

*Macropartisanship and Macroideology in the Sophisticated Electorate*¹

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There are many reasons to believe that political parties' fortunes and the ideological preferences of the electorate are tied together. Yet existing evidence finds no relationship between trends in the partisan and ideological identifications of the American electorate (Box-Steffensmeier, Knight, and Sigelman 1998). We argue that a portion of the electorate organizes political debate in terms of liberal and conservative referents and, in turn, links ideological and partisan identifications over time. Evidence from CBS News and *New York Times* survey data affirms the conclusion that for the more sophisticated portion of the electorate, partisan and ideological trends are mutually reinforcing in both the long and the short run. These groups are also more likely to vote than less politically sophisticated groups, so the incentives for politicians to link popular ideological sentiment with partisanship are strong; the people who pay attention to politics and put them in office (or kick them out) are the same people who connect ideology and partisanship.

There are many reasons to believe that the parties' fortunes and the ideological preferences of the electorate are tied together. Politicians of both parties regularly claim that surges in party support signal ideological mandates from the voters. Ronald Reagan's 1980 victory, for example, was often said to have resulted from the increasingly dominant conservative mood of the electorate. The behavior of political elites also suggests that they believe there is an intimate connection between partisanship and ideology. Strategic politicians try to benefit from favorable ideological trends, puffing their sails when ideological winds blow their direction, in an effort to accommodate public opinion and attract

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supporters to their party (Stimson, MacKuen, and Erikson 1995). President Reagan, for example, explicitly linked his conservative preferences with his party at a time when preferences favored conservative policies. The politics of the day triggered both “real” and symbolic associations with conservatism, providing mutually reinforcing cues for both ideological and partisan movements. Similarly, in the aftermath of the Republican victories in 1994, Speaker of the House Newt Gingrich and the freshman Republican class pushed for conservative policy changes as outlined in the “Contract with America.”

In addition to the behavior of political elites, survey data suggests that Americans’ ideological and partisan preferences are connected. A majority of Americans identify the Democrats as the more liberal of the two parties and the Republicans as the more conservative (Converse 1964; Luttbeg and Gant 1985). In addition, parties represent the ideas and ideological preferences of their membership. Given all this, it is reasonable to expect to find that ideological and partisan preferences of the electorate are related over time.

To the extent that ideological movement reflects popular feelings about the proper direction of government, the parties are likely to respond, that is, conservative preferences should produce conservative policies. If the electorate is watching and listening, it should respond as well, rewarding the party whose policies and rhetoric are in accord with popular ideological sentiment. This suggests that when preferences become more liberal, not only will more Democrats be elected (De Boef and Stimson 1995), but macropartisanship will also shift toward the Democrats: changes in ideological preferences will cause party change in the electorate. As such, the study of the liberal-conservative dimensions of political competition may provide insight into political change (Eisinga and Franses 1996; Eisinga, Franses, and Ooms 1997; Inglehart and Klingemann 1976).

The dynamics of macropartisanship have been studied extensively (e.g., Abramson and Ostrom 1991; Allsop and Weisberg 1988; Box-Steffensmeier and Smith 1996; Haynes and Jacobs 1994; Knoke and Hout 1974; MacKuen, Erikson, and Stimson 1989; Parker 1979; and Weisberg and Smith 1991). There has been much less work on macroideology (e.g., Durr 1993; Fiorina 1988; Gold 1992; Mayer 1993; Robinson 1984; Stimson 1991) and only a single piece on the relationship between the two. We concur that the lack of work on the relationship of the two series is unfortunate. Political parties are organized aggregations of viewpoints on political issues and thus there is reason to suspect, indeed hope from a democratic responsiveness point of view, that partisan loyalties may move in tandem with changing ideological commitments (Box-Steffensmeier, Knight, and Sigelman 1998, 1045). However, Box-Steffensmeier, Knight, and Sigelman found that the mass public does not connect ideological and partisan identifications.

We know that only a segment of the mass public possesses a sophisticated belief system that we might label as ideological (Campbell et al. 1960; Converse 1964; Luttbeg and Gant 1985; Pierce 1970). Typically less than half of the electorate identifies itself as liberal or conservative. And an even smaller

portion of the electorate exhibits ideological constraint in its positions across issues or over time (Achen 1975; Campbell et al. 1960; Converse 1964; Zaller 1992). Add to this the loose ideological configuration of the American parties, and it is easy to conclude that it is unlikely that trends in macropartisanship and macroideology are related. But the conclusion that macroideology and macropartisanship are unrelated is still surprising, until one considers the possibility that only a politically sophisticated subgroup connects the two. A focus on subgroups makes sense in light of Sniderman (1993), who points out that “Stimson’s (1975) findings make plain that any effort to characterize the mass public *as a whole* will be systematically misleading: it will misrepresent the thinking of the more politically aware citizens, or of the less aware, or of both” (1993, 224, emphasis in original). Knight (1985) similarly argues that the “ideology glass” is neither “half empty nor half full” but brimming for some and empty for others.

We argue that only a portion of the electorate is involved with and attentive to the political environment, organizes political debate in terms of liberal and conservative referents, and links ideological and partisan identifications. In short, only the politically sophisticated segment of the electorate relates ideological and partisan identifications over time.² Such a hypothesis is straightforward, but the implications are far-reaching.

