overwhelmingly won a special election as a member of the GOP.[3] In 1984 he went on to retain John Tower's Senate seat for his new party. In fact, Gramm was not the only congressional Democrat rumored at the time to be considering such a move. But despite the blandishments offered by the Republican leadership, few Democratic House members actually switched parties. To offset GOP attempts to exploit some fissures in his party that appeared during the Reagan honeymoon period, Majority Leader Jim Wright declared an "amnesty" for members who had supported President Reagan on tax and budget votes. Wright said further that the party's approach was "not to punish [errant Democrats] but to refrain from rewarding them" (Congressional Quarterly, 1981).[4]

How might the acts of these political leaders be explained? The very few systematic studies on this subject -- from analyses of party switchers in the Turkish assembly (Turan, 1985), in 11 state party conventions (Kweit, 1986), and from recent years in the U.S. House (Castle and Fett, 1985), along with other more qualitative treatments (Gruberg, 1985) -- do suggest a dominant conclusion: Party switching can be generally explained in terms of personal ambition and ideological dissonance. Hennessy, for example, argues that "while opportunism might be suspected in a few cases of celebrated party-switching, the more common and important consideration is that the politicians' long-time personal opinions on issues are out of step with modal opinions of the party that they leave and much more consistent with average opinions of the other party." Kweit (1986: 188) concludes that with respect to all issues examined, "...the switchers conform much more closely to their current party than to their former party."

We have no reason to disagree with this conventional wisdom. It is a basic premise of this study that politicians who switch parties are likely to do so when they are ideologically out of line with their current political party and more in agreement with the other party. Nor do we quarrel with the notion that sometimes the switch may also be related to electoral incentives. The problem lies not in these conclusions but in their utility. After all, there are many other members of congress who have never switched parties but are in as much or more ideological discomfort. Why haven't they all

switched? As an *ex post facto* argument, these "ideological dissonance" and "personal ambition" hypotheses do correctly *describe* the switchers, but they do not adequately *explain* why these people were the ones to switch or why they did it at the time that they did. Many of these members have been in a state of ideological dissonance for years. In each case, why did the decision to change parties occur precisely when it did? It is our intention to advance the study of party switching by providing an explanation for why switching occurs more frequently at some times and not others. Unlike the cross-sectional data used in past work, we adopt below a time series approach to analyze this questions.

In the sections which follow, we discuss (1) political loyalty as an important but too rarely used explanation for certain political phenomena, (2) descriptions of House party switchers, (3) the specific models and variables we will use to explain switching, and (4) the estimates from several statistical analyses that help explain when and why switching occurs. The last three sections are meant as a specific exploratory study of one aspect of political loyalty.

Political Loyalty and Party Switching

Each person carries within him or her a wide array of loyalties. These may be immediate and intensely personal, as in the case of loyalty to a spouse, or more remote and abstract, for example, loyalty to a nation state. Expectations of loyal behavior structure social action in a broad array of contexts. They guide individual actions and allow people to anticipate the actions of others. Loyalty to persons, organizations, or symbols thus contributes to predicitability in society and substantially eases human interaction.

Of the numerous loyalties, all are not equal. Thus, we find that change in the professional football team a fan backs far less distressing than the sale by the same fan, who happens to work for the National Security Agency, of classified information to the Soviet Union.

Although it has largely gone unrecognized, in society at any moment there is probably rough agreement on a hierarchy of loyalties, with some regarded as paramount. In addition, what is seen as treachery or disloyalty in one context at one time is taken far less seriously in other circumstances

or at other moments. For example, as the divorce rate increases, social norms regarding both the nature and duration of loyalty in marriage change.

Of the many arenas of social action, the political is popularly regarded as especially treacherous. "Politicians," as is commonly noted, "make strange bedfellows." They are described as untrusting and untrustworthy, driven by ambition and interest, and susceptible to corruption.

But in fact, it may be argued that loyalty is even more important to political actors than to others, for all they can give in most circumstances is their word. In common political parlance, a "contract" is not a legal document, but a verbal commitment. Admirable people "deliver." Others, when placed under pressure, "throw people in" like losing poker hands. Among politicians, loyalty to a person or a position is even valued when it helps the other side. After all, a "stand up guy" can be counted on if on your side the next time.

One of politicians' core loyalties is expressed through partisanship. For most citizens, political partisanship is one of a large number of loyalties, a connection that is germane to an aspect of life peripheral to ordinary daily concerns and interactions. For most political leaders, in contrast, partisan loyalty is paramount and omnipresent. Even where party organizations are weak, almost all political careers begin and are advanced under a party label. Networks of supporters are formed and expanded, at least in part, within and around the party nexus. Even the very seating arrangement in the legislature -- one side of the aisle or the other -- tends to channel informal interactions within the parameters defined by party, and is a constant, if silent, reminder to members of the defining quality of their partisan connections. Friendship grows in the soil of partisanship and, over time, the two are mutually reinforcing. Significant, too, is the fact that the negative reference of the "other party," employed either overtly or more subtly, helps cement the links of the elected leader to his own side (King, 1986a).

In these circumstances, it is not surprising that strong loyalties emerge. As Morton Grodzins (1956) pointed out in his seminal work written almost three decades ago, such loyalties can "...organize the life of the individual, reducing his area of uncertainty and anxiety. They allow him to move in established patterns of human relations, confident of the actions expected of him and of

the responses his actions would evoke."

