

PARTY IDENTIFICATION OVER THE ELECTORAL CYCLE

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1. INTRODUCTION

The study of party identification, starting with *The American Voter* (Campbell *et al.*, 1960), is based almost exclusively on *election* studies, most notably the American National Election Studies (ANES). With few exceptions, these are relatively small scale studies (1,000 to 2,000 respondents) conducted close to an election. Thus, nearly all we know about party ID is based on data collected within a few months of a national election.

The main exception to this is the literature on “macropartisanship” (MacKuen *et al.*, 1989; Green *et al.*, 1998), which relies upon the Gallup party ID time series. This, however, is an aggregated dataset which provides limited information about micro-level movements in partisanship.

Since fluctuations in party ID over short periods tend to be relatively small (Meffert *et al.*, 2001, estimate annual shifts following presidential elections of between 0.2% and 6.7%, with most less than 2% in magnitude), it is very difficult to study these with typical ANES survey sample sizes. Further, the few panel data sets are limited to five waves or less, so that it is difficult to distinguish aggregate trends from individual level instability.

In this paper, we draw upon a new panel data set that provides detailed insight into individual-level dynamics in party support over a five year period that spans both a presidential and a midterm election as well as everything else in between. The size and frequency of party ID measurements exceeds anything previously available. The bulk of what we know about the individual level stability of partisanship comes from the various ANES panel studies (1956-58-60, 1972-74-76 and 2000-02-04). The number of respondents is two orders of magnitude larger than the ANES panels; the number of waves is four times as large, with over half occurring outside the context of an election campaign.

The purpose of the paper is two-fold. First, the data document substantial shifts in party allegiances over the past five years. The sequence of events—declining support for President Bush personally (starting in 2005) and a catastrophic financial collapse (in 2008), followed by a tepid recovery under President Obama and a resurgent right-wing in the 2010 midterms—provides a useful laboratory for understanding how the stability of partisan attitudes. Second, competing theoretical models in the political science literature imply different models (Markov chain latent class models) for observed party ID. A large sample size allows us to discriminate between the fine-grained properties of these time series. Neither model fares particularly well, but we are able to investigate exactly how and why these failures arise.

2. DATA

The data reported here are from interviews with 41,739 of YouGov PollingPoint panelists who participated in the 2008 Cooperative Congressional Election Study (see Ansolabehere and Rivers, in press, for further details). Each of these panelists was asked the standard party identification question between one and 57 times between January 2007 and September 2011 (with a median of 19 measurements per panelist with a total of 810,083 measurements). All interviews were conducted using a self-administered questionnaire on the Internet. In terms of forecast accuracy, the surveys have consistently out-performed both IVR and live interview telephone surveys and other Internet surveys (Bailey and Rivers, 2009; NCPP, 2011; DeBell, Krosnick and Lupia, 2011).

The only question that will be analyzed in this paper is the Web-translation of the Michigan party ID question. This is really four questions. The stem is:

Generally speaking, do you think of yourself as ...

- Republican
- Democrat
- Independent
- Other (*open-ended text box*)
- Not sure

Republicans are then asked:

Would you call yourself ...

- A strong Republican
- A not very strong Republican

Democrats are asked the same follow-up, except with alternatives “A strong Democrat” or “A not very strong Democrat.” All others are asked a different follow-up:

Would you say that you are closer to ...

- The Republican party
- The Democratic party
- Neither

The order of the first two responses in each question is randomized (unlike the Michigan question which traditionally has used the order shown above). The results are combined into a single seven-category variable:

- (1) Strong Democrat
- (2) Weak Democrat
- (3) Lean Democrat
- (4) Independent
- (5) Lean Republican
- (6) Weak Republican
- (7) Strong Republican

The Independent category includes third party identifiers, apoliticals, and not suers who do not say they are closer to one of the parties. In this analysis, we will ignore the problems that this grouping causes.

3. TRENDS

Party ID was non-stationary over the sample period (2005-11). Though it it impossible to distinguish secular trends from cyclical variation with a time series this short, the nature and timing of these changes strongly suggest that they reflect evaluations of Bush and Obama, rather than a predictable cycle.

The time series of the proportion of respondents identifying with each of the seven party ID categories is shown in the top graph of Figure 3. Among partisans, the proportion of both strong Democrats dropped by nearly five percent following the 2008 presidential election, though this is offset by a three percent increase in the percentage of weak Democrats, suggesting a general weakening of Democratic identification. The percentage of strong Republicans dropped by about 3 percent, but with little apparent pickup in the percentage of weak Republicans. (The instability at either end of the series comes from small sample sizes and should be ignored.)

The bottom graph in Figure 3 shows a striking increase in the number of Independents and leaning Republicans, with no change in the number of leaning Republicans. The shift in both series appears to start in early 2009 and amounts to almost five percent.

These macro-level trends far exceed sampling error and are consistent with other media polling. This raises a number of puzzles. Is a weakening of partisanship typical of the period following presidential elections or is this a peculiarity of this election cycle? Who moved from one category to another? There could, for example, have been an approximately uniform shift of one category in the Republican direction from about five percent of the respondents. Thus, five percent of Strong Democrats could have become weak Democrats, five percent of weak Democrats could have become leaning Democrats, and so forth. Based on the previous discussion, this is not entirely consistent with the macro-level evidence, so that a more complex pattern of switching would be required to explain the overall shift. To understand this, we now turn to a micro-level analysis of stability and switching.

4. STABILITY

Because we tend to focus on variation in macro-level time-series, it is easy to ignore the fact that most respondents have not switched their partisanship. For each of the XX,XXX respondents who was asked their party ID five or more times, we calculated the percentage of times they shifted their partisanship. For example, if someone was asked their party ID ten times, there would be nine possible party ID transitions in which their current party ID differed from their previous party ID. In Figure 4, respondents have been grouped according to the percentage of adjacent periods in which the respondent's party ID changed from its previous value.

