

# Party Identification in Germany: A Dynamic Analysis of Panel Data, 1984-2007

Rocío Titiunik  
University of Michigan, Ann-Arbor  
titiunik@umich.edu

Eric Schickler  
University of California, Berkeley  
eschickler@berkeley.edu

March 27, 2009

Preliminary Draft

Paper prepared for presentation at the Annual Meeting of the Midwest Political Science Association, Chicago, IL, April 2009. We thank Jas Sekhon and Jonathan Wand for their helpful comments and suggestions.

While party identification has long occupied a central place in the study of political behavior in the United States, the concept's usefulness in other contexts has been the subject of considerable controversy. While a handful of studies of other advanced democracies have argued that partisan attachments are typically stable and do an effective job of predicting the vote several years in advance, many other studies have presented evidence that partisanship tends to be unstable once one moves outside the American context (see Bartle and Belluci 2008 for a review). Leaving aside the question of how stable partisanship is *in general*, the variety of institutional and social contexts presented once one moves beyond the confines of American national elections holds the potential to illuminate the conditions under which partisan identities prove to be enduring, along with the factors generating partisan instability.

The German Socio-Economic Panel Survey (GSOEP) offers a unique window into partisan dynamics over a long – and particularly informative – time span. The panel has surveyed respondents annually since 1984, a period in which the German political system was shaken by reunification and its difficult economic aftermath. The inclusion of residents of the former East Germany in the panel starting in 1990, allows for an analysis of the simultaneous evolution of partisan identities within a relatively stable party system (in the west) and in a system in which parties are beginning to take root. This in turn holds the potential for insight into the role of socialization processes in the development of stable partisan identities. The inclusion of many waves of data on the same respondents, and the inclusion of data on family members allows for an exploration of how family networks and changes in life circumstances (e.g. marriage, divorce, residential mobility) affect partisanship.

We are by no means the first scholars to use the GSOEP data to study partisanship; however, as discussed below, prior efforts have not taken full advantage of the information contained in the panel structure of the data. In this preliminary paper, we begin to explore this panel structure more fully.

We apply a brand choice model (see Roy, Chintagunta, and Halder 1996) that is well-suited to handling several difficult aspects of the German partisanship data. This model, described in greater detail below, fits the data reasonably well but has its own shortcomings. In particular, it imposes a Markov structure on the data – so that all of the systematic information useful for predicting current partisanship is captured by partisanship at  $t-1$  and the covariates included in the model (i.e. earlier lags add no predictive power beyond that captured in partisanship at  $t-1$ ). An examination of the correlation structure in the data across different lags shows that serial correlation across repeated choices in the data decreases at a slower rate than the model implies, suggesting that the version of the model we employ here may be imposing assumptions that are too restrictive. We briefly explore the implications of this feature of the data and propose directions for future analysis.

Our bottom line at this point is quite tentative: we find evidence in the correlation structure that suggests that partisanship among West Germans changed relatively slowly over the twenty year period, at a rate that appears comparable to that obtained in American panel data. But we have not yet had the chance to apply the models to the East German data or to explore the variables that generate higher or lower levels of partisan stability. Our results thus far are only suggestive, but we believe that the approach taken here holds promise to capitalize upon the unusually rich data in the

GSOEP to better understand the dynamics of partisanship both in Germany and in comparative perspective.

### Partisanship in Germany

The German party system that emerged out of World War II long included two major party groups – the Social Democratic Party (SPD) and the Christian Democratic Union, along with the CDU’s sister party in Bavaria, the Christian Social Union (CSU). The SPD has long been connected with labor unions, while the CDU / CSU has found its strongest support among Catholics and regular churchgoers. A third party, the Free Democratic Party (FDP) often proved to be a swing, coalition partner of the SPD or CDU/CSU in forming a government. This relatively stable system faced some challenges in the 1980s, with the rise of the Greens. West German unification with East Germany proved an even greater challenge. On the one hand, the West German parties ended up dominating politics in the east – with the exception of the remnant of the old communist party, the Party of Democratic Socialism (the PDS), which has continued to compete and has gained from 4-8% of the national vote in recent elections. At the same time, the economic struggles that ensued after unification generated dissatisfaction among many Germans with the performance of the leading parties.

Indeed, the study of partisanship in Germany has focused to a considerable extent on the question of whether the party system has undergone a dealignment in which voters are no longer connected to the parties in the same way as they were in earlier periods, such as the 1970s and 1980s. These studies often analyze the aggregate distribution of partisanship in the electorate and have provided considerable evidence that the share of the electorate identifying with a party has declined significantly in recent decades (see, e.g., Arzheimer 2006; Zuckerman, Dasovic, and Fitzgerald 2007; Dalton and Burklin 2003; Gluchowski and von Wilamowitz-Moellendorff 1998; Zelle 1998). There is less agreement about the precise timing and sources of this “dealignment.” Several studies claim that partisanship declined gradually in the 1980s-90s. For example, Arzheimer’s (2006) analysis of monthly Eurobarometer data spanning 1977-2002, indicates that the share of the electorate identifying with a party gradually fell over this period. This runs counter to other studies, which have found evidence of a sharp decline in party attachments during the period following reunification with East Germany.<sup>1</sup> Arzheimer models individual-level partisanship, pooling the samples over the twenty-six year time period, and estimating the impact of time and of interactions of time with dummy variables for plausible break points in the series (e.g. 1990, 1991). Arzheimer finds a large and statistically significant negative time trend in the propensity to identify with a party; his parameter estimates indicate that while there is a drop in identification around 1990, the general pattern is one of a “gradual and fairly constant dealignment” rather than “a swift breakdown” (799). Similarly, Dalton and Burklin (2003) cite an “ongoing dealignment trend” that dates back to the 1980s and continued into the new century. They note, however, that the dealignment accelerated in the 1990s (2003: 61).

Those emphasizing the gradual nature of the change tend to attribute the dealignment to shifts in German social structure (see, e.g., Gluchowski and von Wilamowitz-Moellendorff 1998).

---

<sup>1</sup> See the review in Arzheimer (2006: 794). Zelle (1998) contrasts the sudden dealignment rooted in frustration hypothesis with the gradual social change hypothesis. He concludes that the evidence is not fully consistent with either view but is closer to the expectations derived from the frustration hypothesis.