We believe that the fundamental role of political loyalty in the lives of most political leaders has not been paid sufficient scholarly attention. Indeed, the never ending search for and maintenance of all kinds of loyalties can be seen as the driving force behind a large variety of elite political behavior. For example, Cronin (1980: 260) has written that "...those at the White House judge cabinet officers by a formula that weighs ability as primary but ranks loyalty to the president and to the president's political future as a very close second. For some White House aides loyalty to the boss even outweighs competence." Since ability is relatively fixed, the day to day behavior of political elites is likely to be governed largely by the effort to build others' perceptions of their loyalty. Politicians know that the first assessment made of someone is whether they can be trusted. Successful political elites, therefore, constantly attempt to display and build their own loyalty in the eyes of their colleagues.

Since, for elected leaders partisan loyalty is more important than for other citizens, a change in partisanship for these leaders can be presumed to be more consequential as well. Such a change has personal as well as professional implications. It affects not only the politician's current and future career but, at least in the short and middle term, the entire network of friendships and relationships built up, both within and outside the legislature, over the course of that career. As a result of a party switch, the leader is perceived as less predictable, less constrained by the "normal rules of the game." The natural question that arises is, "what other untoward behavior may be expected from this person." And from the switchers perspective, the reactions of others become less certain, especially in the near term, when the partisan thread is severed.

It is therefore plausible to argue that, though the seeds of disloyalty may be long present, disloyal acts ordinarily do not occur. They are "...concrete responses to concrete...situations" and, more importantly, require "...extreme pressure" (Grodzins, 1956: 126-7). Hennessy (1985: 333) hints at this when he writes, "given the bedrock importance of party identification in American electoral politics, nothing could be more dramatic, and ostensibly more sudden, than the announcement of a switch to the other party." In line with this explanation of party switching by American elected

officials, we assume that there are always some members of congress near the margin with some propensity for switching for reasons of ideology or ambition. What we need to identify, then, is the extreme pressure that turns potential into behavior and dissonance into action.

Ordinarily in the United States, political parties accommodate a wide range of ideological differences and successfully channel personal ambitions. In fact, the result is so orderly that the analyst may identify hierarchies of ambition from political career patterns within parties (Loomis, 1984). It is only at times of special stress in the political system, times in which personal and ideological tensions cannot be accommodated, that party switching occurs as a concrete response by visible political leaders to a concrete situation. Critical realignments are examples of this type of situation. It is during these focused periods of extraordinary stress that "ordinarily accepted 'rules of the game' are flouted" (Burnham, 1970: 7). But even at these times norms of loyalty are so strong that the rules are only infrequently disobeyed.

Thus, we begin with the assumption that there always exists legislators with a high potential for switching. We then assume that the number of actual switches is a function of stress emanating from the external, electoral, and congressional environments of these legislators. We believe that large increases in these sorts of pressures lead to a rise in ideological and political dissonance and, in turn, results in small, but observable, increases in party switching. From this perspective, party switching is not a random political oddity; it is a systematic response to a set of identifiable causes.

Describing Party Switches

Leon Epstein's (1981) definition of a political party provides a framework for an operational definition of party switching. For Epstein, a party is "any group, however loosely organized, seeking to elect governmental office-holders under a given label. Having a label (which may or may not be on the ballot) rather than an organization is the crucial defining element." On this basis, a congressional party switcher is someone who was a member of the House under one party label, changed parties, and served in the House under the new label. It also includes the relatively small group who served in congress, switched parties, and were defeated when trying to be elected to an

additional term. Excluded are those who serve in congress under one party label, leave congressional service, and switch at some later time. There were only thirteen members who switched more than once (2.15 times on average). Alternative coding of our switching variable as switch*es* and switch*ers* indicated no appreciable change in either our empirical results or substantive conclusions. In the results reported below, we use only the first switch of these multiple switchers.[5] There were a total of 165 House switchers from 1789 to 1984.[6] These data represent the longest single time series on American political parties ever assembled.

[INSERT FIGURE 1 HERE]

For purposes of analysis, we record the number of switches in each year. The thin line in Figure 1 represents this frequency count from 1789 to 1984 for the U.S. House of Representatives. Since the original series is quite variable, a non-parametric resistant smoother was applied to the original data (see Velleman, 1980; Velleman and Hoaglin, 1981). This version of the data can be thought of as a running mean which tends to ignore extreme points in the data but can be used to help spot trends and systematic patterns. This "smoothed" data is plotted in Figure 1 as a thick line. To spot sharp change, the original series should be studied; to find longer term systematic patterns, the smoothed line should be more helpful.

Figure 1 demonstrates that switching in the House is highest during those periods which have been commonly identified as critical realignments (see Burnham, 1970). The largest increases in switching appear during the first truly competitive elections in the late 1820s and 1830s, during the Civil War, at the turn of the century economic downturn and agrarian reforms, and during the 1930s depression. A smaller cluster of switchers appeared during the 1920s -- a time of political, but not policy, change (Brady, 1985).

The only realignment apparently missed by the Figure is that in 1800, during the formation of the American party system. There was only one switch in the House during that period. However, a case could be made for these data picking up even this event, since this was the first in American history. Prior to that time, political parties were not yet fully formed (Hoadley, 1980), and there

was little possibility of, or reason for, a switch (see U.S. Department of Labor, 1973).[7] At this first realignment, or what really should be called the initial party "alignment", there was political stress and turmoil that seemed to be reflected in party switching.

Every instance of stress one can think of in American political history is not accompanied by a marked increase in party switching in this figure. However, the general pattern is clear, and the figures do provide the first indirect support for our thesis: Switching does appear to occur most often during times of extraordinary political stress.

