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Growth trajectories in the strength of party identification: The legacy of autocratic regimes

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Growth Trajectories in the Strength of Party Identification: The Legacy of Autocratic Regimes

(word count 7,000)

Abstract

While some scholars interpret the frequently documented association between age and the strength of party identification as evidence of accumulated political learning, others stress the importance of critical life stages. Germany's turbulent last century, with its suspensions of democratic processes, provides the unique opportunity to empirically disentangle both effects and to also study the consequences of early experiences of autocratic regimes on later growth rates in partisan strength. Random growth curve models based on multi-cohort panel data emanating from the German Socio-Economic Panel show that the growth trajectory in the strength of party identification largely depends on the number of electoral experiences. Moreover, the analysis documents few differences in growth rates between individuals socialized in democratic versus autocratic regimes.

Keywords

growth curve models, strength of party identification, life-cycle, Germany, political socialization, democratization

Highlights

- Random growth curve models allow us to disentangle different sources of age effects.
- Political learning largely generates growth in partisan strength.
- Socialization in autocratic societies does not impede growth in the strength of party identification.

1 Introduction

Since the work of Almond and Verba (1963), scholars have recognized the importance of civic culture for the success of (emerging) democracies. Democratic rule is defined by the existence not only of certain institutional structures in a society, but also of a participatory political culture. Particularly after waves of democratic transformations, such as the collapse of the communist bloc in the early 1990s and the (still ongoing) Arab spring, public and scientific debates center around the question whether political attitudes in formerly autocratic societies will soon reflect the newly established democratic institutions or whether non-democratic attitudes will continue to prevail in society. One important benchmark for such changes in political attitudes is identification with democratic parties (Campbell et al., 1960; Shively, 1972). The more loyal citizens are to the newly established democratic parties, the lower the impact of exogenous shocks such as economic crises on public support for the democratic system in general.

In his seminal article “Of Time and Partisan Stability,” Converse (1969) elaborates the idea that party identification intensifies in strength over the life course, such that every experience of a democratic election reinforces people’s existing partisan identity. As a consequence of this individual-level process of cumulative political learning, new democracies increase in stability at an aggregate level with every democratic election. Abramson (1979) and others have questioned this conclusion on empirical grounds, arguing on the basis of more advanced age-period-cohort models and repeated cross-sectional data that much of the reported age effect in the strength of party identification

is in fact due to generational differences. Yet other scholars interpret the age gradient in the strength of party identification as reflecting sociological life-cycle differences rather than electoral experiences (Nie et al., 1974; Niemi et al., 1985).

Debates about the age gradient in the strength of party identification are uniquely suited to illustrate the added value of panel data and random growth curve models in the context of APC analysis. First, panel data permit the researcher to relax the simplifying assumption of homogeneous age effects that come with repeated cross-sectional data. Instead, panel data allow the researcher to estimate heterogeneous growth trajectories in an outcome of interest, for instance, across cohorts but also individuals (Yang, 2007). This article draws on this advantage when studying the effects of different early experiences of democratic and autocratic rule for the growth rate in the strength of party identification. Also, the article considers the age at first contact with a new democratic society as a source of individual differences in growth trajectories of partisan strength. This allows the study to shed light on the question of whether citizens in emerging democracies who were socialized under autocratic rule are able to develop meaningful party identification in the new system, or whether stable political loyalties only emerge in newly established democracies after a gap of one generation (Dalton, 1994).

A second advantage of random growth curve models and multi-cohort panel data compared to APC models based on repeated cross-sectional data lies in the possibility to simultaneously specify multiple temporal processes constituting an age effect. The article illustrates this advantage by studying the extent to which the growth trajectory in the strength of party identifi-

cation evolves from repeated electoral experiences as suggested by Converse (1969) or by sociological life-cycle differences as suggested by many other scholars (Nie et al., 1974; Niemi et al., 1985).

2 Data

The Socio-Economic Panel (SOEP) is a longitudinal household survey established in West Germany in 1984. Since the beginning of the study, the SOEP has included a special sample of immigrants to Germany. A sample of East Germans was added in mid-1990 before reunification, when the GDR was still in existence. The ongoing annual survey is extended regularly with refreshment samples, and currently consists of a representative national sample of 24,000 individuals in 12,000 households (Kroh, 2011). The sample analyzed here covers birth cohorts from 1882 to 1992. The earliest 10 percent were born pre-1929 and the latest 10 percent were born post-1980.¹ The median birth cohort is 1957. Age varies between 16 and 102 with a median age of 44.

Strength of party identification –the outcome of interest– has been measured in the SOEP since 1984 on an annual basis using the standard measurement from German political science (Falter et al., 2000). This instrument draws on three consecutive questions: “Many people in Germany lean towards one party in the long term, even if they occasionally vote for another

¹As noted below, the number of respondents in the present analysis is larger than the current sample because of refreshments for people who have died, moved out of the country, or stopped their participation in the panel.

party. Do you lean towards a particular party?” If respondents answer affirmatively, they are asked “Which party do you lean toward?” and then “And to what extent?”.² The 4-point scale of partisan strength (ranging from 0 to 3) used in this paper differentiates among respondents who report no party identification, those who lean “very weakly/weakly”, “somewhat“, and “rather/very strongly” towards one party.³

The mean number of measures of partisan strength among SOEP respondents is 8, with a maximum of 27. Since many of the respondents come from recent refreshment samples, this figure underestimates the durability of respondents’ participation in the SOEP. If one only considers respondents who entered the SOEP before 1992, the mean number of measures of party identification increases to 13. Considering the entire history of interviews with each individual, 32 percent of the roughly 45,000 respondents analyzed here never report a party identification, 40 percent report a (very) strong leaning at least once in the period under investigation, with the other 28 percent reporting at maximum a weak respectively moderate party identification.

To measure different early experiences of SOEP respondents, the analysis draws on contextual data collected by the political project “Political Regime Characteristics and Transitions, 1800-2010” directed by Monty G. Marshall. These aggregate data are merged with the SOEP survey data at the level of

²Although the prevalence and the meaning of a strong party identification may in principle vary across parties, due to the lack of specific hypotheses, the analysis treats a strong party identification for the Christian Democrats, for instance, in the same way as a strong party identification for the Social Democrats.

³To improve balance in the scale, the analysis lumps together sparsely populated answer categories such as weak and very weak leanings.

countries and years. More specifically, SOEP respondents receive the annual polity score of their country of residence when they were 17 years old. This is the (East/West) German annual polity score in native Germans, but in persons immigrating to Germany as adults, this is usually the annual polity score of their country of origin.⁴ Table 1 reports the mean polity score in ten-year groups of birth cohorts who resided in East Germany in 1989, in West Germany in 1989, and immigrants to Germany. The reported polity score varies between autocracy (−10) and democracy (+10).