Thus, Arzheimer argues that the linkage between being a worker and an SPD identifier has faded over time; not only are union members a shrinking portion of the electorate, their propensity to identify with the SPD (or any party) has fallen dramatically (Arzheimer 2006: 803-04). Arzheimer also finds that the propensity to identify with a party has fallen somewhat among groups traditionally identified with the CDU/CSU, particularly Catholics.<sup>2</sup> Dalton and Burklin add that increasingly sophisticated voters need to rely less on partisanship as a cue, and instead turn to issues and performance evaluations when making their decisions.<sup>3</sup> This relates to Dalton's (2000) broader argument that parties have lost relevance to voters across the advanced western democracies amidst increased education levels and new information sources that make citizens less dependent on party as a heuristic. In contrast, those who view the decline in partisanship as a sharp change dating to the early 1990s eschew social-structural explanations – which by their nature point to gradual change – and instead emphasize the upheaval and dissatisfaction associated with the reunification process (see Zelle 1998 for discussion).

Prior studies of dealignment have not fully leveraged the available panel data to assess, at the individual-level, which types of respondents are moving away from their earlier partisan attachments or the factors leading new entrants into the electorate to be nonpartisans. Recent studies, however, have begun to make use of the GSOEP panel to enhance our understanding of the party system change in Germany.

Most recently, Kroh and Selb (2008) use the GSOEP data to assess partisan stability. They use a survival analysis to assess the durability of partisan ties. Their approach focuses on the time until each respondent first leaves his or her party. Due to concerns about interval-censoring, Kroh and Selb restrict their analysis to the 2945 individuals who report an initial partisanship as young adults (age 17 to 21). They then follow these individuals until each reports a different partisan identity in a subsequent wave. Using a Kaplan-Meier survival model, they show that after twenty years, slightly more than half of the sample names another party other than their initial party. The relative hazard rate is high early on and then gradually flattens out. That is, the proportion of those at-risk who change their partisanship is highest early on and then falls over time. Kroh and Selb suggest that this means that the stability of partisanship grows over time, though it could also be that the portion of the sample that remains at risk differs from those who dropped out due to an earlier change (since presumably those who remain at risk are likely to have started out with stronger attachments). Kroh and Selb also find that East German respondents' partisanship is less durable than their West German counterparts; the gap is about 10 percentage points after ten years. This result is consistent with the hypothesis that the age of a democracy affects partisan stability.<sup>4</sup> Respondents with less education and lower interest in politics evidence more durable partisan attachments than do respondents with high education and political interest. Kroh and Selb also explore parental transmission of partisanship and find that those respondents with an initial

---

<sup>2</sup> Gluchowski and von Wilamowitz-Moellendorff's (1998) findings are largely consistent with this account. Tracing change from 1971-97, they argue that the social groups linked to each party have shrunk and that the tie between each group and its favored party has also attenuated over time.

<sup>3</sup> Dalton and Burklin also attribute a substantial share of the decline to changes in the linkages between broad social groups and the parties. They note that social class and religion have a reduced impact on vote choice and partisanship.

<sup>4</sup> The two sets of durability estimates are not strictly comparable, however, in that the East German sample begins in 1990 and thus it may be that period effects are partly responsible for the results (since it may be that West Germans interviewed starting in 1990 are also less stable than those first interviewed in 1984).

partisanship that matches that of their parents are substantially more likely to display durable attachments over time.

While Kroh and Selb’s analysis is promising, the survival analysis framework does not take full advantage of the panel structure of the data. First, the survival analysis makes no allowance for alternative patterns of change. For example, it treats the following observations as equivalent, dropping each after period 3, when each individual evidently undergoes a change in partisanship from party A to party B.

	Period						
	T=1	t=2	t=3	t=4	t=5	t=6	t=7
Respondent 1:	Party A	A	B	C	A	C	B
Respondent 2:	Party A	A	B	A	A	A	A
Respondent 3:	Party A	A	B	B	B	B	B

Clearly, in this hypothetical scenario, respondent 1 displays unstable partisanship. Respondent 2, however, has a temporary deviation in period 3 from what otherwise appears to be a stable, equilibrium partisan identity. Respondent 3 does undergo a genuine change in partisanship in period 3, but that new equilibrium proves enduring. Ideally, an estimation approach should capitalize on the information in waves after an initial shift is evident, in order to distinguish temporary deviations from long-lasting change.<sup>5</sup>

A related issue is that the survival analysis starts with respondents who are just entering the electorate at age 17-21. Prior studies of partisanship in the United States suggest that partisan identities are most likely to change in this formative period, as individuals are still figuring out how their self-conception relates to the parties. It is only after citizens reach age 25-30 that partisan identities become entrenched (Green, Palmquist, and Schickler 2002). The survival analysis does not allow us to determine whether partisanship stabilizes for most German respondents after an initial period of change or whether it remains highly variable over time.

Schmitt-Beck, Weick, and Christoph (2006) also employ the GSOEP data to study partisan stability. At a descriptive level, the authors find that 24% of West German respondents have the same party identification in all 18 waves in the study period; by contrast, 72% change at some point during the study. Most of the change in partisanship is between one party and no party, rather than switching to a different party (see also Zuckerman and Kroh 2006). Still, Schmitt-Beck and his co-authors interpret the sheer frequency of change among West Germans as evidence that partisanship is “characterized by considerable fluctuation, and thus rather shaky” (583).

Schmitt-Beck, Weick, and Christoph apply a hazard model with covariates to analyze the patterns of change more systematically. Their results suggest that the longer one has held a

---

<sup>5</sup> In an unpublished companion paper, Kroh and Selb (2006) find that respondents often do return to their initial partisanship, particularly when that partisanship is consistent with parental partisanship.

partisan identity, the less likely one is to give it up.<sup>6</sup> The authors find that those with low political interest and low education are most likely to change to nonpartisanship, while those with greater political interest are more likely to switch parties. Thus, cognitive mobilization plays a key role in shaping partisan stability. The authors also find that parents are more likely to switch to nonpartisanship when their children leave the household. Social context also matters in other ways. For example, partisan change is more likely when one's spouse has a partisanship different from one's own identity.<sup>7</sup>

Unlike Kroh and Selb (2008), Schmitt-Beck, Weick, and Christoph's hazard model does not drop respondents when they first change parties. Noting that respondents might change their party identification or switch to independence more than once, they "treat multiple spells of party identification experienced by a single person in much the same way as if each of them was a single spell experienced by a separate person" (588). While this has the advantage of drawing upon more of the information in the data, it does not fully exploit the within-person variability. That is, in assessing the long-term stability of partisanship, one can learn more by using the individual respondent as the unit of analysis and tracing patterns of change for that individual across each wave.