Nearly one half of all respondents *never* shifted their party ID. XX.X percent of respondents shifted their partisanship less than 20 percent of the times they were re-interviewed. Hardly anyone shifts their partisanship over half the time they are interviewed. A reasonable description of the

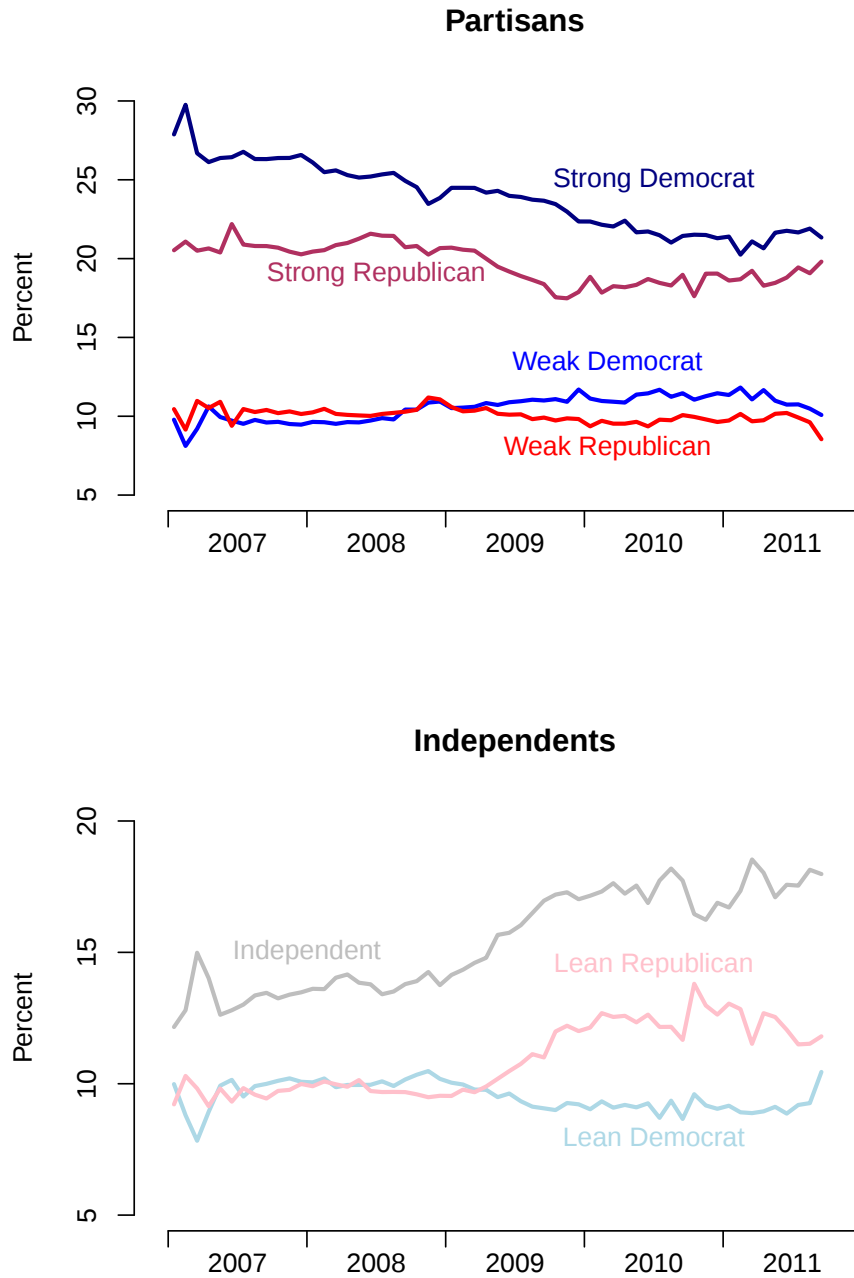


FIGURE 1. Trends in Party ID, 2007–2011. *The proportion of Independents and Republican leaners rose sharply in 2009, while the number of strong partisans, especially strong Democrats, declined. The estimates were obtained by post-stratifying upon Respondents November 2008 party ID and estimating transition rates relative to that base point. The sample sizes for estimating transition rates in 2007 and 2011 were much smaller than during the 2008–2010 period.*

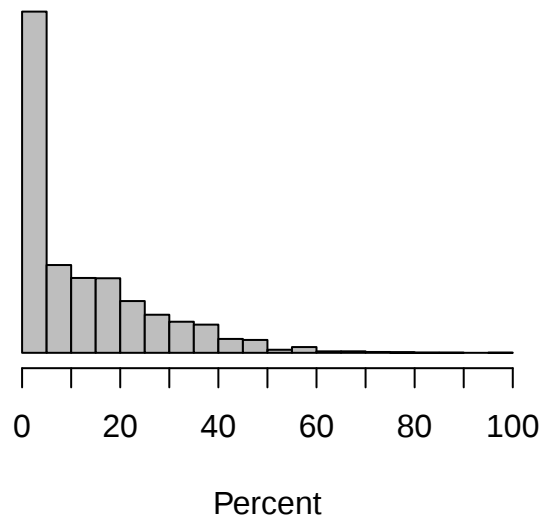


FIGURE 2. Individual-level Stability of Party ID. *The graph shows the percentage of times party ID changed for respondents with five or more measurements of their party ID. Slightly less than half of all respondents reported the same party ID every time they were asked. Hardly any reported party ID inconsistent with their past identification more than a third of the time.*

data is that most people have stable or nearly stable party ID over a five year period, though there is enough instability to produce the macro level trends found in Figure 3.

Next, Figure 4 shows the stability rates for each of the seven party ID categories over a twelve month period. For each of the years between 2007 and 2010, respondents who were interviewed at least once in that year were grouped together. Then, using all pairs of months where respondents were interviewed in both months, the one to twelve month stability rates were calculated.

Several salient features are evident from 4. First, strong partisans are always much more stable than any of the other groups, though the gap is smaller in 2009. Second, at least during this period, strong Democrats were always more stable than strong Republicans, though both have twelve-month stability rates over 90 percent. Third, Independents were the next most stable group after strong partisans. None of the other party ID categories bears are particularly stable with twelve-month stability rates around 70 percent. It is hard to consider something with this level of instability over a year an “enduring attachment.” Finally, stability rates tend to fall much more rapidly as time passed in the first top two panels (where the data start at the beginning of 2007 and end at the end of 2009) than in the bottom two (where the data start at the beginning of 2009 and end in September of 2011).