If macropartisanship and macroideology are connected over time only for the politically sophisticated, the political party elite are communicating with the segment of the electorate that is most interested and involved in politics and most likely to vote (Knight 1985). Further, in this setting elite ideological (or partisan) appeals may have a sizeable effect. For example, a surge in conservative identification could help the Republicans such that party leaders are provided an incentive to represent conservative policies, enhancing representation. We investigate the relationship between macropartisanship and macroideology over time by examining segments of the mass public by level of political sophistication using CBS News and *New York Times* survey data. We find that the most politically sophisticated segment of the electorate does connect macropartisanship and macroideology. The analysis provides insight into the dynamics of American political behavior and has implications for understanding representation.

Macroideology and Macropartisanship in the Politically Sophisticated Electorate

It is easy to be agnostic about the nature and existence of the relationship between macropartisanship and macroideology. Arguments against a relationship, as well as current evidence, are weighty. In particular, Box-Steffensmeier,

²Luskin (1990) defines political sophistication as “political cognitive complexity, political expertise” and states that the politically sophisticated group is more likely to be interested in and participate in politics and have numerous political ideas that cover a wide range of issues that are well organized and constrained.

Knight, and Sigelman (1998) could find no evidence that the mass public links changes in partisanship with changes in ideology. The result may not seem surprising when we note that many individual Americans consider themselves neither liberal nor conservative and even fewer exhibit ideological constraint in their positions across issues or over time (Achen 1975; Campbell et al. 1960; Converse 1964; Zaller 1992). Further, the loose configuration of the parties and diversity of ideas and preferences encourages the existence of conservative Democrats and liberal Republicans, limiting the amount of covariation we might expect between the series (Levitin and Miller 1979).

At the same time, there are reasons to expect to see ties between movements in ideology and partisanship. Eisinga, Franses, and Ooms (1997), for example, suggest that ideological trends will *precede* partisan trends. They argue that ideological attachments provide an overall orientation to parties and that changes in ideology may lead to eventual changes in the mass public's outlook (1997, 9). In contrast, the dynamics associated with elections suggest that ideological trends may *follow* partisan trends; conservative preferences in the electorate may attract conservative candidates for political office and thus further reinforce the parties' ideological bases.

These arguments can be further refined when we consider that few Americans have sophisticated belief systems and that theory and evidence suggest that the behavior of more and less sophisticated Americans is distinct. In particular, we know that the least sophisticated segment of the electorate is more responsive to the political environment, both in their partisanship and ideology (Campbell et al. 1960; Converse 1964; De Boef 1994). Given the absence of ideological constraint, the least sophisticated segment is more likely to respond to symbolic appeals by the parties or single-issue cues in ideology, while dramatic political events or popular presidents may affect its partisanship in either similar or disparate ways. This suggests that the least sophisticated segment may vary in both partisanship and ideology, but do so independently. That is, the macropartisanship and macroideology of the least sophisticated segment of the mass public is unlikely to be connected. Further, to the extent that this portion of the electorate is large, evidence of any relationship between ideological and partisan trends in the aggregate may be nonexistent.

More sophisticated adults, on the other hand, engage in mass politics with a level of conceptualization that is much higher than their less sophisticated counterparts. By definition, the politically sophisticated are more likely to attribute correct meanings to the terms liberal and conservative, more likely to have wide ranging and logically connected ideas, and more likely to associate conservatism with Republicans and liberalism with Democrats than the electorate at large. That is, there may be more coherence between ideology and partisanship for the politically sophisticated due to a higher level of cognitive complexity. They also form the portion of the electorate who have an interest in and pay attention to politics. Thus, they are more likely to both hear and understand the ideological and partisan rhetoric and the issue positioning of elected officials. As a re-

sult, we argue that the politically sophisticated segment of the mass public is more likely to connect macropartisanship and macroideology over time than the less sophisticated segment or the electorate at large. Further, when change occurs, it should do so in a predictable manner—liberal change should produce Democratic gains and/or Democratic gains should increase liberal identification. Whether this relationship runs in one direction or is mutually reinforcing remains to be seen.

Measuring Political Sophistication

Political sophistication is an elusive term generally equated with general political knowledge but often assessed with reference to a liberal/conservative schema (Campbell et al. 1960; Converse 1964; Lane 1962; Luskin 1990; Smith 1989). The absence of political sophistication, and specifically ideological thinking, in the American electorate is well-documented (Campbell et al. 1960; Conover and Feldman 1981; Converse 1964; Knight and Erikson 1997; Luttbeg and Gant 1985). Knight (1985) does point out, though, that a portion of the electorate can place itself on a liberal/conservative scale and that this placement relates to attitudes and voting. While precise conclusions vary as to the amount of political sophistication that exists in the electorate, the conclusions share one theme: only a portion of the mass public can be labeled as politically sophisticated.

The previous literature tells us that the most politically sophisticated segment of the population is interested and involved in politics, educated, and older (Converse 1964; Luskin 1987, 1990; Smith 1989; Zaller 1992). For the politically sophisticated, the exposure to politics and political information and the motivation to follow it is likely to be greater than in the mass public. We cannot track interest in politics or involvement over time; however, we can assess ideological and partisan identification by level of education over time. Education is not a perfect, but rather an acceptable measure of political sophistication (Zaller 1992).³ It is also the only indicator of political sophistication that is available consistently in the CBS News and *New York Times* survey data.