The fullest effort to develop a new theoretical understanding of partisanship using the GSOEP data is presented in Zuckerman, Dasovic, and Fitzgerald (2007; see also Zuckerman and Kroh 2006). Zuckerman and his co-authors argue that partisanship is a bounded choice: individuals will alternate between one party and nonpartisanship, but rarely cross over to identify with the other party. In effect, in making their choice at any given point in time, individuals do not consider all of the available options and instead include only one major party as a potential object of identification. They argue that this conceptual point implies that partisanship ought to be modeled as a two-step process, in which the first step – deciding whether to name a party at all – is related to the second step, naming a particular party.

Zuckerman and his co-authors use a Heckman Probit Selection Model to address this two-stage process. They find that social and political networks seem to influence the decision to identify with a party as well as the party chosen. Thus, the preferences of household members have a substantial impact, as do social networks, such as union and church membership, and regional context (i.e. the party's strength in one's region). Zuckerman et al use postestimation techniques to estimate the probability of identifying with a particular party. They find that at the extremes of social and political context, individuals are extremely likely to support a particular party (e.g. a West German, non-Catholic, union member, living in an SPD household and SPD-favoring region is nearly certain to be an SPD identifier, while a West German, Catholic, non-union member from a CDU/CSU household and region is nearly certain to identify with the CDU/CSU). They infer from these findings that partisanship is rooted in social context rather than either individual psychological processes or self-interest calculations.

---

<sup>6</sup> One difficulty here is that the model does not account for differential strength of partisanship. Individuals with strong partisanship are less likely to move in any given wave and the set of respondents who maintain the same party through the first several waves are likely to consist disproportionately of strong partisans. In other words, for any given individual, the probability of changing may be constant over time but those individuals who enter the study with stronger party ties have a lower baseline probability of changing in each period.

<sup>7</sup> The authors conjecture that this is due to changing one's partisanship to align with the spouse.

While the use of the two-stage selection model is innovative, it does not leverage the information in the panel structure of the data. The authors are, in effect, pooling all of the waves of data, rather than presenting a dynamic analysis of individual change.<sup>8</sup> Zuckerman et al. also estimate a count model of how many times each respondent names a particular party over the course of the panel. Due to an excess of zeroes and overdispersion, they estimate a Zero-Inflated Negative Binomial Model. The “count” portion of the model is intended to model partisan stability, since it reflects how often a party is named given it is named at least once. They find that respondents from households in which the other members favor one party are significantly more likely to name that party repeatedly over the course of the panel. The model is not designed (or intended), however, to estimate the stability of partisanship in ways comparable to estimates from existing panel studies of the United States and Europe.

Collectively, these studies suggest the promise inherent in the GSOEP data, but also indicate that an alternative statistical approach is necessary to leverage the full value of the information contained in the panel data. We begin the process of developing an alternative approach below.

### Measures, Data, and Estimation Approach

The concept of party identification—the sense that one thinks of oneself as belonging to a social group comprised of fellow partisans—is easier to translate into a survey question in the American case. The standard Michigan question wording asks, “Generally speaking, do you usually think of yourself as a Democrat, Republican, Independent, or what?” The German

---

<sup>8</sup> We also have doubts about using the two-stage selection model to analyze the data. First, it is not clear that there exists a variable that affects the decision to identify with a party (as opposed to nonpartisanship) that will not also have some impact on the identity of the party chosen. That is, a valid exclusion restriction is difficult – and perhaps impossible – in this context. Zuckerman et al use political interest as the excluded variable in the second stage, but do not provide evidence that it is in fact unrelated to party choice conditional on identifying with one party. More important, from a theoretical standpoint, is it not clear that the empirical pattern in which individuals shift between one party and nonpartisanship but not between two major parties indicates that the “out-party” has been eliminated from the choice set. Take the case of a moderately liberal Democrat in the United States. Over a twenty-year period, the Democrat may have times when she feels more distant from the Democratic party and thus chooses Independence, but never moves all the way over to the Republican column. This does not necessarily mean that Republicans were eliminated from the choice set. It is equally plausible that Republicans are always too “distant” – either as a social group or as an ideological bundle of policies, depending on one’s theoretical perspective – to be preferable to Independence and Democratic identification. Indeed, if one adopts a spatial framework to understand party choice, it should not be a surprise that individuals are much more likely to move between nonpartisanship and one party than to move between major parties (which presumably are on opposing sides of the ideological spectrum). A similar logic applies to a social group understanding of partisanship: for a Democrat, the out-group Republican is defined more negatively than the more amorphous out-group “independents,” and thus shifts between Democratic identification and Independence should be easier from a psychological standpoint. Indeed, in the paradigmatic case of a realignment in recent U.S. history – that is, in which survey evidence suggests that individuals did eventually switch parties – it appears that southern whites typically first moved from Democratic identification to Independence and then very gradually shifted over to a Republican identification (see Green, Palmquist, and Schickler 2002). Presumably, had the rise of Reagan and the conservative evangelical movement not made the GOP a more hospitable home for these disaffected southern whites, they may well have stayed Independents and never moved all the way over to the GOP – but that does not mean the GOP was not part of their choice set.

partisanship question, used in the GSOEP as well as other surveys, reads: “Many people in Germany are inclined toward a certain political party, although from time to time they vote for a different party. What about you? Are you inclined – generally speaking – toward a particular party.” Respondents who answer that they are inclined towards a party are then asked “Towards which one?” This alternative wording was adopted because literal translation of the Michigan item was thought to confuse party membership and subjective identity (Norpoth, 1978). While the use of the term “inclined” does not tap into a respondent’s self-conception as clearly as the Michigan wording (“think of yourself”), the question wording calls to mind a long-term attachment (“generally speaking”) and aims to distinguish partisanship from current voting behavior. Respondents are also probed regarding the strength of their partisanship (that is, those identifying with a party are asked “to what extent?” they identify).

One feature of this question wording is that it has long been associated with a relatively high – and evidently increasing – rate of nonpartisanship, compared to the American question wording. The key difference is that the U.S. partisanship question – like the question in England and Canada – names the parties, while the German question does not. While there has been considerable debate over which question wording is superior, we emphasize here that question wording differences mean that the absolute rate of nonpartisanship is a weak indicator of the relative extent of party attachments across advanced democracies (see Johnston, 1992; Converse and Pierce, 1985; Schickler and Green 1997 on question wording). Trends over time are more informative, but in this preliminary analysis, we have not attempted to track changes in the share of the population identifying with each party and with no party. We plan to explore this question in future work.