Table 1 about here

The cohorts born before 1910 in Germany were raised in Imperial Germany and the Weimar Republic, two polities coded as semi-democratic. West Germans in these cohorts are on average slightly older than the East Germans and therefore experienced more of the less democratic Imperial Germany than they did of the more democratic Weimar Republic, which explains the small difference between the East and West German samples. Cohorts born between 1910 and 1919 were socialized in the late Weimar Republic and early Nazi Germany and thus have, on average, a polity score of zero. Cohorts born between 1920 and 1929 were fully socialized in Nazi Germany and the early non-democratic post-war years (polity score −9). While all cohorts after 1930 in West Germany were socialized in a democratic society (FRG polity

⁴If, for instance, a respondent grows up in Poland and immigrates to Germany at age 25, then this person receives the polity-score of Poland in the year when the respondent is 17 years of age. For details of the coding of immigrant countries and the year in which they moved to (West) Germany, see also Section 3.1.

score +10), East German birth cohorts up to the mid-1970s were socialized in an autocratic regime (GDR polity score -9).

The mean polity score in immigrants hovers around zero, indicating that some immigrants were raised in autocratic, some in democratic societies. Some of the most frequent countries of origin of so-called labor migrants to Germany (Turkey, Spain, Portugal, Greece) experienced several transformations between military dictatorship and democratic rule in the period analyzed.⁵ That is, even immigrants from the same country of origin may have had very different socialization experiences. Altogether, 70 percent of the analyzed sample was raised in a clearly democratic system (polity score ≥ 7), 22 percent in clearly autocratic society (polity score ≤ -7), and 8 percent in intermediate, hybrid polities.

3 Previous Research

In the “American Voter”, Campbell et al. (1960) report a growing partisan intensity during the individual life-cycle. Converse (1969) elaborates on this idea and derives aggregate predictions of the stability of partisan strength for individuals in democracies experiencing political transformations based on the individual model of partisan strength (see also, Converse, 1976; Gluchowski, 1983). According to this model, partisan strength grows with every experience of a democratic election (learning process). The marginal ben-

⁵For instance, the largest group in the SOEP, Turkish immigrants, experienced, depending on their year of birth, regimes with 9 different polity scores that range between -7 and $+9$.

efit of any additional experience is said to decline, however, the larger the cumulative experience of individuals (resistance phenomenon). Moreover, individuals start as political novices with a higher initial strength of party identification if they were socialized in a partisan family (transmission process). Finally, suspension of the democratic process reduces the individual partisan intensity again (forgetting process).

Figure 1 about here

Figure 1 based on SOEP data shows a typical association between age and the strength of party identification. This non-linear growth curve is largely in line with the prediction of the “learning process” and the “resistance phenomenon” of partisan strength: While the first electoral experiences strongly intensify party identification, persons aged 30 and older show a declining marginal growth rate.⁶

This figure lends itself, however, not only to life-cycle interpretation, but could also be interpreted as evidence of generational differences in partisan intensity in Germany.⁷ In the 1970s, this debate on age versus cohort effects in partisan strength gained momentum with the debate on partisan dealignment (Dalton et al., 1984), the availability of new data sources, and new developments in the modeling of age, period, and cohort effects (Ryder, 1965; Glenn, 1977).

⁶The drop off in the strength of party identification in persons aged 80 and older is less in line with Converse’s model.

⁷Although Converse (1969) considers aging effects to be predominant, he discusses possible sources of confounding cohort differences in specific groups within society.

According to a popular thesis, educational expansion in the 1960s and 1970s reduced the need for strong party identification in many Western societies. The increased cognitive mobilization in a large segment of new cohorts facilitates issue voting and thus renders the decisional function of party identification as a simple heuristic obsolete (Shively, 1979). Moreover, social change is said to have partly overcome the traditional social cleavages in Europe's "frozen" party systems, thus dissolving the bond between voters and parties that existed in the past (e.g., Evans, 1999). Irrespective of the cause, longitudinal data from many Western societies suggest that partisan strength is declining, contrary to the prediction of the Converse model that partisan strength should remain stable in aging societies or even increase with each new election (Dalton and Wattenberg, 2000). This trend was already documented in the 1960s for young US cohorts. For Germany, the context under investigation, cohorts entering the electorate in the 1970s showed declining levels of partisanship (Baker, 1974; Baker et al., 1981).

In a number of studies, scholars have tried to empirically disentangle the effects of age (life-cycle interpretation) and cohort (generational interpretation) in repeated cross-sectional data of partisan strength. While some scholars find cohort differences to be predominant (Abramson, 1976, 1979), a large body of research takes a mediating position, arguing that both age and cohort effects influence partisan strength (Crittenden, 1962; Cutler, 1969; Converse, 1976; Glenn and Hefner, 1972; Jennings and Markus, 1984; Shively, 1979; Cassel, 1993; Tilley, 2002).

3.1 The Nature of Time

The literature on life-cycle effects in party identification discusses multiple sources for the increase in partisan strength in the lifespan. These processes are all empirically highly correlated with calendar age but conceptually distinct. As described before, Converse (1969) speaks of electoral experience as the primary factor leading to age differences in partisan strength. This hypothesis builds on the notion of the so-called decisional function of party identification, put forward by Shively (1979). According to this view, persons who lack information on the range of political choices offered by the parties in a specific election develop a party identification as a simple heuristic for choosing between the various parties and candidates. The repeated experience of being confronted with electoral choices reinforces existing loyalties in citizens, which results in a growing strength of party identification.

Scholars of migration research provide a second account of age differences in the strength of party identifications. Particularly studies on the development of party identification in immigrants highlight the importance of the length of exposure to a new political system (Black et al., 1987; Cain et al., 1991; Cho, 1999; Jones-Correa, 1998; Ramakrishnan and Espenshade, 2001; Wong, 2000). The idea behind the mobilizing effects of passive political exposure is that the dissemination of information through interpersonal communication and public news increases people's contextual knowledge of political processes and actors. Based on this procedural knowledge, persons are better able to develop a strong party identification.

Finally, according to the sociological perspective of life-cycle effects in

partisan strength, critical life stages correlated with age affect individuals' resources for political engagement and their perceptions of the importance of politics. During the turbulent years of young adulthood, people are too occupied with their first jobs, their first relationships, and with getting their bearings in adulthood and life in general to be concerned with politics. Moreover, many young adults may lack a sense of duty to contribute to the common good by participating in politics. Some may become politicized while attending university; others may start to become politically active after settling down and developing specific political interests. The pressure of work and children may reduce their political enthusiasm over the course of time, but they may devote more time to politics again after retirement (Nie et al., 1974; Niemi et al., 1985). This sociological life-cycle perspective, which predicts a non-linear effect of aging, corresponds to a certain extent with the simple growth curve reported in Figure 1.⁸

In sum, the most commonly cited sources of life-cycle effects can be divided into sociological approaches and political science approaches. While studies in sociology highlight critical life-stages, political science approaches stress the importance of political learning for age differences in the strength of party identification. More specifically, the political science view suggests

⁸The cognitive and socio-emotional functioning of individuals is also subject to life-cycle differences, but the psychological literature—to my knowledge—does not provide clear evidence of when in the lifespan the most intense party identifications emerge. While the results of Hess (2001) suggest that the need for structure and thus the tendency to order complex environments based on in and out-groups increases with age, one may also argue that young adults' lack of political information increases their need for party identification as a heuristic in political decision-making.

that partisan strength increases with passive exposure to the political context, on the one hand, and with active electoral experience on the other. All these possible sources of life-cycle effects may operate simultaneously, but are very difficult to empirically disentangle. In many data sources, calendar age is collinear with growing political exposure and the number of elections experienced.