Explaining Party Switches: Variables and Models

We move now to a more systematic, but still exploratory, analysis of congressional party switching. Consistent with our view that party switching is a function of pressures on, and stress among, members of congress, we define three categories of explanatory variables. Ordered by their distance from members of congress, they all measure stress on the political world: (1) the external environment, (2) the electoral environment, and (3) the congressional environment.[8] These are not mutually exclusive, and are probably better seen as a general continuum. The next three sub-sections outline the specific data and measures collected in each of these categories of explanatory variables. It should be of no suprise that there exists no general purpose measure of stress in any of these categories. In fact, collecting variables that span nearly 200 years is often not possible and, when it is, is many times unreliable. As a result, we were careful to develop a large list of surrogate measures that tap these general concepts. Since (as usual) perfect measures do not exist, we collected a much larger number of imperfect ones. That our analyses held up across different measures of the same underlying concepts helped to convince us of the validity of our conclusions. Note that we specifically avoided the "easy," but theoretically deficient, procedure of using dummy variables to represent realignment periods; Instead, at all times we used theoretically *a priori* measures of underlying stress in the political system.

(1) The External Environment

We consider two general types of external explanatory variables: Economic and Military. Both of these have been associated with stress in the political system and on political actors. Economic variables have been used in many contexts to explain political behavior (e.g., Hibbs, 1977). We expect economic downturns to increase the scarcity of recources and, in turn, to increase the frequency of political party switching. Similarly, indicators of military and international conflict have also been shown to influence a variety of political phenomenon (e.g., Mueller, 1973). We expect international conflict to put different kinds of pressure on the political system and to also lead to a greater frequency of party switches. Consistent with our theory, large changes in these variables should yield small but observable changes in the number of members of congress who switch political parties.

For these purposes, *Inflation* is measured as the proportional change in the consumer price index (available since 1800; see U.S. Department of Labor, 1973).[9] Note that inflation is also expected to have different effects during different periods of American history: Prior to about the 1870s when America was a debtor nation, inflation was viewed positively; deflation was feared. It was only in the late 19th and (especially) 20th centuries that inflation was viewed as something to be avoided. Thus, we hypothesize that inflation will decrease switching in the early period and increase it for more recent years. By more directly reducing the scarcity of resources, economic growth is expected to decrease party switching. We therefore code *GNP* as the rate of change in the gross national product (available since 1869).

We code *Military* as the rate of change in the proportion of the population who are military personnel on active duty. It is hypothesized that larger values of this variable are associated with additional stress on legislators. Switching is likely to be relatively more frequent in these instances.[10]

(2) The Electoral Environment

A second general type of stress comes from the electoral environment. Brady et al. (1979) write that "The percent of freshmen in the House is an important variable because it measures the extent of electoral change. The higher the percent freshmen, the greater the electoral change." We expect

that an increase in this variable will reflect political turmoil and will increase switching. Thus, *Freshmen* measures the rate of change in the number of newly elected members of the House.

Another electoral variable is the occurrence of the election itself. Since previous research indicates that electoral considerations weigh in heavily in all legislative behavior (Mayhew, 1974), and since planning is essential in election campaigns, we expect there to be more switches during non-election years (the year prior to the election) than during election years. For this purpose, *NonEleYear* is coded as 0 in the election years and 1 in the non-election years.

Since presidential elections are likely to also have an influence in congress, both directly and as a more general indicator of the electoral environment, we code *PresElect* as the absolute proportionate change in the popular vote for the winning candidate four years before. Larger values of this variable indicate more political change and are hypothesized to increase party switching.

A final variable of this type is the degree of professionalization and institutionalization of the political parties and of congress (Polsby, 1968). It seems clear that more institutionalization should yield less behavior that breaks the informal rules of the game, that is switching. As a rough measure of these concepts, *Professional* is coded as the rate of change in the proportion of the House who leave congress for electoral reasons (that is, are defeated in primaries or general elections).[11] The larger the proportion of members who leave congress for electoral reasons, the more public service is treated by the members as a profession and lifetime career and, we hypothesize, the greater the possibility of congressional party switching.

(3) The Congressional Environment

A final type of pressure can come from within congress. We code first $Switch_{t-2}$ and $Switch_{t-4}$ as the number of switches (in the respective house of congress) two and four years ago. These variables represent "diffusion" or "emulation" effects. When some members switch, the political environment changes, and this increases the current possibility of switching. At certain times, previous switching may introduce new ideas and possibilities into the legislature; at other times, it may gradually change institutional norms. In either case, previous switching should increase current

switching. The lags at two and four years reflect congressional and presidential electoral cycles, respectively.

Since congress acts by passing laws, a second measure of pressure from the congressional environment is *PublicLaw*, the rate of change in the number of public laws passed (see Calendar of the U.S. House, 1984). We take a sharp increase in this variable to be an indication of pushing the political system closer to its limits; political stress among at least some members, particularly those at the ideological and social margins of their parties, should be high and should increase the propensity for party switching.[12]

A Model of Congressional Party Switching

Our argument that party switching is a function of the external, electoral, and congressional environments can be represented as equation (1):

$$S_t = f(X_t, E_t, C_t) + \epsilon_t, \qquad (t = 1,\ldots,T) \qquad 1$$

where,

S_t = the number of party switches in year t in the House of Representatives
$f(.)$ = some known function of .
X_t = a set of external variables
E_t = a set of electoral variables
C_t = a set of congressional variables
ϵ_t = a disturbance term with some known probability distribution, representing all of the unmeasured, idiosyncratic, and random explanations for switching.