Our primary data consist of individual responses to the party identification survey item in the 24 waves of the GSOEP panel study spanning 1984-2007. In this preliminary analysis, we do not consider responses to the probes about party strength and instead just focus on the response to the initial partisanship question. Since partisanship is not an ordered variable in the German multi-party context (i.e. it is problematic to position “no party,” “Green identification,” or “FDP identification” as “between” identification with the SPD and CDU/CSU), we create a series of dummy variables for identification with each major party. The SPD dummy variable is coded as 1 for those responding “SPD” to the first partisanship question and 0 for all those responding that they identify with a different party or with no party. The CDU/CSU dummy variable is coded analogously. We also create a four-category, unordered partisanship variable indicating identification with the CDU/CSU, the SPD, no party, and other party.

As a first cut at the data, we simply explore the correlation structure with respect to identification with the SPD and CDU/CSU. Table 1 presents the autocorrelations for identification with each of these parties over time. We use the phi coefficient as a measure of the association between partisanship at time  $t$  and different lags of partisanship. This coefficient is the form taken by Pearson’s  $r$  when data are dichotomous. The autocorrelations for the SPD dummy variable are calculated as follows: for the autocorrelation over a one year lag, take the dummy variable for support for the SPD in year 2 (i.e. 1985) and the dummy variable for support for the SPD in year 1 (i.e.  $t-1$ , 1984). This generates a 2x2 table with support/no support and year 1 and year 2. We then compute the correlation between support in year 1 and support in year 2 using the phi coefficient. Since there are 23 different periods with a lag of one year (e.g. 1984-85, 1985-86 etc), we compute the correlation for each of these one year lags and average. This yields the average one year

autocorrelation of .73 for identification with SPD and of .75 for identification with the CDU/CSU.<sup>9</sup> Correlations for a two year time span are constructed by generating 2x2 tables with support/no support and year 1 and year 3 (e.g. 1984 vs. 1986; 1985 vs. 1987 etc). As Table 1 suggests, the correlations start out quite high and fall gradually over time. When the gap separating waves is ten years, the SPD dummies are still correlated at .59 and the CDU/CSU at .63. After a full twenty years have elapsed, the SPD correlation is down to a still respectable .49 and the CDU/CSU phi coefficient is .55.

The correlation structure is consistent with the finding from earlier studies that partisanship in Germany is by no means perfectly stable. However, the slow deterioration in the correlations over time suggests that change is typically gradual, at least in the West German context. It also suggests that at least some of the observed change in partisanship between successive panel waves reflects either measurement error or temporary deviation from an underlying equilibrium partisanship. Otherwise, the correlations would decline in a way that is at least approximately geometric over time. That is, if the correlation between SPD identification over a one-year period is .73, then the correlation over two years would be  $.73 \times .73 = .53$ . Instead, the observed correlation over a two year period is .71, suggesting that partisanship lagged by two years is nearly as good a predictor of partisanship at time  $t$  as is partisanship lagged just a single year. Ultimately, we will attempt to estimate a model that incorporates the potential for measurement error or short-term deviations from an underlying equilibrium partisanship, along with covariates that may affect the stability of partisan identities.

In this paper, we present results from a dynamic discrete choice model that does not fully account for these features of the data, but we believe that it nonetheless begins to illuminate the dynamics of partisanship in West Germany. The model is developed in generality by Resnick and Roy (1990), while Roy, Chintagunta and Haldar (1996) develop a particular case and present an empirical marketing application where consumers are modeled as purchasing different brands.

The behavioral motivation of the model is a utility maximizing framework in which individuals choose an outcome (in our case, identification with a particular party) from a finite set of alternatives over different time periods. The utility of individuals is affected by both observed and unobserved factors (where unobserved factors are those unavailable to the researcher), and the party chosen is the one yielding the highest utility. In our case, observed factors include individual-specific characteristics such as age, educational attainment, religion, and union membership. Unobserved factors may be, for example, specific actions taken by the local branches of political parties to attract constituency support. The model assumes that the arrival of these unobserved signals follows a Poisson process and the utility derived from choosing a given party depends on the maximum value of this signal for that party. This implies that individuals have imperfect recall, in the sense that they only remember the most outstanding of these signals and not all of them.

The assumption that unobserved signals arrive as a Poisson process implies that the random utility process is Markov. In other words, the Markov property is a consequence of the assumed

---

<sup>9</sup> An alternative approach is to pool the observations. That is, one can take support for party X in all periods and take support for party X lagged one period in all periods. These vectors have length  $N \times (T-1)$ , where  $T$  is the number of periods and  $N$  the number of respondents. This also generates a 2x2 table, which one can use to compute the correlation. The observed correlations with this approach are nearly identical to those obtained by averaging across years (as in Table 1).

serial correlation among the unobservables. This temporal correlation in the utilities is referred to as “habit persistence” and represents the influence of prior propensities to choose a given party on the current choice probabilities. The choice process is also Markov if the distribution of the random utilities belongs to the multivariate extreme-value family.<sup>10</sup>

Assuming that the utility across choices is stationary and time-homogeneous yields choice probabilities of the widely known logit form. In particular, the probability that individual  $i$  chooses party  $j$  at time  $t$  among  $J$  possible parties, is given by

$$P_t^i(Y_t = j) = \frac{e^{x_{ij}' \beta_j}}{\sum_{k=0}^J e^{x_{ik}' \beta_k}}$$

and the transition probability of choosing party  $j$  in period  $t$  given that party  $r$  was chosen in period  $t-s$  (assuming  $0 < s < t$ ) is given by

$$P_{st}^i(Y_t = j | Y_s = r) = (1 - \rho_{t-s}) \frac{e^{x_{ij}' \beta_j}}{\sum_{k=0}^J e^{x_{ik}' \beta_k}} + \rho_{t-s} \cdot I(j = r)$$

where  $I(\cdot)$  is the indicator function.

Under these assumptions, the parameter  $\rho_{t-s}$  is the serial correlation mentioned above between the chosen alternative in period  $t$  and the chosen alternative in period  $s$ . Note that if  $\rho_{t-s} = 0$ , the

transition probability  $P_{st}^i(Y_t = j | Y_s = r)$  is equal to the marginal

probability  $P_t^i(Y_t = j)$ , indicating that the choice probabilities in period  $s$  have no effect on the choice probabilities at  $t$ . On the other hand, if  $\rho_{t-s} = 1$ , the transition probability

$P_{st}^i(Y_t = j | Y_s = r) = 1$  for all  $r$  different from  $j$ , whereas  $P_{st}^i(Y_t = j | Y_s = r) = 0$ , indicating that individual  $i$  is completely loyal to party  $j$ .