³Zaller (1992) discusses the disagreement in the literature over the measurement of political knowledge (see pages 333–34 in particular and Knight (1985)). Zaller also cites Judd, Krosnick, and Milburn (1981) as having shown that education, interest, and political activity all produce similar results about political awareness. We used the 1992 National Election Study preelection survey to examine the relative roles of education and both interest in and knowledge about politics for predicting partisanship at the individual level. We estimated three models of partisanship: first, as a function of political knowledge, ideological identification, and the interaction between both ideology and knowledge; second, as a function of interest in politics, ideological identification, and the interaction between ideology and interest; and third, as a function of education, ideological identification, and the interaction between ideology and education. The interactive effects in these models find that education performs as well as or better than interest in or knowledge about politics, lending credence to the measure of sophistication employed in the analyses to follow. We thank an anonymous reviewer for this suggestion. The correlation between education and knowledge is .503 and between education and interest, .170.

FIGURE 1

Democratic Macropartisanship and Liberal Macroideology

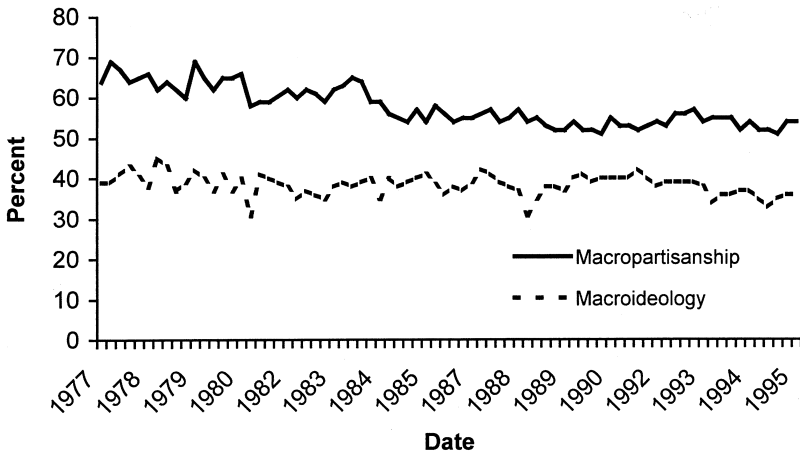


Figure 1 presents Democratic *macropartisanship* (Democrats/(Democrats + Republicans)) and liberal *macroideology* (Liberals/(Liberals + Conservatives)). Our measurement of both macropartisanship and macroideology is consistent with the existing literature (see Box-Steffensmeier, Knight, and Sigelman 1998).⁴ All series begin in the first quarter of 1977 and are measured quarterly through 1995. The 1980s, which comprise a sizeable proportion of our sample, should be a good time to find a relationship between macropartisanship and macroideology.

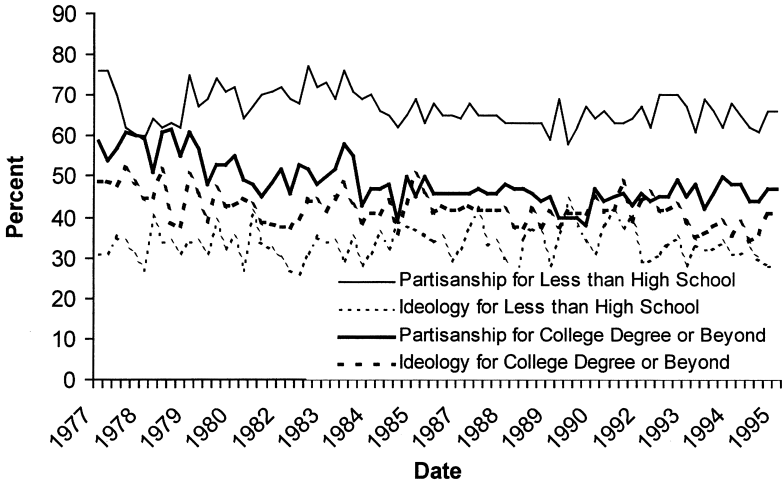
A quick glance at the figure shows that in this period, Americans are much more Democratic than they are liberal. Americans have consistently favored the Democratic over the Republican party but at the same time have chosen conservative ideological self-identification over liberal identification.⁵ Since 1977

⁴Macropartisanship is measured by aggregating responses to the traditional question on partisanship: “In general, do you usually consider yourself a Democrat, a Republican, an Independent or what?” Macroideology is measured by aggregating the responses to: “How would you describe your views on most political matters? Generally, do you think of yourself as liberal, moderate, or conservative?” Overall, an average of about 4,407 respondents are surveyed per quarter. Of these an average of 2,774 answered Republican or Democratic and 2,087 answered liberal or conservative. We used Stimson’s widely accepted dimensional analysis algorithm, which is available at <http://www.unc.edu/~jstimson/resource.html> to estimate missing values and to weight the estimates by sample size (we do not have multiple survey organizations so we do not use this part of the algorithm).