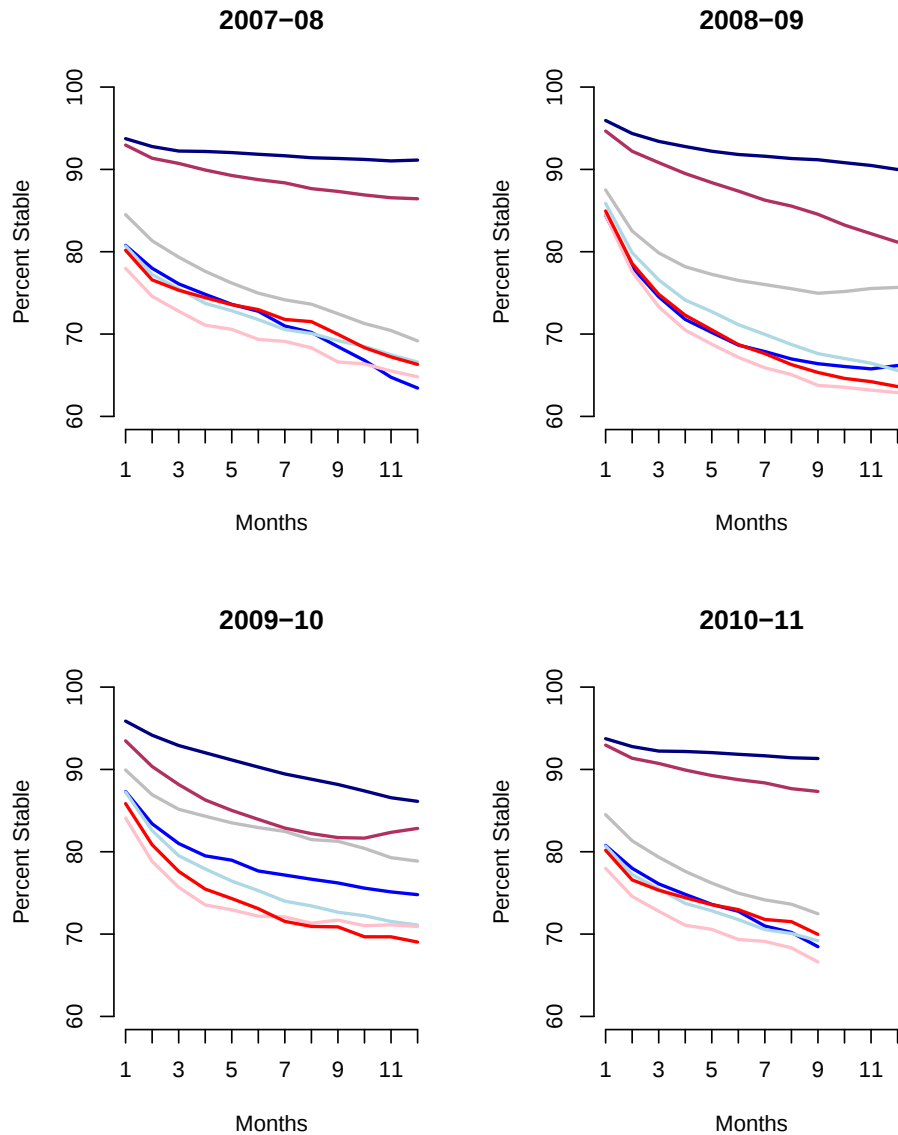


FIGURE 3. Stability of Party ID groups. *Each of the graphs shows the one to twelve month stability rate of each party ID group over a 24 month period. The 2007-08 graph includes all respondents who were interviewed at least once in 2007 and reinterviewed one to twelve months later, and similarly for the other graphs. The party ID groups are color-coded following the usual convention with dark red for strong Republicans and dark blue for strong Democrats.*

5. SWITCHING

In view of the high levels of instability among leaning and weak partisans, we next consider where these people go. Are they giving more or less random responses or is there some pattern to their instability?

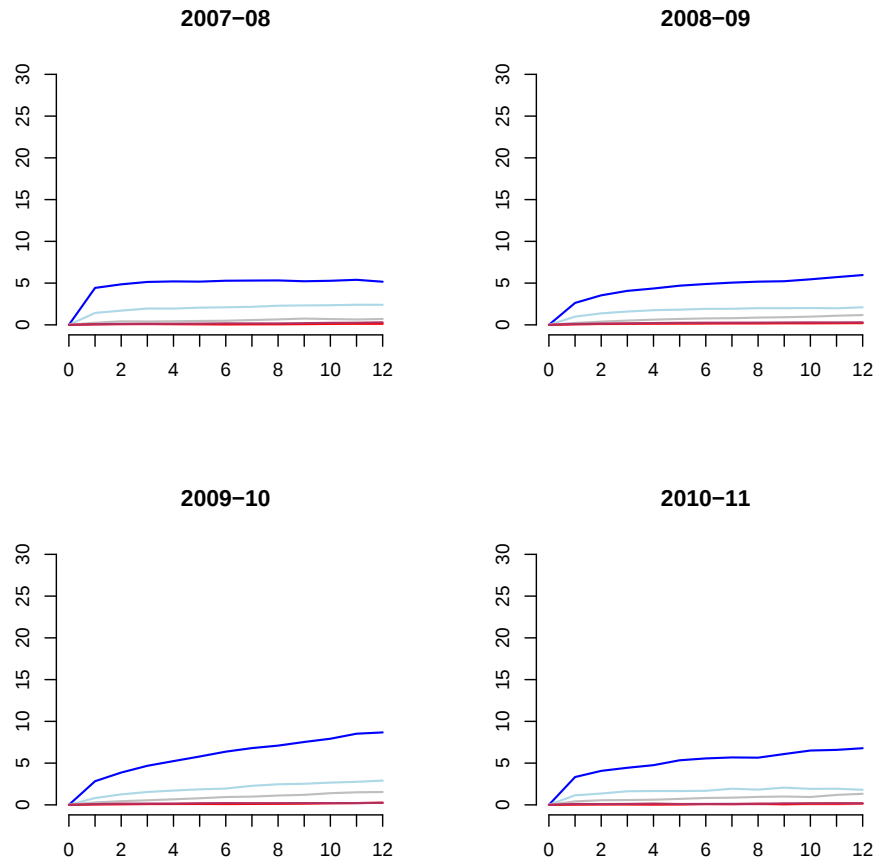


FIGURE 4. Party Switching by Strong Democrats. *Strong Democrats rarely switch to anything other than the weak Democrat category. There appears to be a somewhat more pronounced weakening of Democratic identification in 2009-10, suggesting some disappointment with the performance of the Obama administration.*