---

<sup>10</sup> The family of extreme-value distributions includes the Gumbel, Fréchet and Weibull distributions, also known as type I, II and III extreme value distributions, respectively. The distributions in this family can be obtained as limiting distributions of the maximum value of a sequence of independent, identically distributed random variables. In the standard random utility model, if (and only if) disturbances follow a type I extreme-value distribution, then the choice probabilities have the logit form (see Mc Fadden (1974)).

As described so far, this model makes strong assumptions about the underlying choice and utility processes, but it also has several desirable properties. Its approach is explicitly dynamic, taking as the unit of observation the individual-time pair, and presenting a framework that is appropriate to study the evolution of individual behavior over time. Crucially, the model allows for an individual's choices over time to be serially correlated and thus gives a framework in which stability of choices over time can be assessed. As mentioned above, if this serial correlation is zero, the propensities to choose between the alternatives in previous periods have no effect on the selection probabilities in the current period, a situation that we would interpret as extreme partisan instability.

Roy, Chintagunta and Haldar (1996) show that the model can be extended in at least two ways. First, in addition to the “habit persistence” parameterized by  $\rho$ , one can allow for “state dependence” by including the lagged choice as a covariate in the systematic part of the utility. This lets the previous *realized* choice (as opposed to the previous choice *probabilities*) influence the current choice, modeling the influence of past experience on current choice. Another extension involves accounting for unobserved heterogeneity, which can be implemented by allowing the parameters to be drawn from some (discrete or continuous) probability distribution.

In our results section, we present estimation results from the basic model and the extension that allows for state dependence. Future versions will consider unobserved heterogeneity by means of assuming random parameters.

## Results

We estimate the model described above for West Germans. Our West German sample includes German citizens who reside in West Germany at the beginning of the sample, are eighteen years of age or older, and are successfully interviewed for every year between 1984 and 2007. In total, we have 1,983 individuals for 24 years, yielding a sample of 47,592 individual-year pairs. The model is estimated for different sets of covariates. Model 1 includes age, gender, years of education, household income per capita, and indicators for union membership, Catholicism, and unemployment status. Model 2 includes all covariates in Model 1 and adds the party supported in the previous period to account for possible “state dependence” effects.

Once the model is estimated, we use the estimated beta and rho coefficients to construct the predicted transition matrices. The rows of these matrices represent the party chosen in period  $s$ , and the columns represent the party chosen in period  $t > s$  so that, for example, element (2,3) in any given transition matrix is the probability of choosing party CDU/CSU in period  $t$ , given that in a previous period  $s$  the party chosen was SPD. Predicted probabilities are calculated at the value of the covariates for every observation, and then averaging across observations.<sup>11</sup>

Tables 2 and 3 report the transition matrices for Model 1 and Model 2, respectively, when the model is estimated only once. In other words, we estimate the model once and obtain estimates for the beta coefficients and the autocorrelation between period  $t$  and period  $t-1$ . This yields the first

---

<sup>11</sup> The results remain unchanged if predicted probabilities are calculated at the mean of all continuous variables (age, education years, household income) and the mode of all discrete variables (gender, union membership indicator, catholic indicator, unemployed indicator).

transition matrix in each table. To obtain transition matrices for longer lag lengths, we update the autocorrelation according to the model assumption  $\rho_{t-s} = e^{-\gamma(t-s)}$  which implies  $\gamma = -\ln \rho_1$ .

Once we obtain a rho for every desired lag length, we construct transition matrices calculated at the value of the covariates at  $t$  for each individual and then averaging across individuals. Given that, for example, there are 20 possible transition matrices between a party chosen in a given period ( $t$ ) and party chosen three periods before ( $t-3$ ), we average all matrices in every case.

The results in Table 2 show that the probability of choosing a given party in period  $t$  given that the same party was chosen a period before is fairly high, between 0.7 and 0.8 with the highest probability corresponding to the No Party alternative. An SPD identifier in wave  $t-1$  has a .75 probability of identifying with the party one year later, a .07 probability of switching to the CDU/CSU, and a .15 probability of switching to non-identification with any party. The serial correlation between  $t$  and  $t-1$  is estimated to be 0.668. As lag length increases, rho decreases rapidly and so do the transition probabilities. For example, when the lag length is five, rho is 0.133 and the probability of choosing a given party at  $t$  and given that same party was chosen in  $t-5$  is below 0.5 for all alternatives except No Party. Note that given the autocorrelation for larger lags implied by the model, rho becomes close to 0 when the lag length is 10. In fact, for a lag length of 20 (not reported) rho is virtually zero and the transition probabilities are just equal to the marginal choice probabilities. It is important to emphasize that the rate at which rho declines over time is a direct function of the model; for any value  $p$  of rho, the value of rho after 2 periods is  $p^2$  and after 10 periods is  $p^{10}$ . Thus, even if rho is estimated to be quite high it becomes small after many periods (e.g., after twenty years, a one-year rho of .9 generates a serial correlation of  $.9^{20}=.12$ , and thus a very high rate of party switching).

The results presented in Table 3 for Model 2 are generally similar to those in Table 2. When previous party is included, autocorrelation is slightly higher at 0.701 and transition probabilities slightly lower, but the main results remain unchanged.

To check whether the rate at which the serial correlation implied by the model decreases is consistent with the data, we replicated the transition matrices in Tables 2 and 3, but this time reestimating the model for every lag length. This produces a different estimated rho and different estimated beta coefficients for every lag length, and we use these to construct the transition matrices. The results for Model 1 and Model 2 are reported in Tables 4 and 5, respectively. Table 4 shows that when Model 1 is reestimated for every lag, the rate at which the serial correlation decreases is much lower than that implied by the original model. In Table 2, rho starts at 0.668 and drops to 0.018 by lag length 10,<sup>12</sup> whereas in Table 4 rho is still quite high at 0.505 after ten lags. This translates into much lower rates of party switching. For example, the probability of identifying with the SPD in period  $t$  given identification with the SPD ten years before is 0.61, remarkably higher than the 0.25 shown in Table 2.

The results remain generally similar when Model 2 is considered, although with this model rho appears to decrease more rapidly. Thus, when previous party is included as a covariate, the

---

<sup>12</sup> Again, this is a simple function of the formula for rho over longer time periods that is implied by the model – so that after ten periods,  $.668^{10}=.018$ .

probability of identifying with the SPD in period given identification with the party ten years earlier is a still-respectable .53.