⁵Stimson, MacKuen, and Erikson (1995) find evidence to support the inference that many self-proclaimed conservatives support liberal policy positions. They suggest that this is a function of a variety of positive associations with conservatism, such as prudence, practicality, and patriotism.

FIGURE 2

Democratic Macropartisanship and Liberal Macroideology by Education



and through 1995, macropartisanship has moved in a Republican direction from near 70% Democratic to near 50% Democratic, while macroideology hovered around 38% liberal in the aggregate. Macroideology exhibits minimal variation, about 7 points, while the variance in macropartisanship is over 23 points. This is consistent with hypotheses that suggest that ideological identifications will vary less than partisan ties. To the extent that the series vary, they appear to do so together ($r^2 = .27$).

There should be a stronger over time relationship between macropartisanship and macroideology for the most sophisticated portion of the electorate if our hypothesis is correct. In addition, macropartisanship and macroideology should be further apart for the least educated than for the most educated segment, as we expect more educated adults to associate liberal ideology with Democratic partisanship and similarly conservative ideology with Republican partisanship.

We separate macropartisanship and macroideology into four educational groups: adults who have not completed high school; adults with a high school diploma and no additional education; adults attending some college, business, or trade school; and adults with a college degree or further education.⁶ One fact stands

⁶The percent of college-educated adults as a proportion of the sample increases slightly over time. In the first half of the sample, through 1985, an average of 22% completed college. Between 1986 and 1995, this figure increased to 27%. The proportion of adults who did not complete high school dropped from 18.5% in the first half of the sample to 11.7% after 1985. The middle two education categories remained relatively stable as a percentage of the sample at around 34% (high school graduates) and 24% (some college).

out: College-educated Democrats are much more likely to also be liberals than are Democrats who have not completed high school. An average of less than 6.5 percentage points separates the balance of partisanship and the balance of ideology for the college-educated group, in contrast with over 33 points for the less educated group (20.5 and just over 10 points separate these series for groups with a high school diploma and some college experience, respectively). The correlation between macroideology and macropartisanship was the strongest for the two most educated groups, $r^2 = .568$, and dropped to $-.085$ for the least educated.⁷

The direction of the “error” in macroideology may reflect the taboo associated with the term liberal or the fact that conservative responses may reflect identification with the status quo (Erikson, MacKuen, and Stimson 2000). In particular, it is the response to questions about ideological identification of the less sophisticated that would be victim to this kind of stigmatization. The consistency with which the college educated claim to be both liberal and Democratic (or conservative and Republican) is unmatched in the electorate at large or within any other education group.⁸ While liberal Republicans and conservative Democrats may be politically sophisticated, the vast majority of these “misalignments” occur among the least educated, providing prima facie evidence that we are capturing some of the expected distinctions in political sophistication by subdividing the electorate in this manner. Further, this evidence is consistent with the expectation that the most educated segment better understands the language of political debate and the ties between ideology and partisanship.

⁷From least to most educated, the observed variances of macropartisanship and macroideology, respectively, are: 19.12, 30.68, 30.37, and 30.45 points and 17.78, 11.54, 15.99, and 16.34. After controlling for the average variation in each series that is attributable to sampling error the variances are given by 12.68, 27.26, 21.88, and 21.03 for macropartisanship and 11.89, 8.67, 9.04, and 8.80 for macroideology (Erikson and Wlezien 1999). While the partisanship of the least educated is significantly less responsive than any other subgroup, none of the remaining subgroup variances can be distinguished at the .05 level for either macropartisanship or macroideology.

⁸Sample sizes for each education group averaged as follows over the full period: adults without a high school diploma: an average of 468 gave their ideological identifications and 378 responded Republican or Democrat; for adults with a high school diploma, the same figures were 1,332 and 951; for those attending college, 958 and 675; and for those with a college degree or beyond, 1,015 and 713, respectively.

At the individual level, over the full time period, 14.9% of those without a high school diploma identified as both Republican and conservative or Democratic and liberal, while for those with at least a college degree the figure is almost 28%. In the aggregate, about 22% of respondents stated liberal identification in conjunction with Democratic partisanship or conservative identification in conjunction with Republican partisanship.

Levitin and Miller's (1979) work suggests that some of the “misalignments” may be due to the particular politics of the South. The implications of the dynamics of Southern (more generally, regional) politics for studying ideology and partisanship by educational subgroups are an avenue for further research. The small N for these regional education subgroups precludes investigation at this time.

Methodology and Analysis

We begin our analysis of the relationship of macropartisanship and macroideology by focusing on the most and least politically sophisticated segments of the mass public. We first determine the appropriate characterization of each univariate time series, which also provides insight into the persistence of each series, and then examine the relationship between macropartisanship and macroideology by using the Haugh-Pierce test for temporal precedence (Pierce and Haugh 1977).

The Persistence of Macropartisanship and Macroideology

The balances of partisanship and ideology in the American political system are highly stable. The parties can feel confident that their futures will not deviate too far from the historical balance of the two party identifiers. In other words, today's party balance is strongly related to the past party balance. Historically, this would appear to be true so that looking back, even long after the memory of particular political actors or policies has passed, partisanship and ideology are strongly related. The same can be said of the balance of ideological identifications. Ideological competition takes place over a relatively small range of preferences, and change is always at the margins.