The strategy of identifying separate growth curves for age, exposure, and experience in partisan strength instead of a single growth curve rests on certain institutional changes experienced by SOEP respondents. These are all coded at the level of individual events (e.g., date of birth, date of the interview, date of immigration) and historical events (e.g., democratic elections to the German Reichstag and Bundestag). Age and exposure to politics are measured in days (divided by 365). Electoral experience is measured by the number of parliamentary elections in Germany in which individuals were eligible to vote. The following paragraphs briefly depict the most important institutional changes that generate variation between age, exposure, and experience.

The past century of German history saw two periods of autocracy: The suspension of democratic rule during the Nazi period affected East and West Germans between 1933 and 1945. While West Germans returned to democratic rule in 1949, East Germans additionally experienced socialist dictatorship in the GDR from the end of the Nazi period until 1989. Hence, a centenarian West German in 2000 had 15 years less political exposure to democratic rule than her age would suggest, and a centenarian East German in 2000 had 66 years less democratic exposure. Regional differences in the

length of suspension of democratic rule and individual differences in the age at suspension generate a considerable portion of the variation between calendar age and length of exposure to democratic parties in the data analyzed.

Two electoral reforms generate variation between (passive) exposure to politics and electoral experience, i.e., the possibility to choose between alternative parties in elections. In 1919, female suffrage was introduced, and in 1970, the voting age was reduced from 21 to 18. Some women in SOEP who were born in the 1800s thus have less electoral experience than men of the same cohort. Moreover, West German cohorts prior 1950 have less electoral experience than persons of the same age who were born after 1950.

Besides institutional changes affecting native Germans, immigration to Germany constitutes another source of variation in age, exposure, and experience. A large part of the immigration to Germany in recent decades has come from two groups: former labor migrants from South and Southeast Europe in the 1960s and 1970s, and ethnic Germans from Eastern Europe and the Soviet Union who immigrated in large numbers after the fall of the Communist bloc. Comparing immigrants with natives is interesting insofar as the length of exposure to German democratic parties is shorter in immigrants than in natives of the same age. Moreover, the within-immigrant comparison allows me to further disentangle between exposure and experience, since one observes immigrants with and without German citizenship and thus voting rights.

Naturalization not only depends on individual choice, but also on legal requirements that became less restrictive over time and that also differ between immigrant groups. While many immigrants –dependent upon their year of

arrival— need to provide documentation of a minimum period of residence and level of integration, some immigrant groups are privileged and receive German citizenship basically upon arrival, such as ethnic Germans from Eastern Europe. Since voting rights come at different lengths of residence in Germany, political exposure in immigrants is not the same as electoral experience. In fact, 40 percent of the former labor migrants from south and southeast Europe have non-German citizenship although recruitment of labor migrants stopped thirty years ago. Hence, many so-called labor migrants have more passive exposure to, but less active experience with German politics than some ethnic German immigrants do.

All these differences between East and West Germans and immigrants from different origins are reflected in the data of the Socio-Economic Panel, which oversamples former labor migrants (sub-sample B), East Germans (sub-sample C), and ethnic German immigrants (sub-sample D). The survey provides considerable information on differences in the calendar age, political exposure, and electoral experience of respondents. In fact, the correlation between age and exposure in 1999, the middle of the observation period, was “only” .69, and between exposure and experience “only” .84.

3.2 Experiences of Autocratic Regimes

Time is often considered a primary force in breeding loyalties to democratic parties in transforming societies. While some scholars and political observers emphasize the optimistic view that every year of democratic rule nurtures participatory attitudes in citizens, a more pessimistic view suggests that

generations raised under absolute rule are unable to learn civic virtues. It follows, then, that identification with democratic parties only emerges in democratizing societies after the emergence of a new generation (e.g., Dalton, 1994).

Comparable debates have taken place in migration research: Some scholars doubt that first-generation migrants become fully integrated into the political system of their destination country, while others observe increasing political involvement even in first-generation migrants who immigrate relatively late in life. The analysis here follows this line of research and asks whether growth trajectories in the strength of party identification documented by previous studies and the analysis thus far depend upon experiences in the formative years of early adulthood.

Two factors are frequently cited as reducing the growth rate in partisan strength: first, entry to a new political system relatively late in life, and second, socialization in an autocratic society. These two factors coincide empirically in many democratizing societies. In Eastern Europe, for instance, many citizens had no other experience but the autocratic regimes that have lasted for many decades. But conceptually, late entry to a political system and socialization in an autocratic society are distinct factors.

According to the traditional perspective on party identification, parental transmission is the primary process of the development of attachment to parties (Campbell et al., 1960; Levin, 1961). Scholars from both traditional and revisionist schools of thought argue that intergenerational transmission may increase the stability of party identifications (Achen, 2002). Kroh and Selb (2009) accordingly show, that panel stability in party identification is higher

in individuals who inherited their political views from their parents than in those who developed their party identification independent of parental views (see also, Zuckerman et al., 2007). Since individuals who come into contact with a democratic party system relatively late in life lack the stabilizing factor of intergenerational transmission, one may suspect that these persons develop a strong party identification more slowly (see also, Alwin and Krosnick, 1991; Alwin et al., 1991).

Roughly 73 percent of the analyzed sample grew up in Germany during democratic periods, experienced democratic transformation before the age of 20, or immigrated before the age of 20. Another 17 percent of the respondents in SOEP came into contact with the German democratic system between 20 and 35 years of age, and another 10 percent of the sample was 35 or older when they immigrated or experienced the transformation from an autocratic regime (Nazi Germany or GDR) to democratic rule.

Not only the age of political novices may affect growth trajectories in party identification, but also the type of experiences people have during the formative period of young adulthood. A large body of literature suggests that the experience of an autocratic past in Eastern Europe, for instance, has lasting consequences for party identifications in these societies today (Dalton and Buerklin, 1996; Brader and Tucker, 2001; Miller and Klobucar, 2000; Neundorf, 2010). These studies thus reinforce the idea that early impressions have a lasting effect on political orientations of individuals (Mannheim, 1928; Inglehart, 1971; Broek, 1999; Watts, 1999). It may therefore be easier for individuals with a democratic background to adapt to a new party system than individuals who have no democratic experience whatsoever and not only need

to adjust to a new party system but also to democratic processes in general. To recapitulate, Table 1 suggests considerable variation in the political socialization of SOEP respondents. Although the large majority of 70 percent grew up in clearly democratic systems (polity score ≥ 7) and 8 percent in intermediate polities, still 22 percent experienced clearly autocratic societies during political maturation (polity score ≤ -7).

4 Random Growth Curve Models

Age-Period-Cohort models are an attractive method to disentangle the relative contribution of each of these three factors in observed temporal changes. The studies of this special issue primarily aim at isolating the effect of cohort in different outcome variables measured in repeated cross-sectional data. The present study, in contrast, is primarily interested in age effects and furthermore tries to identify different causes of the age effect in the strength of party identification while controlling for cohort and period differences at the same time. This research design requires panel data, that in principle allow one to estimate age effects in each individual separately. Growth curve models, often applied in biology and psychology, represent the method of choice when studying individual age-trajectories in the strength of party identification (Fabio et al., 2006).