The next seven figures show the inter-category transitions for each of the party ID groups by year. Data have been pooled for all respondents in each year shown. The horizontal axis shows the number of months since the baseline party ID measurement and the vertical axis shows the percentage of respondents in each party ID category. The lines are color-coded using the conventional red-to-blue scheme. All of the groups start at zero (stability rates were shown in 4) and tend to grow over time as respondents switch out of the baseline group.

We summarize the results of this mass of data:

- Strong Democrats rarely switch to anything other than the weak Democrat category. There appears to be a somewhat more pronounced weakening of Democratic identification in 2009-10, suggesting some disappointment with the performance of the Obama administration.

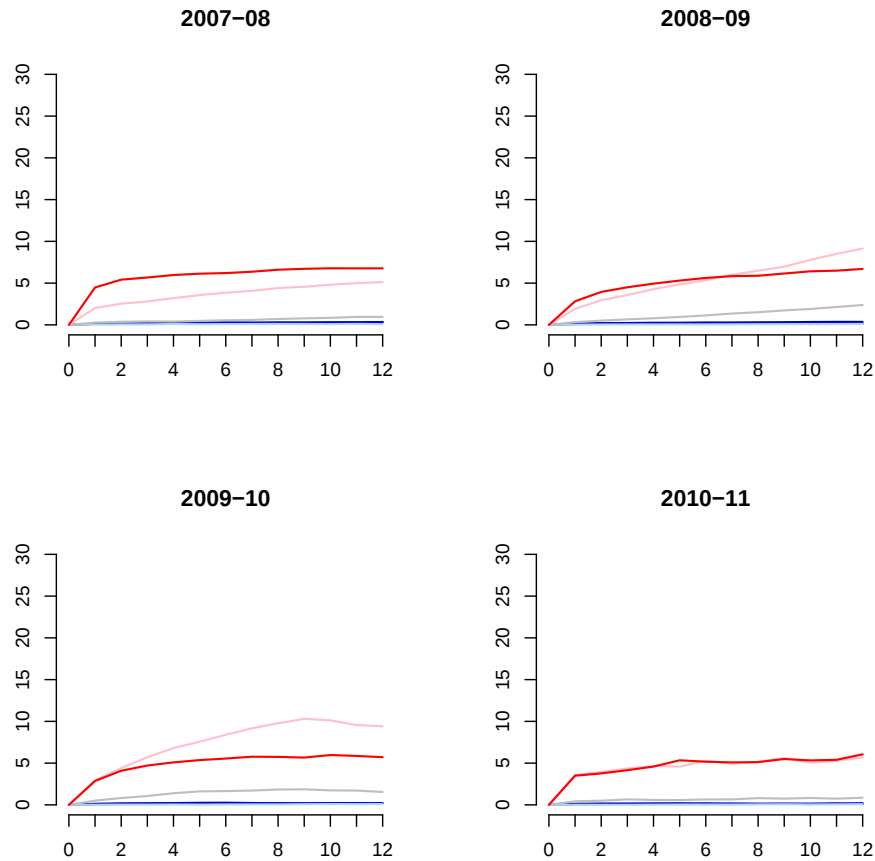


FIGURE 5. Party Switching by Strong Republicans. *Strong Republicans are almost as likely to switch to the leaning Republican as the weak Republican category, especially in 2008-10.*

- Strong Republicans are almost as likely to switch to the leaning Republican as the weak Republican category, especially in 2008-10.
- Weak Democrats show high levels of switching to the adjacent categories (strong Democrat and leaning Democrat), with a much greater tendency toward strengthening in 2007-09 than in 2009-11.
- Weak Republicans show moderate levels of switching to the adjacent categories (strong Republican and leaning Republican), with a greater tendency toward strengthening in 2007-09 than in 2009-11.
- Democratic leaners tend to switch to either weak or strong Democrats or Independents. In 2009-10, there is a pronounced tendency of Democratic leaners to become Independents.
- Republican leaners also tend to switch to either weak or strong Republicans or Independents. The shift towards Independence began earlier among Republicans and ends sooner.
- Independents tend to switch to one of the partisan leaner categories and only rarely into weak partisan groups (and almost never to the strong partisan groups).