This long-range stability and dependence suggest that both macroideology and macropartisanship are persistent processes, which can be effectively modeled with Autoregressive Fractionally Integrated Moving Average (ARFIMA) models. ARFIMA models are generalizations of the more familiar ARIMA (p,d,q) models for a time series:

$$\Phi(L)(1 - L)^d x_t = \Theta(L)\epsilon_t$$

where p,d,q are non-negative integers, $\Phi(L)$ and $\Theta(L)$ are the stationary autoregressive (AR) and moving average (MA) components, and ϵ_t has an unconditional $N(0, \sigma^2)$ distribution. In contrast to an ARIMA model, an ARFIMA characterization of the series allows d to take fractional values, providing a more flexible modeling approach for time series than the knife-edged 0 or 1. After fitting the appropriate ARFIMA (p,d,q) model, one can draw inferences about the persistence or memory of the series.⁹

⁹When d=0, an ARMA process is the result (similarly if d=1, an ARIMA process is the result), which means that the series has short memory and, importantly, the effect of a shock, such as information about the president's actions, die out relatively quickly. The difference between an ARMA and ARFIMA process is the *rate* of decay, the former decays at an exponential rate and the latter at a hyperbolic rate (see Box-Steffensmeier and Smith 1998, Figure 1). "The closer the absolute value of d to one, the longer the memory and the more persistent are the effects of shocks" (Box-Steffensmeier and Smith 1998, 667). Also see Baillie (1996) and Lebo, Walker, and Clarke (2000) for an overview of fractional integration methods.

TABLE 1
 ARFIMA Model Estimates and t-ratios

Dependent Variable (Macropartisanship then Macroideology):	d (s.e)	t-ratio for d = 0	t-ratio for d = 1
Aggregate	0.487 (0.094)	5.18	5.46
	0.285 (0.065)	4.38	11.00
Group without a High School Diploma	0.435 (0.101)	4.31	5.59
	0.213 (0.110)	1.94	7.15
Group with a High School Diploma	0.389 (0.102)	3.81	5.99
	0.223 (0.118)	1.89	6.58
Group with Some College (Trade or Business School)	0.427 (0.094)	4.54	6.10
	0.370 (0.122)	3.03	5.16
Group with a College Degree or Beyond	0.375 (0.094)	3.98	6.65
	0.086 (0.302)	0.28	3.03

Table 1 presents the estimates of d , standard errors, and t-ratios for the tests of the null hypotheses $d = 0$ and $d = 1$. For each series, we can reject the null hypothesis that $d = 1$. Importantly, the model selection criteria indicate that the ARFIMA model outperforms alternative ARMA models. A $(0,d,0)$ model was selected for each series with the exception of macroideology for those with some college $(2,d,2)$ and those with a college degree or beyond $(3,d,0)$.¹⁰ In some cases we cannot reject the null hypothesis that the macroideology series is stationary, that is, $d = 0$, and the series is an ARMA process.¹¹

¹⁰ Estimation of the fractional integration parameter and its standard error can also be used as a test for integration or stationarity with the advantage of explicitly accounting for the nuisance parameters (Sowell 1989, 22) and avoiding the problem of often contradictory unit root test results (Box-Steffensmeier and Smith 1998; Barkoulas, Baum, and Caglayan 1999; Hassler and Wolters 1995). Of course, the longer the time series, the more precise the standard errors. The appropriate ARFIMA models were selected with the Akaike Information Criterion (AIC). The selected models can be checked by examining the residuals to make sure they are white noise, for example, by using the Q statistic.

¹¹ In these cases, the series may be near-integrated (De Boef and Granato 1997).

Based on Box-Steffensmeier, Knight, and Sigelman (1998) we expect partisanship to be more persistent than ideology, where persistence refers to the rate that the process moves toward equilibrium. Looking at Table 1 and comparing the estimates of d , we consistently see that the partisanship series will decay more slowly when shocked than the ideology series.

Haugh-Pierce Granger Causality Tests

Do ideological identifications shape partisan identifications? Do increases in the proportion of the electorate that claims to be Republican subsequently yield conservative gains in the ideological balance of the electorate? Is there reason to believe that the relationship(s) is reinforcing? We answer these questions and examine the relationship between macroideology and macropartisanship by taking into account the dynamic properties of the individual time series and using the Granger (1969) causality approach to determine temporal precedence.¹² Granger causality stipulates that a time series X_t “Granger causes” another time series Y_t if taking account of past values of X_t leads to improved predictions for Y_t . While causality is a complicated concept, it is clearly related in important ways to temporal precedence and to independence.

We test for Granger causality using the Haugh-Pierce Granger causality test. This variant for Granger causality testing is conducted by pre-whitening both series (to purge the series of any component that can be explained by its past) and looking at the correlations between innovations in the series at various lags (and leads) (Harvey 1993, 308). The use of fractional integration techniques to pre-whiten the series in Haugh-Pierce Granger causality tests addresses a major criticism against the Haugh-Pierce approach: “sensitivity to the particular prefilter chosen to implement the empirical analysis” (Feige and Pearce 1979, 532), thereby making this approach particularly attractive.¹³

¹²Although we understand that no methodology can verify causality in an epistemological sense, we can refute claims that series are independent and find supporting evidence for hypotheses about temporal ordering (see Kennedy 1993, 68).