Random growth curve models fall into the class of hierarchical or mixed regression models (e.g., Rabe-Hesketh and Skrondal, 2005). These models estimate a sample mean effect of some regressor (called fixed effects) and the variation in this effect across individuals of the sample (called random

effects). The random growth curve analysis of this article models the strength of party identification of individual i at time point t , pi_{it} , as a function of the fixed effects of age (A), period (P), and cohort (C) and a residual term u_{it} . The growth curve A is specified as a metric variable while P and C are treated as categorical variables summarizing groups of panel waves and birth cohorts.

Besides the mean level of partisan strength in the sample, β_0 , and the mean age gradient, β_1 , the random growth curve model also estimates the individual i 's deviation from the mean level of partisan strength, ζ_{0i} , and the individual deviation of the growth rate from the population mean, i.e. ζ_{1i} .

$$\text{pi}_{it} = (\beta_0 + \zeta_{0i}) + (\beta_1 + \zeta_{1i})A + \beta_2P + \beta_3C + u_{it}$$

Table 2 reports the estimates of the growth curve models of partisan strength. Models 2 and 4 are random growth curve models and as a robustness check, Models 1 and 3 report the equivalent OLS model without random effects. Yang (2007) demonstrates that the additional degrees of freedom in panel data as opposed to repeated cross-sectional data can be used to estimate interactions between cohort and age effects in growth curve models, and the present study additionally shows that it is also possible to identify more than one source of age differences in growth curve models at the same time.

4.1 Sources of Growth Trajectories

The analysis considers $k = 1, 2, 3$ sources of A , i.e. individual growth in the strength of party identification: the number of democratic elections to the German parliament experienced as eligible voter, A_1 , exposure to a democratic German political system in years, A_2 , and calendar age, A_3 .

For each source of the growth trajectory in partisan strength, Models 2 and 4 in Table 2 estimate a random growth curve, $\zeta_{k,1i}$. These random slopes capture individual differences in the relevance of experience, exposure, and age in growth trajectories of partisan strength. To allow for non-linearities in growth rates, all reported models estimate polynomials of degree $l = 2, 3, \dots, 6$ for the $k = 1, 2, 3$ sources of growth in partisan strength. Since higher-order polynomials typically are hard to interpret, Figure 2 plots the estimated growth trajectories and their respective 95 percent confidence bands estimated by model 2.

$$pi_{it} = (\beta_0 + \zeta_{0i}) + \sum_{k=1}^3 (\beta_{k,1} + \zeta_{k,1i}) A_k + \sum_{k=1}^3 \sum_{l=2}^6 \beta_{k,1}^l A_k^l + \beta_2 P + \beta_3 C + u_{it}$$

The growth curve estimates (fixed effects) reported in Figure 2 suggest only moderate period effects between 1984 and 2010. The political context of the mid-1980s seemingly increased the strength of party identification temporarily. However, the analysis documents considerable cohort differences in the strength of party identifications. With every new cohort born after the 1920s, the likelihood of party identification declines. This process accelerates further in cohorts born after 1950. The relative ratio of reporting a party

identification in the most recent birth cohort of 1990 is less than half of the relative ratio for the reference cohort born before 1910.

Figure 2 about here

Figure 2 and the estimates in the ‘fixed part’ of Table 2 report wide variation in growth trajectories by calendar age, political exposure, and electoral experience. Age does not generate growth in partisanship that is significantly different from zero at any point of the age distribution. In fact, the confidence bands of the age trajectories are too large, for the most part, to be displayed within the boundaries of the reported plot. Political exposure leads to an increase in partisan strength in the first 5 years. After that, the growth rate first turns constant and then slowly negative. Individuals exposed to politics for 45 or more years are predicted to have even lower strength in party identification than persons with zero years of exposure. Finally, electoral experience has an almost linear effect on the strength of party identification. With every new election that citizens experience, the strength of their party identification increases. This holds even after 15 elections, i.e., after roughly $(15 \times 4 =)$ 60 years of electoral experience.

The ‘random part’ of Table 2 reports estimates of the variability of the random intercept, σ_{ζ_0} , the random growth trajectory by electoral experience, $\sigma_{\zeta_{1,1}}$, the random growth trajectory by political exposure, $\sigma_{\zeta_{2,1}}$, and the random growth trajectory by age, $\sigma_{\zeta_{3,1}}$. Large inter-individual standard deviation in the intercept suggests that strength in party identification is to a considerable extent a time-invariant trait of individuals and large inter-individual standard deviation in the slopes of experience, exposure, and age

indicates that individuals widely differ in their growth trajectory of partisan strength. In fact, Model 2 reported in Table 2 suggests a large inter-individual standard deviation in the intercept ($\sigma_{\text{Intercept}} = 1.12$). Given a residual standard deviation in the model of .8, one can conclude that 66 percent of the variance in the strength of party identification is attributable to a time-invariant trait of individuals ($\rho = \frac{1.12^2}{1.12^2 + .8^2} = .66$). Also growth rates by age, exposure, and experience display sizable variation across individuals suggesting that these elements of growth trajectories of partisan strength affect individuals differently.

Random growth curve models allow one not only to specify standard deviations of random effects, but to also consider correlations between them. Models 2 and 4 in Table 2 estimate the following covariance matrix of random effects:

$$\text{Cov}(\zeta) = \begin{pmatrix} \sigma_{\zeta_0}^2 & & & \\ \sigma_{\zeta_0, \zeta_{1,1}} & \sigma_{\zeta_1}^2 & & \\ \sigma_{\zeta_0, \zeta_{2,1}} & \sigma_{\zeta_{1,1}, \zeta_{2,1}} & \sigma_{\zeta_{2,1}}^2 & \\ \sigma_{\zeta_0, \zeta_{3,1}} & \sigma_{\zeta_{1,1}, \zeta_{3,1}} & \sigma_{\zeta_{2,1}, \zeta_{3,1}} & \sigma_{\zeta_{3,1}}^2 \end{pmatrix}$$

Negative correlations between the intercept and slopes reported in Table 2 indicate a possible ceiling effect: Those individuals with strong party identification gain little in intensity of their loyalty over time. Moreover, the effects of political exposure and electoral experience are negatively correlated suggesting that those whose party identification gains in strength by passive exposure to a political system benefit less from electoral experience

and vice-versa.

In sum, the results of Model 2 suggest that the aging effect in partisan strength for the most part reflects growing electoral experience, as predicted by Converse (1969) and others. The absence of any residual age effect questions the relevance of critical life stages, as predicted by sociological research. Also, passive exposure to a political system in the first years after initial contact with it may be helpful in providing basic contextual knowledge that is relevant for the development of party identification. Note that the results are not an artifact of the relatively high correlation between calendar age, political exposure, and electoral experience. Excluding one of these factors at a time does not change the substantive conclusions.