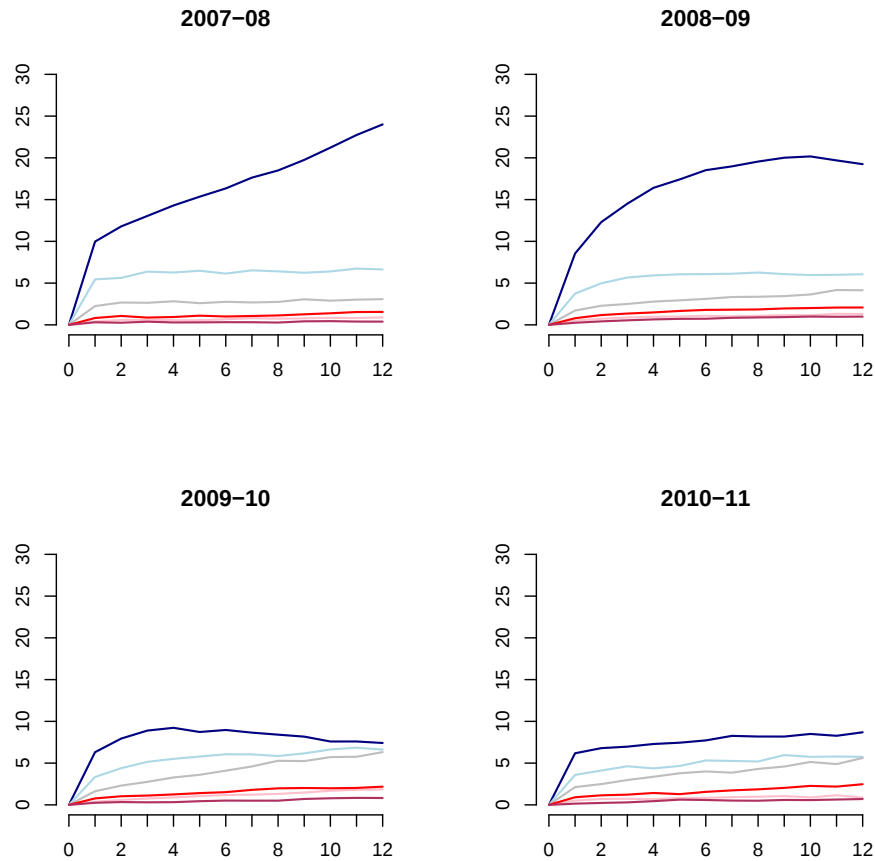


FIGURE 6. Party Switching by Weak Democrats. *Weak Democrats show high levels of switching to the adjacent categories (strong Democrat and leaning Democrat), with a much greater tendency toward strengthening in 2007-09 than in 2009-11.*

6. DYNAMIC MODELS OF PARTY CHOICE

There are essentially two different models of party choice in the political science literature.¹The first² Fiorina's "running total" model, in which party ID is just a weighted sum of past evaluations of a party. Fiorina's model, which only a Harvard graduate student of that era could think was rigorous, was vaguely Bayesian (similar to adaptive expectations models in the 1960's). Fiorina's voters form expectations in an *ad hoc* way, but he gets the essential idea right: what you think about the parties today is based upon the sum total of what you have experienced. This means that, given present party ID, one's past party ID is irrelevant for predicting future party ID, since that's

¹The names associated with the models obey Stigler's Law of Eponymy: "No Law is ever named after the person who first discovered it, including Stigler's Law of Eponymy."

²I say "first" because this was the first time I saw it and drank the Kool Aid.

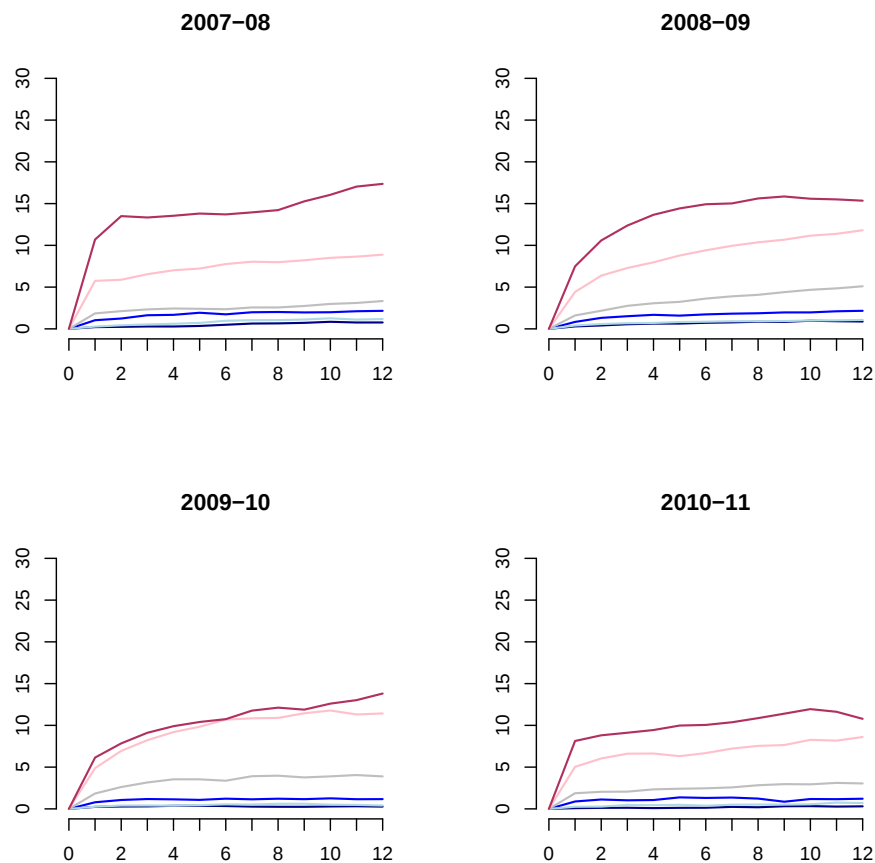


FIGURE 7. Party Switching by Weak Republicans. *Weak Republicans show moderate levels of switching to the adjacent categories (strong Republican and leaning Republican), with a greater tendency toward strengthening in 2007-09 than in 2009-11.*

entirely a function of present party ID and what comes after. Formally, this is equivalent to the *Markov property*: the future is independent of the past, conditional upon the present.

The other model is the so-called “Michigan model,” where party ID is inherited via childhood socialization³ and stays more or less fixed over a person’s lifetime.⁴ The Michigan model focuses upon the supposed stability of party ID (as contrasted with issue preferences and voting behavior). A more recent defense of the Michigan model (Green *et al.*, 2003) argues that most instability in party ID can be attributed to measurement error.

These two perspectives imply quite different models for the observed time series. The “running total” model implies that the observed series is a Markov process, while the Michigan model, at

³Or genetics.

⁴Converse (1976) is an interesting elaboration, which can be roughly rationalized in terms of predictive Bayesian inference.