If $f(.)$ were defined as a linear function and ϵ_t were assumed to be distributed normally, the influence of X_t, E_t, and C_t, could be estimated by an ordinary least squares regression analysis. However, strong theoretical concerns suggest that this standard procedure is an implausible specification. The problems with the standard model are not technical details; they are theoretically misleading specifications (Beck, 1986). Changes need to be made in this case for three reasons. First, ϵ_t is clearly not normally distributed; it is empirically and theoretically bounded by zero and is not continuous.[13] Second, the linear relationship is likely to produce negative predictions of the

number of switchers, a clearly implausible result.[14] Finally, the true relationship is only likely to be linear when the explanatory variables, X_t, E_t, and C_t, have no influence on congressional party switching, a substantively uninteresting situation (on this last point, see Cox and Lewis, 1966).

To remedy these problems, two important specifications must be made in equation 1. First, we recognize that ϵ_t is distributed as a Poisson variable, as are the disturbances from nearly all event count models (King, 1986c). Second, and more important, we let the form of the relationship be exponential. This nonlinear form implies that the "effort" (in terms of a change in some explanatory variable) it would take to move the number of switches from 0 to 1 is considerably more than the effort it would take to increase the frequency of switches from (say) 19 to 20. Since switching in isolation is likely to be a "harder" political action than switching when many others are switching, this model is more appropriate than the more usual linear form. Since each observation (year) is much like one cell of a contingency table (with a count of the number of switchers instead of a cross-tabulation count of responses), this exponential Poisson regression (EPR) model is quite similar to log-linear models of contingency tables (see Fienberg, 1980).[15]

An additional specification has to do with the dependent variable. Since the total number of members of the House have varied, it might be more reasonable to consider S_t/NMem as the dependent variable, (where NMem is the number of members of the House). One way to do this within the current framework is to include the natural log of NMem on the right hand side of the equation. Conceptually, this is quite pleasing, since it implies that we need to control for NMem; mathematically, it is a direct result of the exponential specification.[16]

These changes turn equation 1 into equation 2:

$$S_t = \exp[\alpha + X_t\beta_1 + E_t\beta_2 + C_t\beta_3 + \ln(NMem)\beta_4] + \epsilon_t, \qquad (t=1,\ldots,T) \qquad 2$$

where, in addition to those definitions in equation (1),

exp(.) = the natural exponentiation of .
α = an intercept term
β_1 = a set of parameters representing the influence of X_t on S_t
β_2 = a set of parameters representing the influence of E_t on S_t
β_3 = a set of parameters representing the influence of C_t on S_t
β_4 = a parameter representing the influence of the NMem control variable
ϵ_t = a set of T independent Poisson disturbances, representing all of the unmeasured, idiosyncratic, and random explanations for switching.

In order to apply model 2, a variety of additional decisions need to be made.[17] First, we believe that one version of this model should not apply to the entire period; the effects of many of the variables probably change over time. Thus, we break our time series into two parts -- 1802 to 1876 and 1877 to 1984 -- and present two models. The choice of this breakpoint is not arbitrary. It represents the formal end of the reconstruction period following the civil war; the agreement that decided the Tilden-Hayes presidential election also withdrew all Union troops from the South. It is also a breakpoint commonly used by historians and others. Other breakpoints (and 30 year moving estimates) were experimented with, and there was no major change in the conclusions. We omit the years 1789 to 1801 from the models for two reasons. First, Hoadley's (1980) analysis indicates that the American party system was not fully formed until about the end of that period. And second, the available data for this early period is not very reliable.

The general hypothesis reflected in this model is that the more stress from the three categories of variables, the more members of the House should change political parties. However, large increases in these explanatory variables are only expected to increase switching by relatively small amounts (after all, switching is a relatively rare political activity; it would be odd for any common event to increase switching by a large amount). Small bursts of party switching are therefore hypothsized to appear only when the intersection of a number of separate explanatory factors consistently push members of congress toward the same end. This suggests a possible problem with the data analyses: The hypotheses all posit coefficients different from zero, but all only by a small amount. Since conventional tests of significance are based on the precision of the coefficient (the standard errors)

and on the distance of the coefficient from zero, we may have precise but still not conventionally "significant" estimates. In these cases, it is particularly useful to remember that the best guess of the true relationship is the coefficient value, regardless whether an arbitrary significance level is met (King, 1986b). This turns out not to be a presistent problem below, but does play a role at times.

Explaining Party Switches: Estimation

For each of the two models, the results were quite insensitive to the particular choice of variables. Overall, the models were quite successful.[18] Tables 1 and 2 present the early and later periods. The goodness of fit statistics (Chi-Square and "R^2")[19] appearing on the bottom of Tables 1 and 2 indicate surprisingly good fits -- particularly considering the high variance and noise in the original series (see Figure 1).[20]

Table 1 presents the results for the first time period. Note that because the mean of the dependent variable is about 1, these coefficients can be interpreted approximately the same as regression coefficients for the "typical" year (where there was an average of one switch). For years

Table 1: An EPR Model of Party Switching, 1802-1876

Variable	Estimate	Stan.Error	Prob($\beta=0$)
EXTERNAL:			
Inflation	-2.7180	2.1280	0.1008
Military	0.0874	0.2707	0.3734
ELECTORAL:			
NonEleYear	1.2770	0.3089	0.0000
Professional	-1.9570	0.6165	0.0008
PresElect	0.8214	0.9502	0.1937
CONGRESSIONAL:			
PublicLaw	0.4569	0.3756	0.1119
PublicLaw_{t-2}	0.8635	0.3697	0.0098
Switch_{t-2}	0.1270	0.0446	0.0022
Switch_{t-4}	0.0770	0.0577	0.0911
Constant	-17.8100	5.4680	0.0006
ln(NMem)	3.0870	0.9924	0.0009
N	75		
"R^2"	0.567		
Chi-Square	113.36		
Prob(all β's=0)	0.0000		

when there are more switchers, the model posits a larger effect. The precise way to interpret each coefficients is by multiplying it by the expected number of switchers in a year and treating this product the same way as an OLS regression coefficient (see below for examples and King, 1986c, for statistical arguments).