¹³By jointly estimating the autoregressive and moving average components as well as d and providing standard errors for d , much of the “art” of Box-Jenkins analysis is removed, and thus the Haugh-Pierce procedures are put on a stronger foundation than was possible in the past. The cross-correlations between the disturbances in the univariate ARFIMA processes provide information on the Granger causality patterns between macropartisanship and macroideology because the disturbances are the components of series that cannot be predicted from their own past (Harvey 1993, 308). One looks for statistical significance of different lags of cross-correlations by comparing the sample estimate of the cross-correlation function with its (approximate) standard error: $1/\sqrt{T}$ where T is the length of the residualized series (Haugh 1976, 383).

Pre-whitening by the ARFIMA model results in the disturbances being white noise, which is a goal of filtering for Granger causality testing (see Harvey 1993, 307; Freeman 1983, 331 on the latter). Leaving the series in levels is unacceptable unless a (0,0,0) model is appropriate, which is unlikely (but see Williams (1992) for an argument about Bayesian approaches to vector autoregression analysis). Running the analysis with levels data has the predictable result of increasing the evidence for a relationship between the series. In this case, the components of the series that can be

The null hypothesis is that x and y are not causally related. If several cross correlations are $+/-2$ standard error limits, then there is a *lack* of Granger independence between the original series (Freeman 1983, 332). The Box-Ljung Q statistic is used to test the null hypothesis that the series are independent, that is, $+/-$ lags, which implies no relationship between ideology and partisanship.

We present the Q statistic for the Haugh-Pierce test and its level of significance for $k = 2, 4, 8,$ and 12 quarter lags in Table 2. These lag lengths represent both short- and long-term lags, and one should look for robust conclusions across the variety of lags. *Macropartisanship* is the dependent variable (and thus *macroideology* the independent variable), which simply affects the interpretation of the positive and negative lags, not the conclusions. Significance at positive lags indicates that partisan change causes ideological change. Similarly, significance at negative lags indicates that ideological change causes partisan change. The Q statistic for the combined positive and negative lags tests for independence between the series.

The Haugh-Pierce tests show no evidence that trends in macropartisanship and macroideology are related; this is consistent with the findings of Box-Steffensmeier, Knight, and Sigelman (1998). The independence of the series may be attributed to the looseness of the parties or the broad lack of political sophistication within the electorate.

We focus next on the education groups. Consistent with the hypothesis that less sophisticated adults do not connect partisanship and ideology, there is no evidence that those in the bottom two subgroups (no high school diploma and high school diploma only) connect partisan and ideological movements: the movements in both macropartisanship and macroideology occur independently.

We find increasing evidence that the series are not independent as we move to adults with some college education. Even after 3 years, movements in the series are related. The significance of both positive and negative lags (individually as well as jointly) suggests that neither series is temporally precedent. Instead, the relationship between the series appears to be reinforcing.¹⁴

predicted from their own past are not filtered out. Given the shared patterns in persistence in both series, failure to filter out the persistence will produce strong evidence for causality that is unwarranted. In contrast, repeating the analyses with differenced data, when d really should be fractionally differenced, results in overdifferencing and diminished evidence of a relationship. Appropriately filtering the series so that the researcher removes everything from the series that can be explained by the series itself, the cross-correlations then only relate to information about the relationship between innovations in the two series. Likewise, Freeman (1983) points out that differencing in order to satisfy the stationarity condition is unsatisfactory because researchers can actually destroy causal relationships (1983, 334). See Box-Steffensmeier, De Boef, and Lin (1997) for more technical details on fractional integration in the context of Haugh-Pierce Tests.

¹⁴To assess instantaneous causality, we examined the cross-correlations at lag 0 to see if the value is greater than $+/- 2$ standard deviations. The evidence for short lags was consistent with that in Table 2 for the aggregate and every subgroup.

TABLE 2
 Haugh-Pierce Granger Causality Tests—
 Macropartisanship and Macroideology

Dependent Variable: Macropartisanship	Lags	Q Values (significance levels in parentheses)		
		Positive Lags	Negative Lags	+/- Lags
Aggregate	k=2	0.61 (0.74)	1.09 (0.58)	4.69 (0.46)
	k=4	1.64 (0.80)	1.88 (0.76)	6.51 (0.69)
	k=8	9.27 (0.32)	4.56 (0.80)	16.81 (0.47)
	k=12	9.27 (0.68)	11.48 (0.49)	23.73 (0.53)
Group without a High School Education	k=2	1.51 (0.47)	1.83 (0.40)	3.34 (0.65)
	k=4	3.62 (0.46)	2.98 (0.56)	6.61 (0.68)
	k=8	9.57 (0.30)	3.90 (0.87)	13.47 (0.70)
	k=12	12.84 (0.38)	8.25 (0.77)	21.09 (0.69)
Group with a High School Education	k=2	3.94 (0.14)	1.43 (0.49)	9.62 (0.09)
	k=4	4.42 (0.35)	1.75 (0.78)	10.41 (0.32)
	k=8	11.73 (0.16)	4.19 (0.84)	20.18 (0.27)
	k=12	12.87 (0.38)	9.75 (0.64)	26.87 (0.36)
Group with Some College Education	k=2	1.25 (0.00)	3.02 (0.00)	5.49 (0.02)
	k=4	1.87 (0.00)	3.10 (0.00)	6.19 (0.29)
	k=8	8.11 (0.09)	6.74 (0.15)	16.08 (0.25)
	k=12	13.71 (0.09)	12.10 (0.15)	27.03 (0.17)
Group with a College Education	k=2	1.31 (0.00)	5.90 (0.00)	19.47 (0.00)
	k=4	2.59 (0.11)	7.78 (0.01)	22.63 (0.00)
	k=8	3.96 (0.56)	13.98 (0.02)	30.20 (0.01)
	k=12	5.91 (0.75)	17.33 (0.04)	35.50 (0.03)