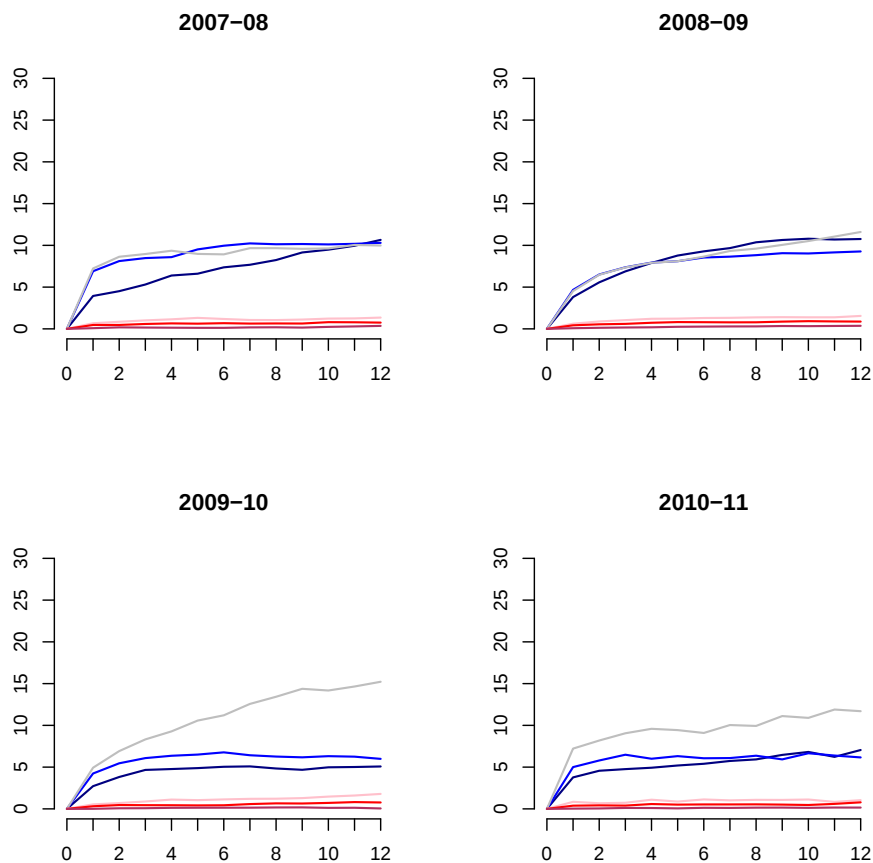


FIGURE 8. Party Switching by Democratic Leaners. *Democratic leaners tend to switch to either weak or strong Democrats or Independents. In 2009-10, there is a pronounced tendency of Democratic leaners to become Independents.*

least in its most recent form, implies that party ID is generated by a stable latent class model. In the next two sections, we explain these models in detail and pursue their implications.

7. THE MARKOV PROPERTY

Is party ID a Markov process? That is, given a person's present party ID, are their past and future party identifications independent of one another? What this means is that current party ID incorporates all relevant information relevant to future party preferences, as in Fiorina's (1977, 1981) model of party choice. In Fiorina's model, a voter's party ID represents a running total of all past evaluations of the parties. The same is true in Bayesian models of party choice (Zechman, 1978; Rivers, 1981; Achen, 2002). As explained below, measurement error and non-attitude models imply that the party ID process is *not* Markov, so this may viewed as relevant to testing these theories.

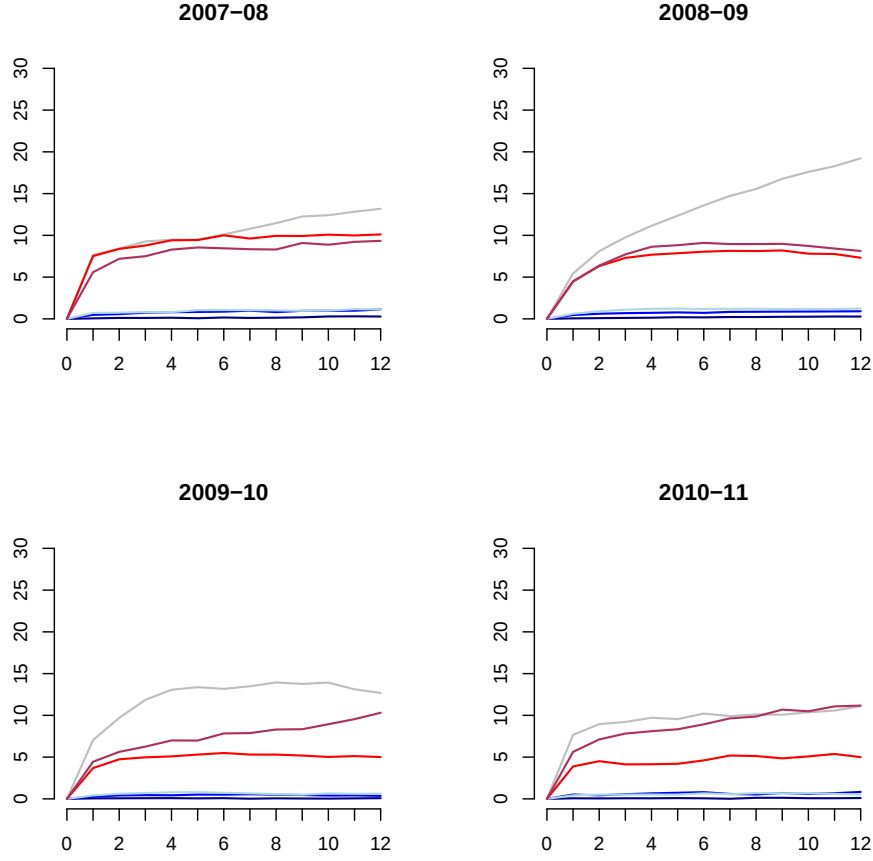


FIGURE 9. Party Switching by Republican Leaners. *Republican leaners also tend to switch to either weak or strong Republicans or Independents. The shift towards Independence began earlier among Republicans and ends sooner.*

7.1. Testing the Markov Property. The Markov property is easy to test, since if X_t is Markov, then

$$\begin{aligned} \Pr\{X_{t-1} = x_{t-1}, X_{t+1} = x_{t+1} | X_t = x_t\} \\ = \Pr\{X_{t-1} = x_{t-1} | X_t = x_t\} \Pr\{X_{t+1} = x_{t+1} | X_t = x_t\} \end{aligned}$$

for all x_{t-1}, x_t, x_{t+1} in the support of X . However, the Markov property implies the stronger condition that *anything* in the past be independent of *anything* in the future conditional upon the present:

$$\Pr\{X_s = x_s, X_u = x_u | X_t = x_t\} = \Pr\{X_s = x_s | X_t = x_t\} \Pr\{X_u = x_u | X_t = x_t\}$$

for any $s < t < u$ and x_s, x_t, x_u in the support of X . It is this form that we will test.