Taken together, these results provide a mixed picture regarding the extent of partisan stability. While the results presented in Tables 2 and 3 suggest that partisanship in West Germany changes dramatically over time – and has little staying power over the course of even five years – these findings are dependent on the assumption that the serial correlation is subject to exponential decay. When the serial correlation is instead estimated independently for longer time spans, the results suggest that that partisanship in West Germany changes over time, but at a less dramatic pace and does have at least some significant staying power. These latter results are more consistent with the raw serial correlations displayed in Table 1. While the rho estimates in Tables 4 and 5 are still somewhat lower than the raw correlations in Table 1 – suggesting perhaps that the inclusion of the covariates explains a portion of the persistence in partisanship – the two sets of results tell a substantively similar story.

## Discussion

This preliminary analysis of partisanship using the GSOEP survey provides hints of the extraordinary promise of this data, while also suggesting some of the difficult modeling decisions that confront efforts to leverage the information in the twenty-four years of panel data. While we believe that the dynamic discrete choice model employed here holds some promise, it is clearly not the last word when it comes to examining panel data on partisan stability. In particular, the results presented suggest that one needs to relax the assumption that all of the systematic information useful for predicting current partisanship is captured by partisanship at  $t-1$  and the covariates included in the model. This assumption, in combination with the other assumptions of the model, implies that serial correlation is subject to exponential decay. However, we observe that serial correlation decreases more slowly than one would expect if these assumptions were true. We infer from this that an observed change at time  $t$  is not necessarily indicative of a “genuine” change in an individual’s underlying partisan attachments (or non-attachment, in the case of non-identifiers). Instead, it reflects a combination of measurement error, temporary deviation from an underlying equilibrium, and genuine, long-term change. An important next step for the analysis will thus be to consider a modeling strategy suited to disentangling temporary change (i.e. change due to either measurement error or short-term deviations from an underlying equilibrium) from permanent change. We suspect that one way to do this will be to apply time series methods; in effect, one has nearly 2000 individual time series for the West Germans, each with 24 annual observations. One can examine which covariates lead the observed series to be more or less stable. Time series analysis may also help disentangle temporary deviations from more meaningful changes in underlying partisanship. Another step will be to consider mixed dynamic discrete models in which parameters are allowed to vary by types of individuals. This may be a promising strategy when it comes to identifying heterogeneity in the population and addressing whether some individuals are more stable partisans than others, since a mixed setting can flexibly identify the number of types from the data.

An additional step will be to incorporate the East German data. Table 6 presents the autocorrelations for identification with the CDU and SPD in both East and West Germany for the

1992-2007 period. As in Table 1, we use the phi coefficient as a measure of the association between partisanship at time  $t$  and different lags of partisanship. Consistent with earlier work, partisanship does appear to be less stable in the newly democratic East than in West Germany. It is worth noting that the correlation is not only lower over a single year lag (e.g. for CDU, the one-year correlation is .67, as compared to .76 in the West), but also falls off more rapidly in the East. After ten years, the correlation for CDU partisanship in the East is a mere .47, as compared to .67 in West Germany. The data also suggest that partisanship in the West is as stable in the 1992-2007 period as it was over the course of the full 1984-2007 period. This provides tentative (albeit partly indirect) evidence that reunification may not have led to greater partisan instability in the West. We will attempt a more direct test of this conjecture in the next version of this paper.

**Table 1: Phi coefficients of correlation for support of SPD and CDU**

Lag (# of years)	Support for SPD	Support for CDU
1	0.73	0.75
2	0.71	0.72
3	0.69	0.71
4	0.68	0.70
5	0.66	0.68
6	0.64	0.67
7	0.63	0.66
8	0.62	0.64
9	0.61	0.64
10	0.59	0.63
11	0.59	0.62
12	0.58	0.61
13	0.57	0.60
14	0.56	0.60
15	0.55	0.60
16	0.53	0.59
17	0.52	0.58
18	0.50	0.58
19	0.50	0.57
20	0.49	0.55

**Table 2: Transition matrices for model 1 with autocorrelation implied by model**

		t				Rho
		No Party	SPD	CDU/CSU	Other	
t-1	No Party	0.82	0.08	0.07	0.03	0.668
	SPD	0.15	0.75	0.07	0.03	
	CDU/CSU	0.15	0.08	0.74	0.03	
	Other	0.15	0.08	0.07	0.70	
t-2	No Party	0.70	0.13	0.12	0.05	0.446
	SPD	0.26	0.58	0.12	0.05	
	CDU/CSU	0.26	0.13	0.56	0.05	
	Other	0.26	0.13	0.12	0.49	
t-3	No Party	0.62	0.17	0.15	0.06	0.297
	SPD	0.33	0.46	0.15	0.06	
	CDU/CSU	0.33	0.17	0.45	0.06	
	Other	0.33	0.17	0.15	0.36	
t-4	No Party	0.57	0.19	0.17	0.07	0.199
	SPD	0.37	0.39	0.17	0.07	
	CDU/CSU	0.37	0.19	0.37	0.07	
	Other	0.37	0.19	0.17	0.27	
t-5	No Party	0.53	0.21	0.19	0.07	0.133
	SPD	0.40	0.34	0.19	0.07	
	CDU/CSU	0.40	0.21	0.32	0.07	
	Other	0.40	0.21	0.19	0.21	
t-6	No Party	0.51	0.22	0.20	0.08	0.088
	SPD	0.42	0.30	0.20	0.08	
	CDU/CSU	0.42	0.22	0.29	0.08	
	Other	0.42	0.22	0.20	0.17	
t-7	No Party	0.49	0.22	0.21	0.08	0.059
	SPD	0.43	0.28	0.21	0.08	
	CDU/CSU	0.43	0.22	0.27	0.08	
	Other	0.43	0.22	0.21	0.14	
t-8	No Party	0.48	0.23	0.21	0.08	0.039
	SPD	0.44	0.27	0.21	0.08	
	CDU/CSU	0.44	0.23	0.25	0.08	
	Other	0.44	0.23	0.21	0.12	
t-9	No Party	0.47	0.23	0.22	0.08	0.026
	SPD	0.44	0.25	0.22	0.08	
	CDU/CSU	0.44	0.23	0.25	0.08	
	Other	0.44	0.23	0.22	0.11	
t-10	No Party	0.46	0.23	0.22	0.08	0.018
	SPD	0.45	0.25	0.22	0.08	
	CDU/CSU	0.45	0.23	0.24	0.08	
	Other	0.45	0.23	0.22	0.10	

Note: Model 1 estimated including the following covariates: intercept, age, gender, education years, household income per capita, union membership indicator, catholic indicator and unemployment indicator. Probabilities calculated at value of covariates for every individual and then averaged. Rho estimated for first lag and updated according to model.