The most educated portion of the electorate exhibits similar patterns in some important respects. First, partisan and ideological movements in this portion of the electorate are clearly linked. Even at very long lags, the movements in the ideological and partisan balances are not independent. The behavior of the most sophisticated portion of the electorate is also distinct from less sophisticated portions of the electorate. Individually, the positive lags are significant for the first 4 lags (about 1 year) (see column 1), indicating that movements in the partisan balance lead the ideological balance. However, over a period of 3 years there is strong evidence that the dynamics of the party balance respond to macroideology (significant values at negative lags; see column 2). Shocks to the balance of ideology play their way through the party system over a long period of time. This result fits nicely with our understanding of this historical period in which the Republican party reasserted its conservative roots and the party in the electorate gradually responded to accommodate this shift.

The evidence comports well with our hypothesis that the more politically sophisticated group is more likely to link partisanship and ideology over time. It is also consistent with Niemi and Weisberg's (1993) conclusion that there is "a continuum, with a small group at the very top in knowledge and sophistication, but only a small group as well who are totally uninformed" and "that this 'truism' applies to ideological thinking" (1993, 50) (see also Delli Carpini and Keeter 1994). Only the most educated segment of the mass public connects partisanship and ideology over time.

Conclusions

Our analysis reveals that the aggregate relationship between macropartisanship and macroideology belies the complex dynamics that underlie it. Focusing our attention on the dynamics of the mass public can result in an incomplete understanding of political dynamics and the malleability of public opinion so that much of what matters in politics is lost to the analyst.

The fact that even in the ripe era of the 1980s there was no aggregate relationship between the macropartisanship and macroideology suggests that political elite efforts at linking ideology and partisanship are not affecting the behavior of the mass public. However, for the politically sophisticated group, there was a connection between macropartisanship and macroideology. An area for future research is to identify the factors that contribute to change in both series.

Citizens whose ideology and partisanship are tightly linked are a relatively small and generally stable segment of the electorate; but when they do change political orientations, both their partisanship and their ideology move together. What is important is that these citizens are also the most likely to vote. In this sense, the incentive for politicians to link popular ideological sentiment with partisanship is strong.

The findings are also evidence of an exclusive process: the least sophisticated groups are left out of an important political dialogue. This inattentive public shows much wider gaps between ideology and partisanship series and no relationship between the two. If the preferences of the inattentive groups are not different from those held by a majority, then the process may be an efficient one. However, if their preferences are distinct, then only a portion of the mass public is being represented. The lack of even a mild correlation across the groups, for example, provides evidence to suggest that the most politically sophisticated are different, which highlights democratic theory questions about what and who are being represented.