The two external variables are both in the correct direction, but neither quite meets conventional significance levels. An increase in inflation depressed party switching by reducing economic stress: A ten percentage point increase in inflation reduced the number of switchers by about a half of a switch. This is consistent with our original hypothesis that large changes in the members' environments would yield comparatively small changes in switching behaviors. Note that if 5 people have already switched, then a ten percentage point increase in inflation will reduce switching by about 2.7 switchers. An increase in international conflict increased switching but here the standard error is quite large.

In the electoral category of variables, about 1.3 more switches occured during non-election than during election years. An increase in congressional and party professionalization -- measured by the rate of change in the percent of the House leaving for electoral reasons -- decreased party switching. Volatility in presidential elections (PresElect) had an effect in the predicted direction, but it was a relatively imprecise estimate.

In the congressional category, a 30 percentage point increase in the change in the number of public laws promulgated resulted in nearly one additional switcher over the next two year congressional term. Previous levels of switching also increased current levels (note the positive estimates for $Switch_{t-2}$ and $Switch_{t-4}$). All these effects were consistent with our prior theoretical hypotheses.

Overall, the results strongly suggest that the propensity of members to switch political parties during this early period in American history is a function of stress in the external, electoral, and congressional environments. Large amounts of stress from any one of these categories of explanatory variables only increases switching by a relatively small amount. Noticable numbers of party switchers appear, according to these results, when two or three of these variable categories

simultaneously increase environmental stress, as occurs during periods of political realignment.

Table 2 presents the results for Model 2 applied to the data from 1877 to 1984. For this later period in American history, the results were again quite consistent with our expectations: Every coefficient again had the hypothesized sign.

Consider, first, the external variables which appeared to have the expected influence. A change in the Gross National Product (a statistic which was not available for most of the first time period) did depress switching, presumably by reducing the scarcity of economic and, consequently, electoral resources. A ten percent increase in GNP decreased switching by about 0.23 members. Since it was viewed considerably more negatively in this period, inflation, as expected, did increase switching. Again, large changes in pressure on the political system appear to be making small but observable changes in the frequency of party switching. At times in American history when several of these indicators converge to put simultaneous pressure on members of congress and their constituents,

Table 2: An EPR Model of Party Switching, 1877-1984

Variable	Estimate	Stan.Error	Prob($\beta=0$)
EXTERNAL:			
Inflation	2.1140	3.6680	0.2822
GNP	-2.2280	2.1450	0.1495
Military	0.6626	0.6011	0.1352
ELECTORAL:			
NonEleYear	1.4800	0.4588	0.0006
Professional	-2.6680	1.9160	0.0819
PresElect	1.7620	1.3250	0.0918
CONGRESSIONAL:			
PublicLaw	2.0120	0.8425	0.0085
PublicLaw_{t-2}	0.4904	0.6714	0.2326
Switch_{t-2}	0.0209	0.1910	0.4564
Switch_{t-4}	0.1889	0.1659	0.1274
Freshmen	0.6101	0.7969	0.2220
Freshmen_{t-2}	1.3250	0.8113	0.0512
Constant	14.6700	8.0860	0.0348
ln(NMem)	-2.8450	1.3720	0.0191
N	105		
"R^2"	0.425		
Chi-Square	52.92		
Prob(all β's=0)	0.0000		

observable switching begins to occur.

The variables in the other categories are almost all stronger in this later period: For the electoral environment, about one and a half more party switches occur during non-election years. Increases in professionalization of the parties and congress continues to depress switching, but now by about 30% more than in the earlier period. Changes in the presidential elections have about twice the effect they did during the first century: A twenty percent change in the electoral fortunes of the winning presidential party from one election to the next results in about one and a half new switchers during that period.

Changes in the congressional enviornment also influence the likelihood of party switching. For example, dramatic changes the production of public laws in the House leads to members abandoning their political party at about twice the rate that occured as a result of the same changes in law making during the first century. Sharp increases in new blood in the House tend to increase switching during the current period and again two years later. Previous switching in the House seems to increase the likelihood of current switching, at about the same overall rate as occured from 1802 to 1876, although the estimates are more imprecise in this period.

Conclusions and Discussion

Although previous research has taught that those who switched parties did so because they had high levels of ideological dissonance or personal ambition, it was not known why so many other members of congress existed under this dissonance without switching parties. This research concentrated on political loyalty and disloyalty for an explanation of this phenomenon. The importance of loyalty is evident from the infrequency of switching, even under maximum pressure.