Table 2 about here

4.2 Heterogeneous Growth Trajectories

APC models based on panel data not only permit the researcher to estimate more than one cause of age differences in growth curve models at the same time, as demonstrated in the previous section, but also to estimate different growth trajectories in different groups of individuals as demonstrated, for instance, by Yang (2007). Models 4 of Table 2 and the accompanied Figure 3 consider interaction effects between growth rate in the strength of party identification by experience, exposure, and age on the one hand and political experiences during political socialization on the other hand. These experiences are the age at first contact with a democratic regime in Germany (entry) and the level of democracy of the political regime individuals expe-

rienced during political maturation (polity). Hence, the $k = 1, 2, 3$ growth rates in the strength of party identification by experience, exposure, and age are each a function of the mean growth rate in the sample, $\beta_{k,1}^1$, the systematic deviation from this mean in groups defined by different experiences during political socialization, γ_{1k} polity + γ_{2k} entry, and the individual deviation from the linear prediction of the growth trajectory in partisan strength, $\zeta_{k,1i}^1$.

$$\begin{aligned} \text{pi}_{it} = & (\beta_0 + \zeta_{0i}) + \sum_{k=1}^3 (\beta_{k,1}^1 + \gamma_{1k} \text{polity} + \gamma_{2k} \text{entry} + \zeta_{k,1i}^1) A_k \\ & + \sum_{k=1}^3 \sum_{l=2}^6 \beta_{k,1}^l A_k^l + \beta_2 P + \beta_3 C + \beta_4 \text{polity} + \beta_5 \text{entry} + u_{it} \end{aligned}$$

The estimates of regime type experienced at age 17 of Model 4 in Table 2 suggest that growing up in a dictatorship does not significantly affect the development of party identification in young adults in the new democratic environment. Neither does the mean strength of party identification differ by early political socialization (see, coefficient of Regime), or does regime type experience affect the growth trajectories in the strength of party identification (see, coefficients of Age \times Regime, Exposure \times Regime, Experience \times Regime).

However, the age at first contact with a new political system does affect the level and also the growth rate in the strength of party identification. Individuals who come into contact with the new polity between 20 and 35 differ from those who enter a political system before that time only in terms of the mean level of partisan strength ($-.28$). Since the growth trajectories of

age, exposure, and experience do not differ between the reference of “natives” to a political system and persons entering between 20 and 35, the negative gap between both groups does not widen or close in the long run.

Turning to the group of persons entering a political system relatively late in life (> 35), one observes differences to the reference group both in terms of the mean level as well as the growth trajectories in the strength of party identification. They start at a much lower level of partisan strength at the beginning of the process ($-.42$); however, their partisan identity benefits more from aging and electoral experience than is true for the baseline group of “natives” to the political system. The growth rate by political exposure is again smaller than in the reference group. To get a better idea of these differences, Figure 3 displays the growth curves approximated by polynomials of age, political exposure, and electoral experience in the reference group of persons having first contact with a polity before the age of 20 and those who are 35 and older at first contact.

Figure 3 about here

Both natives to a political system and persons entering relatively late in life benefit from political exposure in the first 5 years; however, longer periods of political exposure in a new polity more quickly turn negative in persons who had their first contact with a polity as adults. This process, *ceteris paribus*, slightly widens the initial gap in the strength of party identification between these groups. The higher growth rate by electoral experience in persons entering a political system relatively late in life conversely reduces the initial negative gap in the strength of party identification in the long

run. After about five elections in a new polity ($5 \times 4 = 20$ years), persons entering a polity as adults are no longer significantly less likely to identify strongly with a political party.

Overall, the analysis raises doubts about the pessimistic view on late entries to a political system, particularly from individuals socialized in autocratic societies. A 17-year-old political novice is more likely to report a party identification than a 40-year-old political novice to a political system. However, citizens entering a democratic polity late in life may catch up with natives by electoral experiences.

5 Conclusions

The present paper investigates growth trajectories in the strength of attachments to democratic parties in a multi-cohort panel design. The data, which emanate from the German Socio-Economic Panel (SOEP), cover 45,000 persons from cohorts between 1882 and 1992 observed on an annual basis between 1984 and 2010. The number of observations is roughly 385,000. The German case provides a unique opportunity to disentangle empirically the effects of calendar age, political exposure, and electoral experience due to a number of historical and institutional changes and significant numbers of immigrants.

The study provides an application of panel data and random growth curve modeling in the context of age, period, cohort analysis and illustrates in which ways panel data enable researches to address certain questions that cannot be answered in the same way using repeated cross-sections. This

relates on the one hand to the identification of different processes underlying temporal changes and on the other hand to the analysis of heterogeneous temporal effects.

Substantively, the analysis suggests that electoral experience is the primary factor that generates life-cycle effects in the strength of party identification (Converse, 1969). Particularly (residual) age seems to play a negligible role, a finding that calls the validity of sociological life-cycle interpretations of growth trajectories in the strength of party identification into question.

Also, exposure to politics only facilitates the development in the first years after initial contact with a new party system. The negative trend thereafter may either be explained by too much contextual knowledge undermining the decisional function of party identifications in persons with increasing levels of political awareness, or by too much contextual knowledge breeding political cynicism in well-versed democrats.

A cautionary remark should be made, however, on the interpretation of the effect of electoral experience. Since retrospective data on actual voting behavior in past elections is unavailable for SOEP respondents, the analysis relies on the number of parliamentary elections in which respondents were eligible to vote, not the number in which they actually cast their vote. It is, in my view, unlikely that this difference considerably biases estimates. First, turnout in elections to the Reichstag and Bundestag were comparatively high in the last century, ranging between 70 and 90 percent with a median above 80 percent. Hence, the correlation between the number of elections in which respondents were old enough to vote and the number in which they did so is very high and thus the possible magnitude of bias limited.

Second, one may argue that having the right to vote and being exposed to an election is what matters for the decisional function of partisanship and thus for electoral experience, as discussed in this article. According to Downs (1957), the decision whether or not to turn out in an election already involves a comparison between different party platforms. If the difference in expected party utility is too low, individuals will not participate in the election. Hence, the decisional function of party identification may already operate in the decision to vote in an election, not only inside the voting booth.

Comparable growth rates in the strength of party identification exist for individuals socialized in established democracies as well as for those socialized in autocratic societies. Also individuals who had their first contact with a new political system in their 20s do not display significantly different growth curves in the strength of party identification than those raised in the same political system. Only people who come into contact with a new political system at the age of 35 or older show somewhat different growth trajectories: These individuals start with a much lower level of partisan strength than teenage political novices. But the marginal growth rate due to electoral experience is even higher in older political novices. All in all, these findings support the positive view of democratizing societies that attachments to new political parties increase in strength with every new election. This also holds for cohorts raised in formerly autocratic societies. As to migration research, the results underline the importance of integrating immigrants into the electoral process by naturalization to also strengthen their support of the democratic parties in the host country.

The focus of this article was on life-cycle differences in the strength of party identification. However, the analysis also documents considerable cohort differences, in line with previous studies. Hence, one would not expect growing partisan strength in an aging society like Germany at an aggregate level. This effect is more than counterbalanced by an ever-declining likelihood of younger cohorts to identify with political parties.