To test whether X_s is independent of X_u conditional upon $X_t = x_t$, we compute the chi-squared statistics for the cross-classification of X_s and X_u within the subset of the sample for which $X_t = x_t$. Since the subsamples are non-overlapping for $x_t \neq x'_t$, the sum of the chi-squared statistics

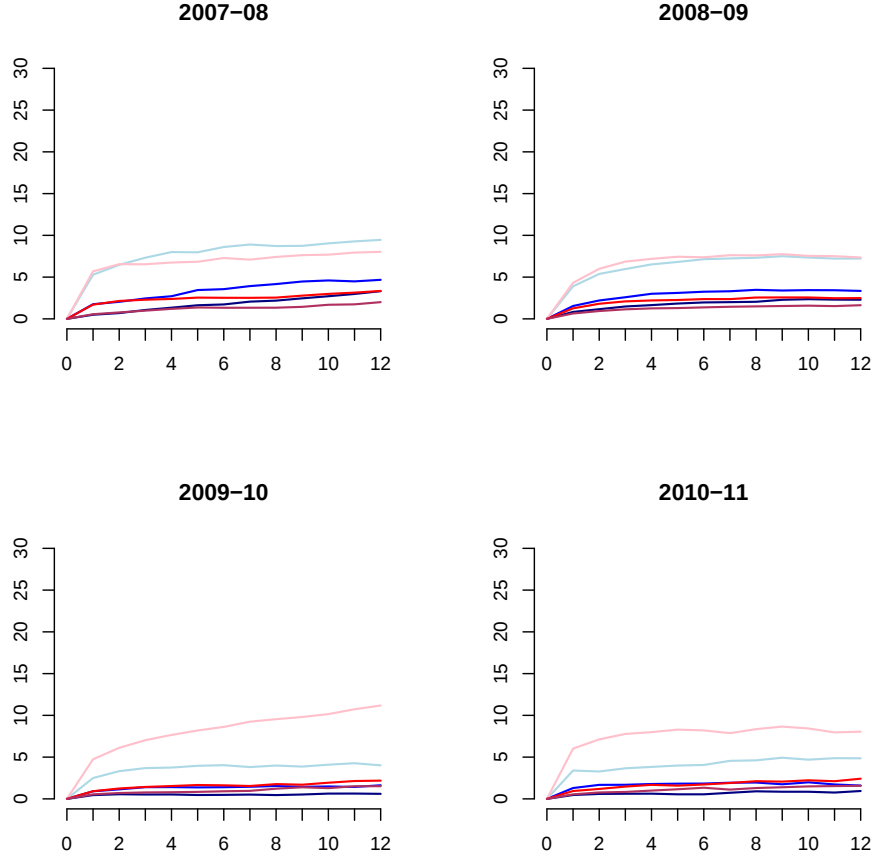
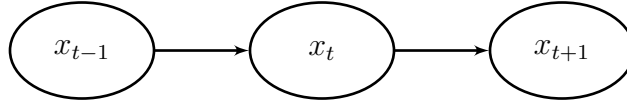


FIGURE 10. Party Switching by Independents. *Independents tend to switch to one of the partisan leaner categories and only rarely into weak partisan groups (and almost never to the strong partisan groups).*

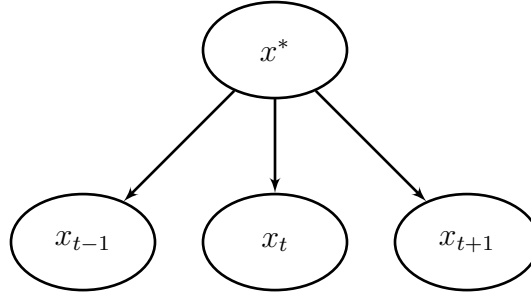
FIGURE 11. Markov Model



for $x_t = 1, \dots, 7$, is also distributed as approximately chi-squared (under the Markov hypothesis) with degrees of freedom equal to the sum of the degrees of freedom.

We encountered some practical problems in implementing this approach. The asymptotic chi-squared approximation is poor when the expected number of observations in the cells is small, with a tendency to reject the null hypothesis too frequently. To mitigate this problem, we grouped X_s and X_u into three categories according to the value of x_t : the category of x_t alone was always included; all categories above and below x_t were grouped together except for the endpoints (strong Democrats and strong Republicans) where weak partisans of the same party were kept alone and

FIGURE 12. Latent Class Model



the remaining categories (Independents and partisans of the opposite party) were grouped together. Let $h(X, x_t)$ denote this transformation, *i.e.*,

$$h(X, x_t) = \begin{cases} 1 & \text{if } X < x_t \text{ or } X = x_t = 1 \\ 2 & \text{if } X = 2 \text{ when } x_t = 1, \text{ or } X = 6 \text{ when } x_t = 7, \text{ or } X = x_t \text{ otherwise} \\ 3 & \text{if } X > x_t \neq 7 \text{ or } X = x_t = 7 \end{cases}$$

Using this transformation, we test whether

$$\begin{aligned} \Pr\{h(X_s, x_t) = h(x_s, x_t), h(X_u, x_t) = h(x_u, x_t) | X_t = x_t\} \\ = \Pr\{h(X_s, x_t) = h(x_s, x_t)\} \Pr\{h(X_u, x_t) = h(x_u, x_t) | X_t = x_t\} \end{aligned}$$

for $s < t < u$ and $x_t = 1, \dots, 7$.⁵ This doesn't resolve all the problems, since strong partisans rarely move more than a unit on the party ID scale, but it helps substantially.

The chi-squared test for each 3×3 subtable has 4 degrees of freedom and the sum of the chi-squared statistics has 28 degrees of freedom. The tests were conducted using November 2008 (where we had the most party ID readings) for the middle period, and one, two, three, six, or twelve month leads and lags. Thus, t was selected to be November 2008 so X_t is the respondents party ID in that month. The lags ($t - s$) and leads ($u - t$) were chosen to be 1, 2, 3, 6, 9, or 12 months. The results are shown in Table XXX below.