**Table 3: Transition matrices for model 2 with autocorrelation implied by model**

		t				Rho
		No Party	SPD	CDU/CSU	Other	
t-1	No Party	0.84	0.08	0.06	0.03	0.701
	SPD	0.14	0.78	0.06	0.03	
	CDU/CSU	0.14	0.08	0.76	0.03	
	Other	0.14	0.08	0.06	0.73	
t-2	No Party	0.72	0.13	0.10	0.04	0.491
	SPD	0.23	0.62	0.10	0.04	
	CDU/CSU	0.23	0.13	0.60	0.04	
	Other	0.23	0.13	0.10	0.54	
t-3	No Party	0.64	0.17	0.14	0.06	0.344
	SPD	0.30	0.51	0.14	0.06	
	CDU/CSU	0.30	0.17	0.48	0.06	
	Other	0.30	0.17	0.14	0.40	
t-4	No Party	0.58	0.19	0.16	0.07	0.241
	SPD	0.34	0.43	0.16	0.07	
	CDU/CSU	0.34	0.19	0.40	0.07	
	Other	0.34	0.19	0.16	0.31	
t-5	No Party	0.54	0.21	0.18	0.07	0.169
	SPD	0.37	0.38	0.18	0.07	
	CDU/CSU	0.37	0.21	0.35	0.07	
	Other	0.37	0.21	0.18	0.24	
t-6	No Party	0.51	0.22	0.19	0.08	0.118
	SPD	0.39	0.34	0.19	0.08	
	CDU/CSU	0.39	0.22	0.31	0.08	
	Other	0.39	0.22	0.19	0.20	
t-7	No Party	0.49	0.23	0.20	0.08	0.083
	SPD	0.41	0.31	0.20	0.08	
	CDU/CSU	0.41	0.23	0.28	0.08	
	Other	0.41	0.23	0.20	0.16	
t-8	No Party	0.47	0.24	0.21	0.08	0.058
	SPD	0.41	0.30	0.21	0.08	
	CDU/CSU	0.41	0.24	0.26	0.08	
	Other	0.41	0.24	0.21	0.14	
t-9	No Party	0.46	0.24	0.21	0.09	0.041
	SPD	0.42	0.28	0.21	0.09	
	CDU/CSU	0.42	0.24	0.25	0.09	
	Other	0.42	0.24	0.21	0.13	
t-10	No Party	0.45	0.25	0.22	0.09	0.028
	SPD	0.42	0.27	0.22	0.09	
	CDU/CSU	0.42	0.25	0.24	0.09	
	Other	0.42	0.25	0.22	0.11	

Note: Model 2 estimated including the following covariates: intercept, age, gender, education years, household income per capita, union membership indicator, catholic indicator, unemployment indicator and party supported in previous period. Probabilities calculated at value of covariates for every individual and then averaged. Rho estimated for first lag and updated according to model.

**Table 4: Transition matrices for model 1 with model reestimated for every lag**

		t				Rho
		No Party	SPD	CDU/CSU	Other	
t-1	No Party	0.82	0.08	0.07	0.03	0.668
	SPD	0.15	0.75	0.07	0.03	
	CDU/CSU	0.15	0.08	0.74	0.03	
	Other	0.15	0.08	0.07	0.70	
t-2	No Party	0.81	0.09	0.08	0.03	0.636
	SPD	0.17	0.72	0.08	0.03	
	CDU/CSU	0.17	0.09	0.71	0.03	
	Other	0.17	0.09	0.08	0.67	
t-3	No Party	0.80	0.09	0.08	0.03	0.614
	SPD	0.18	0.70	0.08	0.03	
	CDU/CSU	0.18	0.09	0.69	0.03	
	Other	0.18	0.09	0.08	0.65	
t-4	No Party	0.79	0.09	0.08	0.03	0.599
	SPD	0.19	0.69	0.08	0.03	
	CDU/CSU	0.19	0.09	0.68	0.03	
	Other	0.19	0.09	0.08	0.63	
t-5	No Party	0.78	0.09	0.09	0.04	0.576
	SPD	0.21	0.67	0.09	0.04	
	CDU/CSU	0.21	0.09	0.66	0.04	
	Other	0.21	0.09	0.09	0.61	
t-6	No Party	0.78	0.10	0.09	0.04	0.560
	SPD	0.22	0.66	0.09	0.04	
	CDU/CSU	0.22	0.10	0.65	0.04	
	Other	0.22	0.10	0.09	0.60	
t-7	No Party	0.77	0.10	0.09	0.04	0.544
	SPD	0.23	0.64	0.09	0.04	
	CDU/CSU	0.23	0.10	0.64	0.04	
	Other	0.23	0.10	0.09	0.58	
t-8	No Party	0.77	0.10	0.09	0.04	0.529
	SPD	0.24	0.63	0.09	0.04	
	CDU/CSU	0.24	0.10	0.62	0.04	
	Other	0.24	0.10	0.09	0.57	
t-9	No Party	0.76	0.10	0.10	0.04	0.519
	SPD	0.24	0.62	0.10	0.04	
	CDU/CSU	0.24	0.10	0.62	0.04	
	Other	0.24	0.10	0.10	0.56	
t-10	No Party	0.75	0.11	0.10	0.04	0.505
	SPD	0.25	0.61	0.10	0.04	
	CDU/CSU	0.25	0.11	0.61	0.04	
	Other	0.25	0.11	0.10	0.55	

Note: Model 1 estimated as in Table 2. Probabilities calculated at value of covariates for every individual and then averaged. Rho and coefficients estimated separately for each lag.