References

- Abramson, P.R., 1976. Generational change and the decline of party identification in America: 1952-1974. *American Political Science Review* 70, 469–478.
- Abramson, P.R., 1979. Developing party identification: A further examination of life-cycle, generational, and period effects. *American Journal of Political Science* 23, 78–96.
- Achen, C.H., 2002. Parental socialization and rational party identification. *Political Behavior* 24, 151–169.
- Almond, G.A., Verba, S., 1963. *The civic culture: Political attitudes and democracy in five nations*. Princeton University Press, Princeton.
- Alwin, D.F., Cohen, R.L., Newcomb, T.M., 1991. *Political Attitudes over the Life Span: The Bennington Women After Fifty Years*. University of Wisconsin Press, Madison.
- Alwin, D.F., Krosnick, J.A., 1991. Aging, cohorts, and the stability of sociopolitical orientations over the life span. *American Journal of Sociology* 97, 169–195.
- Baker, K.L., 1974. The acquisition of partisanship in Germany. *American Journal of Political Science* 18, 569–582.
- Baker, K.L., Dalton, R.J., Hildebrandt, K., 1981. *Germany Transformed: Political Culture and New Politics*. Harvard University Press, Cambridge.
- Black, J.H., Niemi, R.G., Powell, G. Bingham, J., 1987. Age, resistance, and political learning in a new environment: The case of Canadian immigrants. *Comparative Politics* 20, 73–84.
- Brader, T., Tucker, J.A., 2001. The Emergence of Mass Partisanship in Russia, 1993-1996. *American Journal of Political Science* 45, 69–83.

- Broek, A.v.d., 1999. Does Differential Cohort Socialization Matter? The Impact of Cohort Replacement and the Presence of Intergenerational Differences in the Netherlands. *Political Psychology* 20, 501–523.
- Cain, B.E., Kiewiet, D.R., Uhlaner, C.J., 1991. The Acquisition of Partisanship by Latinos and Asian Americans. *American Journal of Political Science* 35, 390–422.
- Campbell, A., Converse, P.E., Miller, W.E., Stokes, D.E., 1960. *The American Voter*. Wiley, New York.
- Cassel, C.A., 1993. A Test of Converse's Theory of Party Support. *Journal of Politics* 55, 664–681.
- Cho, W.K.T., 1999. Naturalization, socialization, participation: Immigrants and (non-)voting. *Journal of Politics* 61, 1140–1155.
- Converse, P.E., 1969. Of time and partisan stability. *Comparative Political Studies* 2, 139–171.
- Converse, P.E., 1976. *The Dynamics of Party Support: Cohort-Analyzing Party Identification*. Sage, Beverly Hills.
- Crittenden, J., 1962. Aging and party affiliation. *Public Opinion Quarterly* 26, 648–657.
- Cutler, N.E., 1969. Generation, maturation, and party affiliation: A cohort analysis. *Public Opinion Quarterly* 33, 583–588.
- Dalton, R.J., 1994. Communists and Democrats: Attitudes toward Democracy in the two Germanies. *British Journal of Political Science* 24, 469–493.
- Dalton, R.J., Buerklin, W., 1996. The two German electorates, in: Kaase, M., Klingemann, H.D. (Eds.), *Germans Divided*. Berg, Oxford, pp. 183–208.
- Dalton, R.J., Flanagan, S.C., Beck, P.A., 1984. Electoral change in advances

- industrial societies, in: Dalton, R.J., Flanagan, S.C., Beck, P.A. (Eds.), *Electoral Change in Advanced Industrial Democracies: Realignment or Dealignment?*. Princeton University Press, Princeton, pp. 3–22.
- Dalton, R.J., Wattenberg, M.P. (Eds.), 2000. *Parties without Partisans*. Oxford University Press, Oxford.
- Downs, A., 1957. *An Economic Theory of Democracy*. Harper and Row, New York.
- Evans, G., 1999. *The End of Class Politics?: Class Voting in Comparative Context*. Oxford scholarship online, Oxford University Press.
- Fabio, A., Loeber, R., Balasubramani, G.K., Jeffrey, R., Fu, W., Farrington, D.P., 2006. Why some generations are more violent than others: Assessment of age, period, and cohort effects. *American Journal of Epidemiology* 164, 151–160.
- Falter, J., Schoen, H., Caballero, C., 2000. Dreissig Jahre danach: Zur Validierung des Konzepts Parteiidentifikation in der Bundesrepublik, in: Klein, M., Jagodzinski, W., Mochmann, E., Ohr, D. (Eds.), *50 Jahre empirische Wahlforschung in Deutschland: Entwicklung, Befunde, Perspektiven, Daten*. Westdeutscher Verlag, Wiesbaden, pp. 235–271.
- Glenn, N.D., 1977. *Cohort Analysis*. Sage Publications, Beverly Hills.
- Glenn, N.D., Hefner, T., 1972. Further evidence on aging and party identification. *Public Opinion Quarterly* 36, 31–47.
- Gluchowski, P., 1983. Wahlerfahrung und Parteiidentifikation: Zur Einbindung von Wählern in das Parteiensystem der Bundesrepublik, in: Kaase, M., Klingemann, H.D. (Eds.), *Wahlen und politisches System: Analyse aus Anlass der Bundestagswahl 1980*. Westdeutscher Verlag, Opladen, pp. 442–477.
- Hess, T.M., 2001. Ageing-related influences on personal need for structure. Inter-

- national Journal of Behavioral Development 25, 482–490.
- Inglehart, R., 1971. The silent revolution in europe: Intergenerational change in post-industrial societies. *American Political Science Review* 65, 991–1017.
- Jennings, M.K., Markus, G.B., 1984. Partisan orientations over the long haul: Results from the three-wave political socialization panel study. *American Political Science Review* 78, 1000–1018.
- Jones-Correa, M., 1998. Different paths: Gender, immigration and political participation. *International Migration Review* 32, 326–349.
- Kroh, M., 2011. Documentation of Sample Sizes and Panel Attrition in the German Socio Economic Panel (SOEP) 1984–2010. Number 59 in Data Documentation, DIW, Berlin.
- Kroh, M., Selb, P., 2009. Inheritance and the dynamics of party identification. *Political Behavior* 31, 559–574.
- Levin, M.B., 1961. Social climates and political socialization. *Public Opinion Quarterly* 25, 596–606.
- Mannheim, K., 1928. Das Problem der Generationen. *Koelner Vierteljahreshefte fuer Soziologie* 7, 157–185.
- Miller, A.H., Klobucar, T.F., 2000. The Development of Party Identification in Post-Soviet Societies. *American Journal of Political Science* 44, 667–685.
- Neundorff, A., 2010. Democracy in transition: A micro perspective on system change in post-socialist societies. *Journal of Politics* 72, 1096–1108.
- Nie, N., Verba, S., Kim, J.o., 1974. Political participation and the life cycle. *Comparative Politics* 6, 319–340.
- Niemi, R.G., Powell, G.B., Stanley, H.W., Evans, C.L., 1985. Testing the converse partisanship model with new electorates. *Comparative Political Studies* 18,

300–322.

Rabe-Hesketh, S., Skrondal, A., 2005. *Multilevel and Longitudinal Modeling Using Stata*. Stata Press, College Station.

Ramakrishnan, S.K., Espenshade, T.J., 2001. Immigrant Incorporation and Political Participation in the United States. *International Migration Review* 35, 870–909.

Ryder, N.B., 1965. The cohort as a concept in the study of social change. *American Sociological Review* 30, 843–861.

Shively, W.P., 1972. Party Identification, Party Choice, and Voting Stability: The Weimar Case. *American Political Science Review* 66, 1203–1225.