As suggested in our theory, and confirmed in our data analyses for the House of Representatives, we now have an explanation for *when* some members make the final jump to the opposition. Estimates from our statistical models indicate that switching is often explainable by systematic variables representing pressure on the legislators from the external, electoral, and congressional environments. Large changes in these three categories of variables each led to only fractional

increases in the propensity of members to switch. It is only when there were large amounts of political stress coming simultaneously from several of these categories -- such as is the case during critical realignments -- that there is enough reason to cause members to change their political party affiliations.

As a rather extreme example of this type of situation, consider 1861, a non-election year: Civil war requirements increased the proportion of the population who were military personnel on active duty by more than two hundred percent (a larger increase than during any one year in American history). The number of public laws doubled (the largest such increase in four decades). Also, 9 representatives switched parties two years before and 10 others switched two years before that. All of these converging forces put considerable pressure on those members of the House who existed with some level of ideological dissonance and had an initial propensity for switching parties. As a consequence, 5 (of 178) members of the House changed their party loyalties during that year (our model predicted 4.7 switchers).

There were also some important differences in the explanation of congressional party switching over time. In both periods, some mixture of the three categories of variables had some part. It appears that the external (economic and military) variables had a similar influence in both periods, although better data in the second (GNP) added some information. In the later period, the other categories appeared to have substantially increased in extent and in influence.

Almost all research on political leaders shows them to be extremely risk adverse in electoral politics. Furthermore, partisan loyalties are valued in themselves and cemented over time. The concept of political loyalty has been shown here to be a useful one for understanding one aspect of the behavior and motivations of members of congress. We believe future researchers will find this concept to have theoretical and empirical utility. Evidence of the extreme strength of party loyalty among members of congress comes from two sources. First, there were very few switches in any one year during most periods in American history. Second, simultaneous large changes in a variety of forces impinging on the members of House only led to relatively modest, but still observable, increase in party switching.

Though prior research also indicates that members of congress switch parties for reasons of ideology and ambition, members always have some level of political dissonance. In this work, we model a two century long time series of party switching and find that switching is more frequent in periods when extraordinary stress is put on the legislators. As expected, even at these times, the increase in switching is modest.

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Notes

[1]The literature on mass party identification includes explanations of the decline in the tendency of citizens to identify with political parties (Wattenberg, 1985), discussions of measurement issues (Weisberg, 1980), and analyses of the effects of political variables on partisan attachments (Franklin and Jackson, 1983). Explanations of variations in party identification among the mass public include political socialization, previous party identification, issue change, voting behavior, retrospective adjustments based on evaluations of the incumbent's party, and period, cohort, and life-cycle effects (see Franklin and Jackson [1983] for a brief review).

Almost all studies of party identification among the public use cross-sectional or panel data. There are some advantages to these data, but more can be learned about long term change with time series approaches (Kramer, 1983). The available data make this very difficult for the study of the mass public. Thus, one important reason for studying congressional party switchers is that considerably better data, with little measurement error and over a much longer time period, can be assembled for studying the party identification of these elites than of citizens.

[2]See Sinclair (1977), Brady, Cooper, and Hurley (1979), Poole and Daniels (1985), Kingdon (1973), Matthews and Stimpson (1975), Clubb and Traugott (1977), and Clausen (1973).

[3]See the stories in *The New York Times*, 3 January (p.17) and 23 February (p.16), 1983.

[4]Some of the other well-known examples of modern era switchers include Donald Riegle of Michigan, Eugene Atkinson of Pennsylvania, Wayne Morse of Oregon, Strom Thurmond of South Carolina, and Andy Ireland of Florida.

[5]The person who switched more than any other 1789-1984 was Representative Nathaniel Prentice Banks. He switched five times in his career and was a member of the Coalition Democratic Party, the American Party, the Republican Party, the Union Republican Party, the Liberal Republican Party, and (for a second time) the Republican Party.

[6]We code most of these data from the *Bibliographical Characteristics of American Congressmen*, but a considerable portion was cross checked with Gruberg (1985) and *Members of Congress Since 1789* and a variety of other places in isolated cases. The ICPSR electronic version of *Bibliographical Characteristics of American Congressmen* codes party identification as the party which each member belonged to for the longest period; switchers are not identified in any way.

[7]As a proportion of members of the House, this early switch was more substantial and meaningful than a switch at the end of the series.

[8]Many researchers have used similar schemes for categorizing explanatory variables. Brady et al. (1979: 386) have written that "The dominant view of contemporary political scientists holds that legislative behavior and legislative outputs are a result of various combinations of external and internal variables. That is, legislators must deal with groups, institutions, and forces that are formally external to the legislative body as well as groups, norms, and forces that are part of the internal organization of the legislative body." See also Patterson and Caldeira (1984).

[9]The proportional change in the consumer price index (CPI), can be calculated as $(CPI_t - \mathrm{CPI}_{t-1})/\mathrm{CPI}_{t-1}$, but a nearly exact measure, which for technical reasons is actually better (and is used here and most everywhere else), is $log(CPI_t) - \log(\mathrm{CPI}_{t-1})$. There are two reasons why using the rate of change rather than the raw index is important. First, for example, an increase in the price of a typical market basket of food from \$10.00 to \$11.00 is more consequential than if the increase were from \$100.00 to \$101.00. Thus, both of these increases would be measured positively, but the former would be about a 0.10 proportional increase and the latter would be about a 0.01 proportional increase. Second, this measure avoids spurious correlations by making the variable mean-stationary; thus this measure takes out the general upward drift in this (and many other) variables that would lead to false conclusions about an empirical relationship. For these reasons, this procedure is also used for many of the other variables in this study. See King (1986b) for an elaboration.