The Markov property is easily rejected for all of the lead/lag combinations shown in Table XXX. The fit is somewhat better for the longer time spans (9 and 12 months), though the Markov hypothesis is still rejected for any reasonable significance level. Similar results were found using different middle years or even longer lags.

7.2. Understanding the Failure of the Markov Property. In all cases, the Markov Property is rejected because there is too much stability in party ID, *i.e.*

$$\Pr\{X_s = X_u = x_t | X_t = x_t\} > \Pr\{X_s = x_t | X_t = x_t\} \Pr\{X_u = x_t | X_t = x_t\}.$$

Using the results in Dawid (1978), this implies

$$\Pr\{X_u = x_t | X_s = X_t = x_t\} > \Pr\{X_u = x_t | X_t = x_t\}.$$

⁵Note that $h(X_t, x_t)$ need not be Markov even if X_t is Markov. However, the condition being tested is implied by the Markov property, since the conditioning is upon X_t , not $h(X_t, x_t)$.

November 2008 Party ID	Lead/Lag (months)					
	1	2	3	6	9	12
Strong Democrat	423.7	599.0	641.5	477.4	87.3	150.6
Weak Democrat	67.1	227.0	336.7	319.5	54.1	95.9
Lean Democrat	133.7	215.7	212.3	226.6	51.5	83.1
Independent	228.5	561.5	431.3	261.1	47.3	146.7
Lean Republican	59.0	149.7	206.1	207.7	19.5	65.2
Weak Republican	65.0	288.7	288.4	267.1	66.0	33.4
Strong Republican	128.9	684.4	441.9	506.5	43.7	100.8
$\chi^2(24)$	1106.0	2726.0	2558.1	2265.9	369.3	675.7

TABLE 1. Chi-squared Tests of Markov Property. *Entries are the chi-squared statistics for testing the independence of party ID at $t - k$ and $t + k$ given party ID at $t = \text{November, 2008}$, where the lead/lag $k = 1, 2, 3, 6, 9$ or 12 . The chi-squared statistic is computed for each category of party ID in November 2008 and the bottom row of the table is the sum of the column entries above it. In all cases, the chi-squared statistics far exceed the critical value of 43.0 for a $\chi^2(24)$ at the $\alpha = .01$ significance level.*

That is, the probability of party ID persisting for a third period, given that it has persisted for two periods is higher than the probability of it persisting a single period.⁶

There are several potential explanations for the failure, ranging from a higher order Markov process to a latent Markov process subject to errors of observation. Although the point null is easily rejected, the size of the departure from the exact Markov condition is relatively small, especially for long lag lengths.

8. LATENT CLASS MODEL

In the latent class model (LCA), it is assumed that actual party ID doesn't change from period to period, but that measured (or "manifest") party ID fluctuates due to random misclassification. Conditional upon latent party ID, measured party ID is conditionally independent. This corresponds to having stable party ID subject to measurement error (the model in Green *et al.*, 2003). However, instead of having a latent continuous party ID, we use a model with a seven category latent party ID, which is estimated using the EM algorithm (Linzer and Lewis, 2010).

In all cases, the LCA model estimates imply a one-to-one mapping between the seven observed and latent categories. The model estimates provide an estimate of the misclassification rate (the rate at which respondents report a different party ID than their latent stable party ID) for each period. We estimated a model using seven months of data starting three months before the 2008 presidential election. The misclassification rates for each month for each category of party ID are shown in ??.

⁶The interpretation is slightly loose, since it is stated in terms of a homogeneous process, which it evidently not the case here. However, the equation does not require homogeneity.

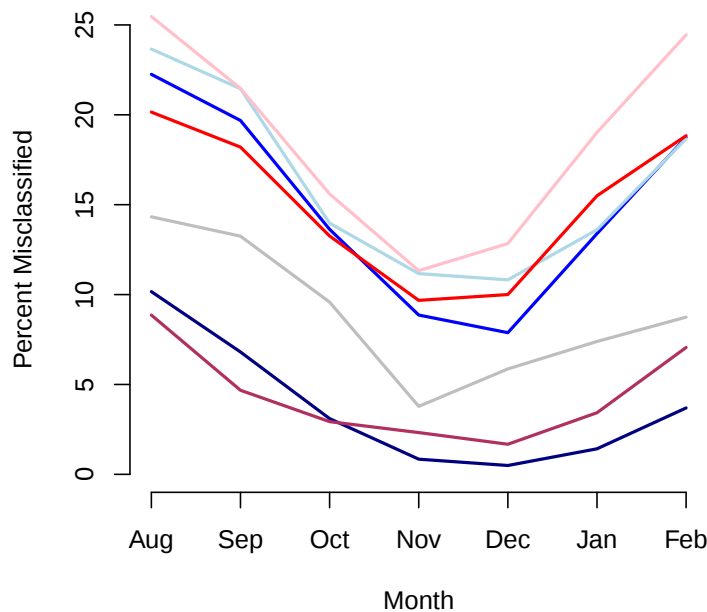


FIGURE 13. Misclassification Rates for Reported Party ID, August 2008–February, 2009. A seven category latent classification model was fit for 9,249 respondents whose party ID was measured at least once per month over seven consecutive months. Reported party ID was misclassified if it did not belong to the modal category for each latent class. The lines are colored from dark red to dark blue, corresponding to strong Republicans and strong Democrats, respectively. Misclassification rates are lowest for the election month and rise rapidly as the time to or from the election increases. Misclassification rates are lowest for strong partisans and lowest for the weak and leaning categories.

The results are quite remarkable: misclassification rates are very low in the election month and rise rapidly as the time to or from the election increases. This is especially true for the weak and leaning party categories. These results are not very reassuring for the measurement error model, since misclassification rates should not vary substantially over the electoral cycle. The follow-up questions to the party ID stem (strength of partisanship for party identifiers, leaning direction for Independents) seem to only work at the time of an election. Whether they measure anything more than current voting preference is unclear.

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