Shively, W.P., 1979. The development of party identification among adults: Exploration of a functional model. *American Political Science Review* 73, 1039–1054.

Tilley, J., 2002. Political Generations and Partisanship in the UK, 1964–1997. *Journal of the Royal Statistical Society, Series A* 165, 121–135.

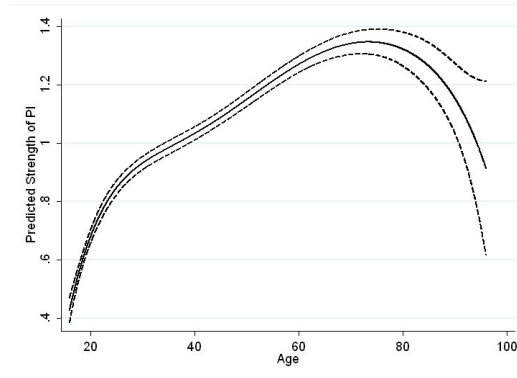
Watts, M.W., 1999. Are there typical age curves in political behavior? the "age invariance" hypothesis and political socialization. *Political Psychology* 20, 477–499.

Wong, J.S., 2000. The Effects of Age and Political Exposure on the Development of Party Identification among Asian American and Latino Immigrants in the United States. *Political Behavior* 22, 341–371.

Yang, Y., 2007. Is old age depressing? growth trajectories and cohort variations in late-life depression. *Journal of Health and Social Behavior* 48, 16–32.

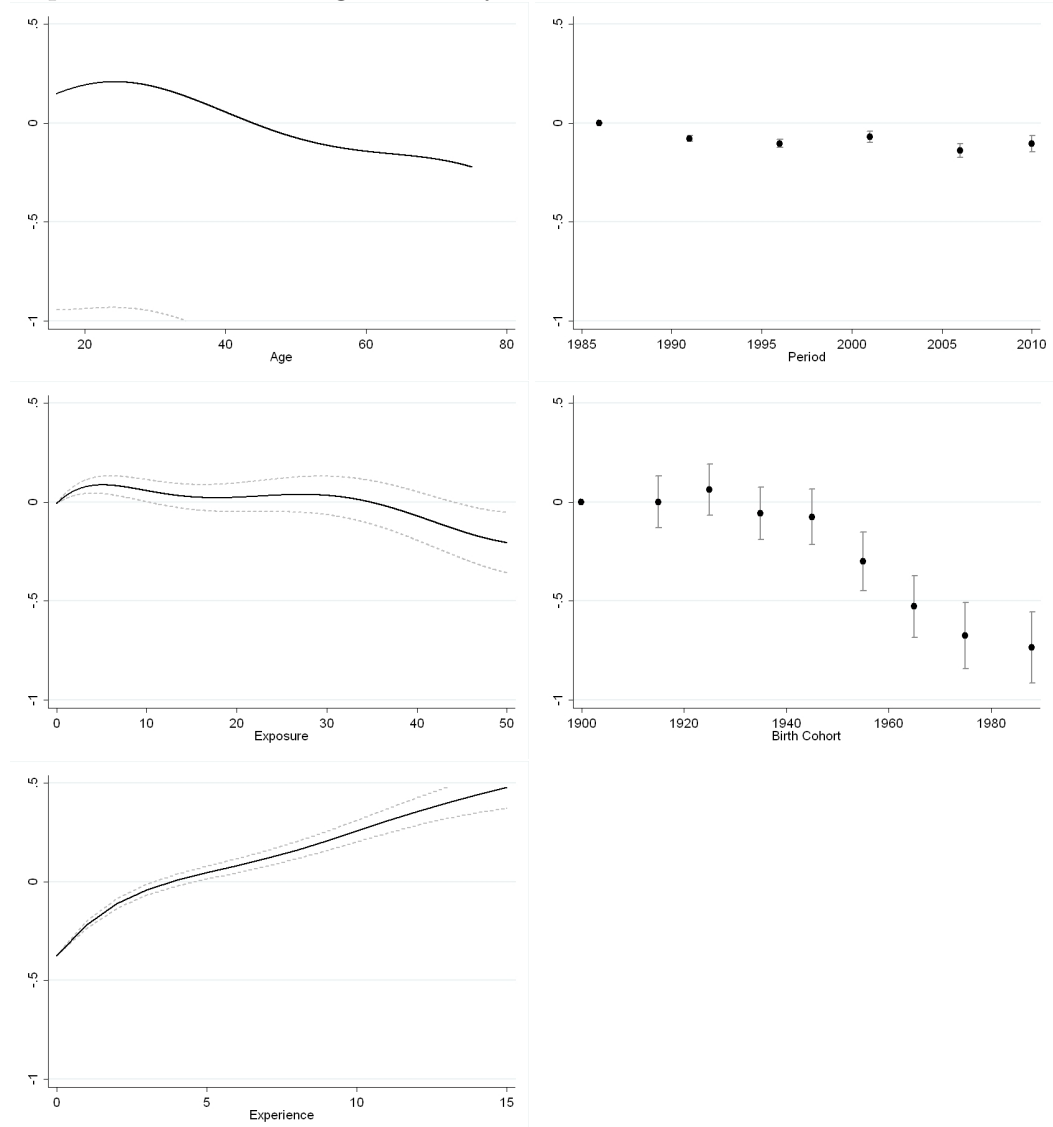
Zuckerman, A.S., Dasovic, J., Fitzgerald, J., 2007. *Partisan Families: The Social Logic of Bounded Partisanship in Germany and Britain*. Cambridge University Press, Cambridge.

Figure 1: Age Differences in the Strength of Party Identification.