[10]Other variables which we coded and tried as external explanatory variables, but were not included in the models discussed below, were the rate of change in GNP, in the Standard and Poor's Stock Price Index, in real disposable personal income, in immigration to the U.S., and in the number of battle deaths and injuries during war time. Including these variables in the models below does not add much and does not change the conclusions presented below. We therefore conclude that we have reasonably tapped the underlying concepts of interest and omit these variables.

[11]Of course, this measure does not include those who do not run in anticipation of being defeated. We consider this to be a minor problem for two reasons. First, an overwhelming proportion of incumbents usually have little problem being reelected. Second, it is likely that *professional* would correlate highly with the unobserved "election anticipation" variable.

[12]Other variables which we coded and tried in several of the models as explanatory variables from the electoral and congressional categories included other lag lengths of some of the variables described in the text, and in addition, the formation and deletion of standing committees, and the rate of change in the average age of members in the House and Senate, in private laws passed, and in the average number of years of congressional service for each chamber. By excluding these variables

from the models presented below, we did not change our empirical results or substantive conclusions. Again, by trying different imperfect measures of the same underlying variables, we conclude that we have tapped the major variations of political stress.

[13]Since there are relatively small frequencies for each observation, the normal distribution would not even be a good approximation in this case.

[14]In fact, some negative fitted values occurred in every model we fit using OLS.

[15]Although we know of no published empirical application of a Poisson regression model in political science, and know of only a few in other fields (Maddala, 1984: 56), the statistical and estimation problems have been worked out (see El-Sayyad, 1973; Nelder and Wedderburn, 1972; and King, 1986c).

[16]Note that if $E(S_t)/NMem = \exp(X\beta)$, then $E(S_t) = \exp[X\beta + \ln(NMem)]$. This implies that the coefficient on ln(NMem) should be constrained to one. However, allowing this coefficient to vary freely is harmless (and indeed may be a more powerful control if the theoretical model is slightly incorrect).

[17]This model is estimated as a special case of Nelder and Wedderburn's (1972) very general maximum likelihood estimator. The widely available GLIM computer program implements this estimator.

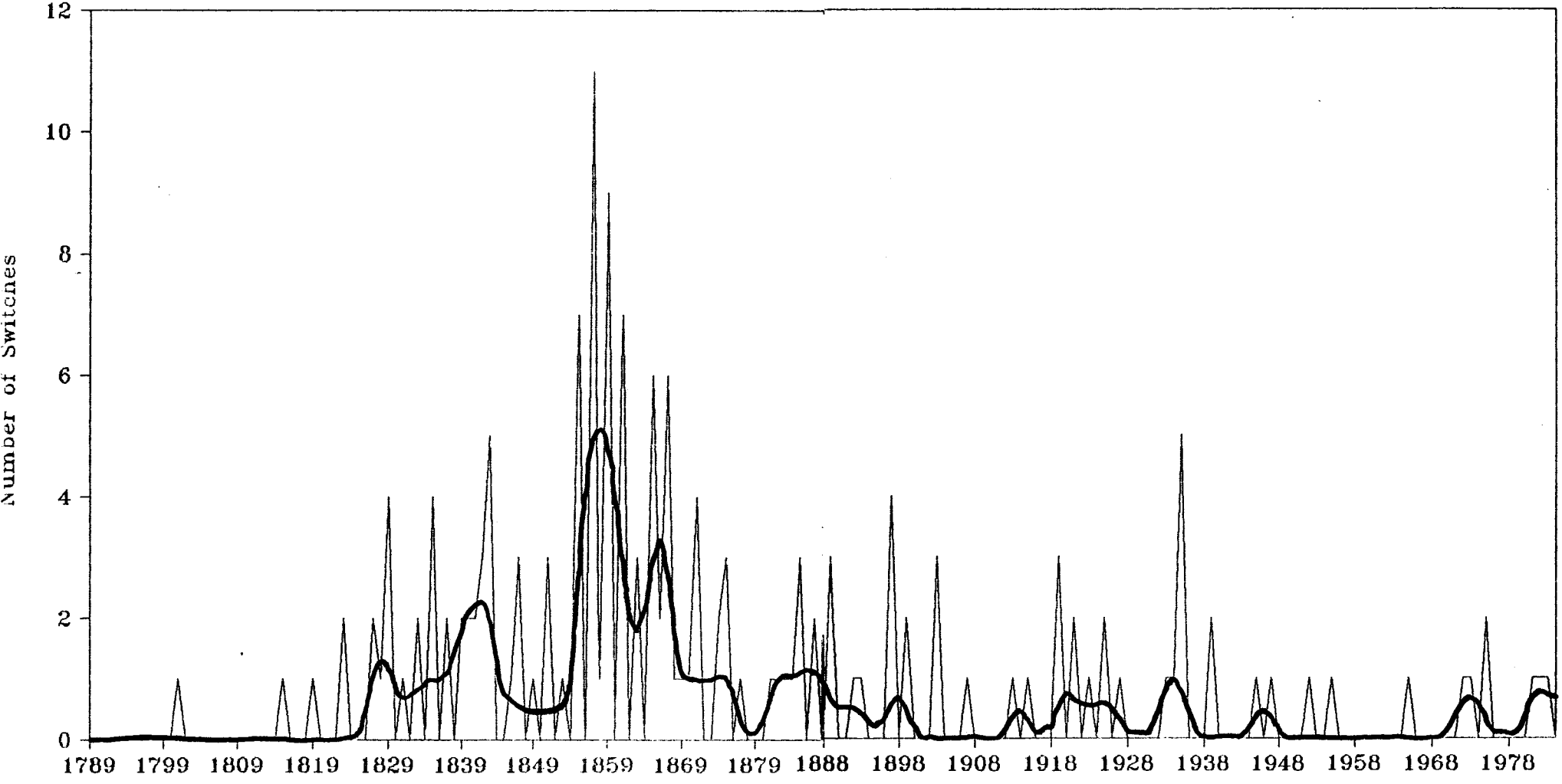
[18]In most cases, tests indicated that the Poisson distribution assumption fit the data better than a Normality assumption. Note that inspection of the autocorrelation and partial autocorrelation functions of the residuals indicated only white noise; the lagged dependent variables at t-2 and t-4 were a major factor in whitening the series. Thus, autocorrelation was not a problem here.