**Table 5: Transition matrices for model 2 with model reestimated for every lag**

		t				Rho
		No Party	SPD	CDU/CSU	Other	
t-1	No Party	0.84	0.08	0.06	0.03	0.700
	SPD	0.14	0.78	0.06	0.03	
	CDU/CSU	0.14	0.08	0.76	0.03	
	Other	0.14	0.08	0.06	0.73	
t-2	No Party	0.77	0.09	0.10	0.04	0.579
	SPD	0.19	0.67	0.10	0.04	
	CDU/CSU	0.19	0.09	0.68	0.04	
	Other	0.19	0.09	0.10	0.62	
t-3	No Party	0.75	0.10	0.10	0.04	0.548
	SPD	0.21	0.65	0.10	0.04	
	CDU/CSU	0.21	0.10	0.65	0.04	
	Other	0.21	0.10	0.10	0.59	
t-4	No Party	0.75	0.11	0.11	0.04	0.526
	SPD	0.22	0.63	0.11	0.04	
	CDU/CSU	0.22	0.11	0.63	0.04	
	Other	0.22	0.11	0.11	0.57	
t-5	No Party	0.73	0.11	0.11	0.04	0.497
	SPD	0.23	0.61	0.11	0.04	
	CDU/CSU	0.23	0.11	0.61	0.04	
	Other	0.23	0.11	0.11	0.54	
t-6	No Party	0.72	0.12	0.12	0.04	0.474
	SPD	0.25	0.59	0.12	0.04	
	CDU/CSU	0.25	0.12	0.60	0.04	
	Other	0.25	0.12	0.12	0.52	
t-7	No Party	0.71	0.12	0.13	0.05	0.453
	SPD	0.26	0.57	0.13	0.05	
	CDU/CSU	0.26	0.12	0.58	0.05	
	Other	0.26	0.12	0.13	0.50	
t-8	No Party	0.70	0.12	0.13	0.05	0.435
	SPD	0.27	0.56	0.13	0.05	
	CDU/CSU	0.27	0.12	0.56	0.05	
	Other	0.27	0.12	0.13	0.48	
t-9	No Party	0.70	0.12	0.13	0.05	0.421
	SPD	0.27	0.55	0.13	0.05	
	CDU/CSU	0.27	0.12	0.55	0.05	
	Other	0.27	0.12	0.13	0.47	
t-10	No Party	0.68	0.13	0.14	0.05	0.400
	SPD	0.28	0.53	0.14	0.05	
	CDU/CSU	0.28	0.13	0.54	0.05	
	Other	0.28	0.13	0.14	0.45	

Note: Model 2 estimated as in Table 3. Probabilities calculated at value of covariates for every individual and then averaged. Rho and coefficients estimated separately for each lag.

**Table 6: Phi coefficients of correlation for support of SPD and CDU**

Lag (#of years)	Support for SPD		Support for CDU	
	East Germany	West Germany	East Germany	West Germany
1	0.62	0.74	0.67	0.76
2	0.59	0.72	0.64	0.74
3	0.56	0.70	0.62	0.73
4	0.53	0.69	0.59	0.72
5	0.49	0.67	0.57	0.71
6	0.48	0.65	0.55	0.70
7	0.45	0.65	0.53	0.69
8	0.44	0.63	0.52	0.67
9	0.43	0.61	0.50	0.67
10	0.44	0.59	0.47	0.67
11	0.42	0.58	0.46	0.65
12	0.44	0.57	0.43	0.64
13	0.40	0.57	0.41	0.62
14	0.39	0.55	0.40	0.62
15	0.40	0.56	0.37	0.61

Note: East German and West German samples for period 1992 through 2007.

## References

- Arzheimer, Kai. 2006. "Dead men walking? Party Identification in Germany, 1977-2002." *Electoral Studies* 25:791-807.
- Bartle, John and Paolo Bellucci, eds. 2008. *Political Parties and Partisanship*. New York: Routledge Press.
- Converse, Philip, and Roy Pierce. 1985. "Measuring Partisanship," *Political Methodology*, 11:143-56.
- Dalton, Russell J. 2000. "The Decline of Party Identification," in *Parties without Partisans*, Russell J. Dalton and Martin P. Wattenberg, eds., New York: Oxford University Press.
- Dalton, Russell J. and Wilhelm Burklin. 2003. "Wahler als Wandervogel: Dealignment and the German Voter". *German Politics and Society* 21:57-75.
- Green, Donald, Bradley Palmquist, and Eric Schickler. 2002. *Partisan Hearts and Minds: Political Parties and the Social Identities of Voters*. Yale University Press.
- Gluchowski Peter and Ulrich von Wilamowitz-Moellendorff. 1998. "The Erosion of Social Cleavages in Western Germany, 1971-97," in *Stability and Change in German Elections : How Electorates Merge, Converge, or Collide*, Christopher J. Anderson and Carsten Zelle, eds., London: Praeger.
- Johnston, Richard. 1992. "Party Identification Measures in the Anglo-American Democracies: A National Survey Experiment." *American Journal of Political Science* 36:542-59.
- Kroh, Martin and Peter Selb. 2008. "The Origins of Durable Partisanship." In Bartle, John and Paolo Bellucci, eds. 2008. *Political Parties and Partisanship*. New York: Routledge Press.
- Mc Fadden, Daniel. 1974. "Conditional Logit Analysis of Qualitative Choice Behavior", in *Frontiers in Econometrics*, Paul Zarembka, ed., New York: Academic Press.
- Norpoth, Helmut. 1978. "Party Identification in West Germany: Tracing an Elusive Concept." *Comparative Political Studies* 11:36-59.
- Resnick, Sidney and Rishin Roy. 1990. "Multivariate Extremal Processes, Leader Processes and Dynamic Choice Models." *Advances in Applied Probability* 22:309-331.
- Roy, Rishin, Pradeep K. Chintagunta and Sudeep Haldar. 1996. "A Framework for Investigating Habits, "The Hand of the Past," and Heterogeneity in Dynamic Brand Choice." *Marketing Science* 15:280-299.
- Schickler, Eric, and Donald Green. 1997. "The Stability of Party Identification in Western Democracies: Results from Eight Panel Surveys." *Comparative Political Studies* 30: 450-83.

Schmitt-Beck, Rudiger, Stefan Weick and Bernhard Christoph. 2006. "Shaky attachments: Individual-level Stability and Change of Partisanship among West German Voters, 1984-2001." *European Journal of Political Research*, 45: 581-608.

Zelle, Carsten. 1998. "A Third Face of Dealignment? An Update on Party Identification in Germany, 1971-94," in *Stability and Change in German Elections : How Electorates Merge, Converge, or Collide*, Christopher J. Anderson and Carsten Zelle, eds., London: Praeger.

Zuckerman, Alan S., Josip Dasovic and Jennifer Fitzgerald. 2007. *Partisan Families. The Social Logic of Bounded Partisanship in Germany and Britain*. Cambridge: Cambridge University Press.

Zuckerman, Alan S. and Martin Kroh. 2006. "The Social Logic of Bounded Partisanship in Germany: A Comparison of West Germans, East Germans and Immigrants." *Comparative European Politics*, 4: 65-93.