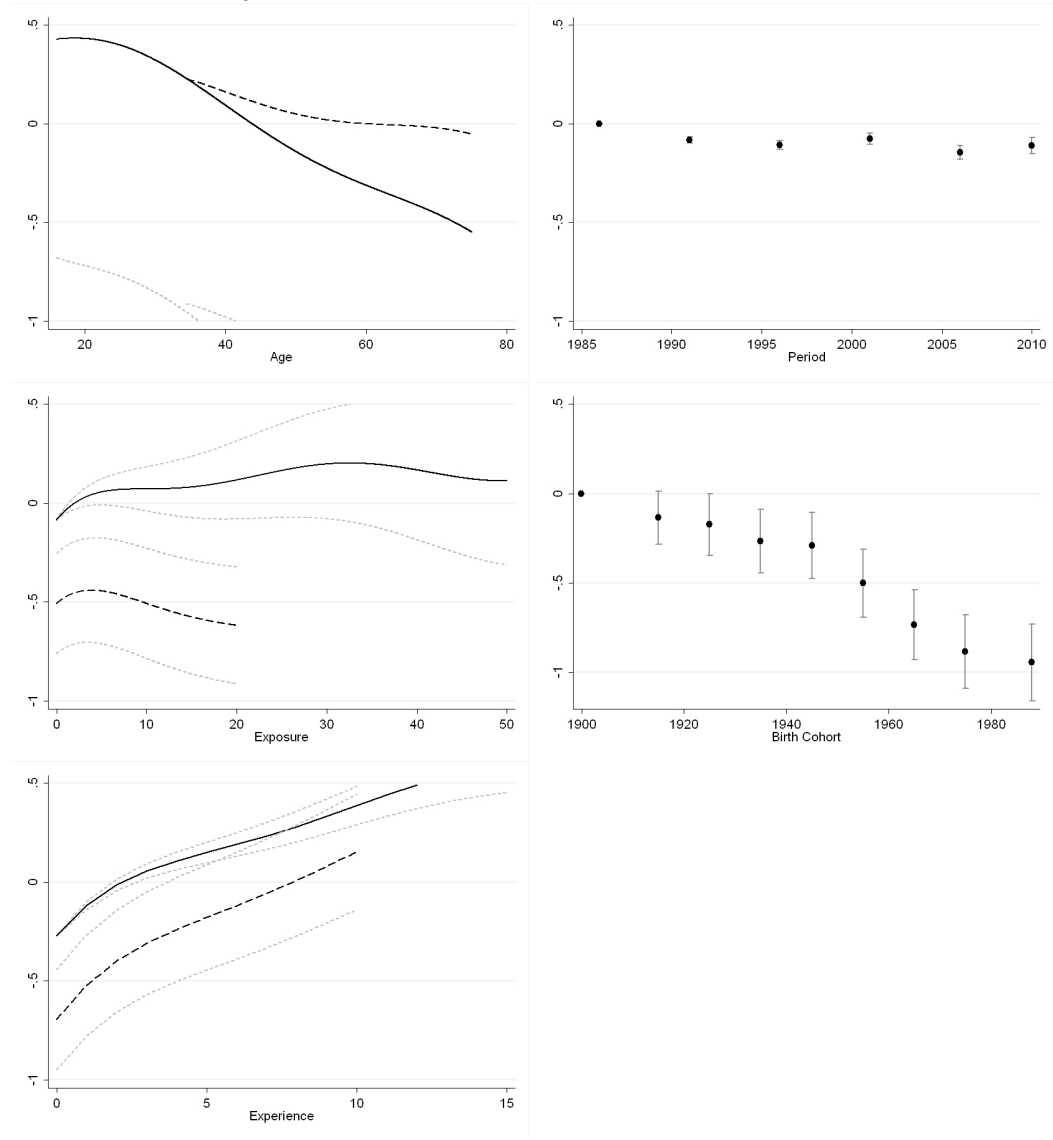
Source. SOEP v27, n=45,045, 95-percent confidence bands.

Figure 2: Mean Growth Curves of Age, Political Exposure, and Electoral Experience in the Strength of Party Identification.



Note. The estimates of the growth curve model are documented in Table 2. For reasons of comparability of the growth curves, they are centered on the sample means. *Source.* SOEP v27, n=45,045, 95-percent confidence bands.

Figure 3: Mean Growth Curves of Age, Political Exposure, and Electoral Experience in the Strength of Party Identification by Age of First Contact with a New Polity.



Note. The estimates of the growth curve model are documented in Table 2. For reasons of comparability of the growth curves, they are centered on the sample means. Respondents entering the German political system at age 20 or younger (solid lines) and respondents entering the political system at age 35 and older (dashed lines). *Source.* SOEP v27, n=45,045, 95-percent confidence bands.

Table 1: Regime-Type-Experience by Year of Birth in Native East and West Germans and Immigrants.

	East Sample	West Sample	Immigrants	Total
1882-1909	6	5	-2	5
1910-1919	0	1	-3	0
1920-1929	-9	-9	-4	-8
1930-1939	-8	10	1	4
1940-1949	-9	10	2	4
1950-1959	-9	10	2	4
1960-1969	-9	10	6	5
1970-1979	6	10	8	9
1980-1993	10	10	10	10
Total	-3	8	5	5

Note. Polity scores range between -10 (autocracy) and +10 (democracy). The figures relate to the country in which SOEP respondents resided at age 17. Table entries are average polity scores. *Source.* SOEP v27 and Polity IV.

Table 2: Growth Curve Models of the Strength of Party Identification.

	(1)	(2)	(3)	(4)
Fixed Part				
Age	-.28**	-.02	-.32**	-.05
Age ²	.02**	.00	.02***	.02
Age ³	-.00***	-.00	-.00***	-.00
Age ⁴	.00***	.00**	.00***	.00
Age ⁵	-.00***	-.00**	-.00***	-.00
Age ⁶	.00***	.00**	.00***	.00
Age × Entry 20–35			.00	.00
Age × Entry 35+			.02***	.01***
Age × Regime			-.00	-.00
Exposure	.05***	.05***	.06***	.06***
Exposure ²	-.01***	-.01***	-.01***	-.03
Exposure ³	.00***	.00***	.00***	-.03
Exposure ⁴	.00***	-.00***	-.00***	-.03
Exposure ⁵	.00***	.00***	.00***	-.03
Exposure ⁶	.00***	.00***	-.00***	-.03
Exposure × Entry 20–35			-.00	.00
Exposure × Entry 35+			-.02***	-.02***
Exposure × Regime			-.00	-.00
Experience	.29***	.19***	.27***	.18***
Experience ²	-.08***	-.04***	-.07***	-.03
Experience ³	.01***	.00	.01**	-.03
Experience ⁴	-.00**	-.01	-.01	-.03
Experience ⁵	.00*	-.01	.00	-.03
Experience ⁶	-.01	-.01	-.00	-.03
Experience × Entry 20–35			.00	-.00
Experience × Entry 35+			.03**	.02***
Experience × Regime			.00	-.00
Entry 20–35	-.13***	-.17***	-.16	-.28***
Entry 35+	-.03	-.10**	-.49***	-.42***
Regime	.00	-.00	.01	-.00
East Germany	-.22***	-.25***	-.21***	-.25***
Migration Background	-.14***	-.21***	-.14***	-.20***
Cohort _{1882/1909} –Cohort _{1980/1993}			Output Omitted	
Period _{1984/1988} –Period _{2009/2010}			Output Omitted	
Random Part				
$\sigma_{\text{Intercept}}$		1.12 (0.02)		1.12 (0.02)
σ_{Age}		.02 (<0.01)		.02 (<0.01)
σ_{Exposure}		.04 (<0.01)		.04 (<0.01)
$\sigma_{\text{Experience}}$.08 (0.02)		.08 (0.01)
$\rho_{\text{Intercept, Age}}$		-.54 (0.04)		-.54 (0.04)
$\rho_{\text{Intercept, Exposure}}$		-.26 (0.05)		-.26 (0.05)
$\rho_{\text{Intercept, Experience}}$		-.08 (0.05)		-.07 (0.05)
$\rho_{\text{Age, Exposure}}$		-.45 (0.06)		-.46 (0.06)
$\rho_{\text{Age, Experience}}$.54 (0.14)		.55 (0.15)
$\rho_{\text{Exposure, Experience}}$		-.55 (0.04)		-.56 (0.04)
NObservations	385,280	385,280	385,280	385,280
NIndividuals	43,810	43,810	43,810	43,810
NWaves	27	27	27	27

Note. *** p < 0.01 ** p < 0.05; * p < 0.10. Models (1) and (3) are OLS regressions with robust standard errors clustered at the level of individuals and models (2) and (4) are mixed effects regressions Data Source SOEP v27.