[19]"R^2" is a proportionate reduction in error statistic based on the log of the likelihood function. There is no direct relationship between "R^2" in the Poisson regression model and the R^2 in the OLS regression models. They are equivalent at a conceptual level.

[20]A logit model was also fit the a dichotomized version of the data. The Poisson regression model was presented in the text because no information is lost. The results of the two models were generally similar, although the logit model was less efficient.

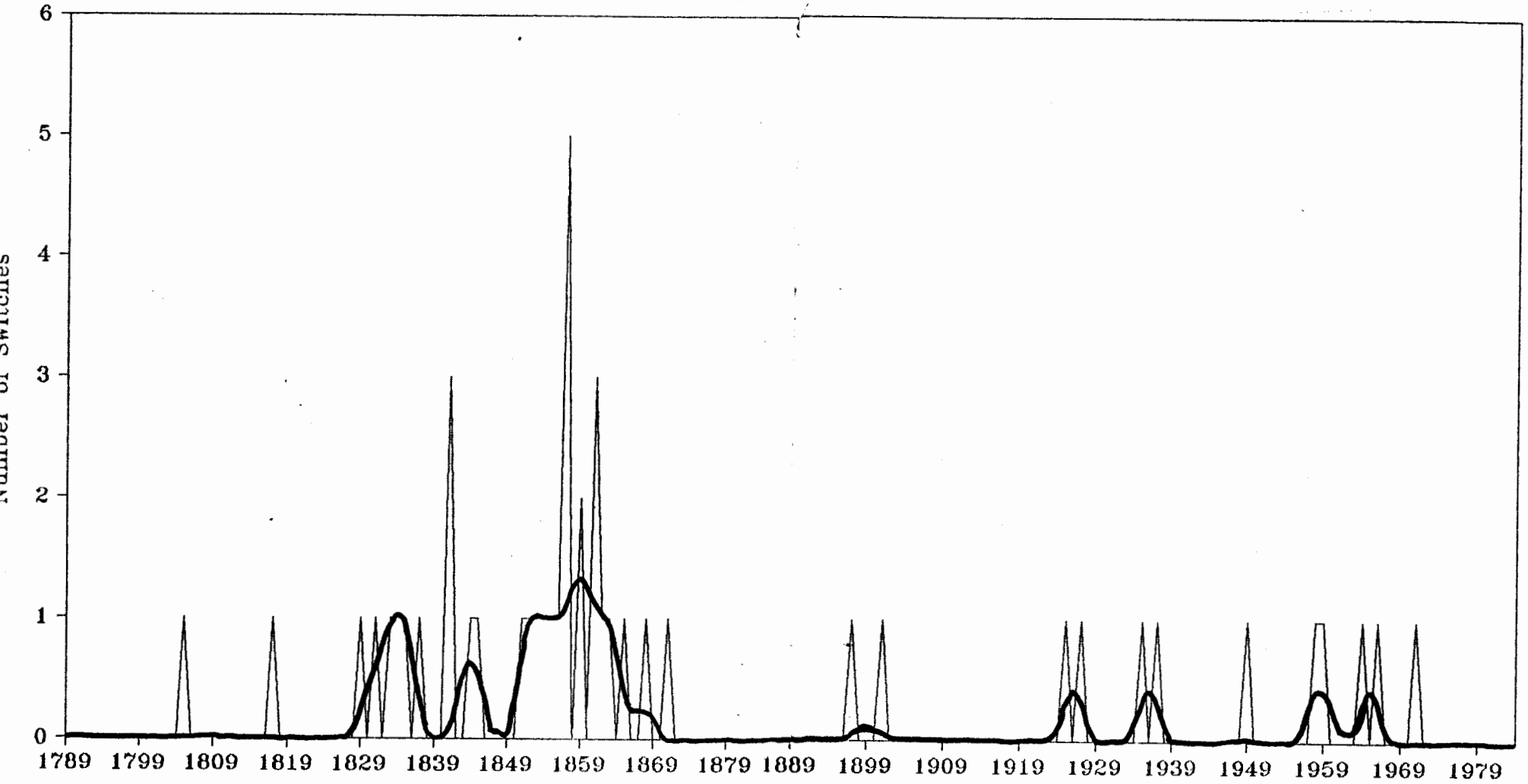
FIGURE 1

House Party Switches: 1789-1984



NOTE: The thin line connects the actual number of political party switches for each year in the U.S. House of Representatives, 1789 to 1984. The thick line is a statistically "smoothed" version which may help to represent systematic patterns and trends.

FIGURE 2



NOTE: The thin line connects the actual number of political party switches for each year in the U.S. Senate, 1789 to 1984. The thick line is a statistically "smoothed" version which may help to represent systematic patterns and trends.