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References

- Abramson, Paul R., and Charles W. Ostrom. 1991. "Macropartisanship—An Empirical Reassessment." *American Political Science Review* 85(1): 181–92.
- Achen, Christopher H. 1975. "Mass Political Attitudes and the Survey Response." *American Political Science Review* 69(4): 1218–1223.
- Allsop, Dee, and Herbert F. Weisberg. 1988. "Measuring Change in Party Identification in an Election Campaign." *American Journal of Political Science* 32(4): 996–1017.
- Baillie, Richard T. 1996. "Long Memory Processes and Fractional Integration in Econometrics." *Journal of Econometrics* 73(1): 5–59.
- Barkoulas, John T., Christopher F. Baum, and Mustafa Caglayan. 1999. "Fractional Monetary Dynamics." *Applied Economics* 31, December: 1393–1400.
- Box-Steffensmeier, Janet M., Suzanna De Boef, and Tse-Min Lin. 1997. "The Dynamics of the Gender Gap." Paper presented at the annual meeting of the American Political Science Association, San Francisco.
- Box-Steffensmeier, Janet M., and Renee M. Smith. 1996. "The Dynamics of Aggregate Partisanship." *American Political Science Review* 90(3): 567–80.
- Box-Steffensmeier, Janet M., and Renee M. Smith. 1998. "Investigating Political Dynamics Using Fractional Integration Methods." *American Journal of Political Science* 42(2): 661–89.
- Box-Steffensmeier, Janet M., Kathleen Knight, and Lee Sigelman. 1998. "The Interplay of Macropartisanship and Macroideology: A Time Series Analysis." *The Journal of Politics* 60(4): 1044–62.
- Campbell, Angus, Phillip E. Converse, Warren E. Miller, and Donald E. Stokes. 1960. *The American Voter*. New York: John Wiley and Sons.
- Conover, Pamela, and Stanley Feldman. 1981. "The Origins and Meaning of Liberal and Conservative Self-Identifications." *American Journal of Political Science* 25(4): 617–45.
- Converse, Philip E. 1964. "The Nature of Belief Systems in Mass Publics." In *Ideology and Discontent*, ed. David E. Apter. New York: Free Press of Glencoe.
- De Boef, Suzanna. 1994. Partisanship: Linking Individual and Aggregate Behavior. Ph.D. dissertation, University of Iowa.
- De Boef, Suzanna, and James Granato. 1997. "Near-Integrated Data and the Analysis of Political Relationships." *American Journal of Political Science* 42(2): 619–40.
- De Boef, Suzanna, and James A. Stimson. 1995. "The Dynamic Structure of Congressional Elections." *Journal of Politics* 57(3): 630–44.
- Delli Carpini, Michael X., and Scott Keeter. 1994. "The Public's Knowledge of Politics." In *Public Opinion, the Press, and Public Policy*, ed. J. David Kenamer. Westport, CT: Praeger.
- Durr, Robert H. 1993. "What Moves Policy Sentiment?" *American Political Science Review* 87(1): 158–70.
- Eisinga, Rob, and Philip Hans Franses. 1996. "Testing for Convergence in Left-Right Ideological Positions." *Quality & Quantity* 30(4): 345–59.
- Eisinga, Rob, Philip Hans Franses, and Marius Ooms. 1997. "Convergence and Persistence of Left-Right Political Orientations in the Netherlands 1978–1995." Unpublished manuscript: University of Nijmegen.
- Erikson, Robert S., and Christopher Wlezien. 1999. "Presidential Polls as a Time Series: The Case of 1996." *Public Opinion Quarterly* 63(2): 163–77.
- Erikson, Robert S., Michael MacKuen, and James Stimson. N.d. *The MacroPolity*. New York: Cambridge University Press. Forthcoming.
- Feige, Edgar L., and Douglas K. Pearce. 1979. "The Causal Relationship Between Money and Income: Some Caveats for the Time Series Analysis." *The Review of Economics and Statistics* 61(4): 521–33.
- Fiorina, Morris P. 1988. "The Reagan Years: Turning to the Right or Groping Toward the Middle?" In *The Resurgence of Conservatism in Anglo-American Democracies*, ed. Barry Cooper, Allan Kornberg, and William Mishler. Durham, NC: Duke University Press.

- Freeman, John R. 1983. "Granger Causality and the Time Series Analysis of Political Relationships." *American Journal of Political Science* 27(2): 327–358.
- Gold, Howard J. 1992. *How Mandates: American Public Opinion and the Conservative Shift*. Boulder, CO: Westview Press.
- Granger, C. W. J. 1969. "Investigating Causal Relations by Econometric Models and Cross-Spectral Models." *Econometrica* 37(3): 424–38.
- Harvey, Andrew. 1993. *The Econometric Analysis of Time Series*. 2nd ed. Cambridge: MIT Press.
- Hassler, Uwe, and Jurgen Wolters. 1995. "Long Memory in Inflation Rates: International Evidence." *Journal of Business and Economic Statistics* 13(1): 37–46.
- Haugh, Larry D. 1976. "Checking the Independence of Two Covariance Stationary Time Series: A Univariate Residual Cross-Correlation Approach." *Journal of the American Statistical Association* 71(3): 378–85.
- Haynes, Stephen E., and David Jacobs. 1994. "Macroeconomics, Economic Stratification, and Partisanship: A Longitudinal Analysis of Contingent Shifts in Political Identification." *American Journal of Sociology* 100(1): 70–103.
- Inglehart, Ronald, and Hans D. Klingemann. 1976. "Party Identification, Ideological Preference and the Left-Right Dimension among Western Mass Publics." In *Party Identification and Beyond. Representations of Voting and Party Competition*, ed. Ian Budge, Ivor Crewe, and Dennis Farlie. London: Wiley.
- Judd, Charles, Jon Krosnick, and Michael Milburn. 1981. "Political Involvement and Attitude Structure in the General Public." *American Sociological Review* 46(5): 660–69.
- Kennedy, Peter. 1993. *A Guide to Econometrics*. Cambridge: MIT Press.
- Knight, Kathleen. 1985. "Ideology in the 1980 Election: Political Sophistication Matters." *Journal of Politics* 47(3): 828–53.
- Knight, Kathleen, and Robert S. Erikson. 1997. "Ideology in the 1990s." In *Understanding Public Opinion*, ed. Barbara Norrander and Clyde Wilcox. Washington, DC: Congressional Quarterly Press.
- Knoke, David, and Michael Hout. 1974. "Social and Demographic Factors in American Political Party Affiliations, 1952–1972." *American Sociological Review* 39(5): 700–713.
- Lane, Robert E. 1962. *Political Ideology*. New York: Free Press.
- Lebo, Matthew J., Robert W. Walker, and Harold D. Clarke. 2000. "You Must Remember This: Dealing with Long Memory in Political Analyses." *Electoral Studies* 19(1): 31–48.
- Levitin, Teresa E., and Warren E. Miller. 1979. "Ideological Interpretations of Presidential Elections." *American Political Science Review* 73(3): 751–71.
- Luskin, Robert C. 1987. "Measuring Political Sophistication." *American Journal of Political Science* 31(4): 856–99.
- Luskin, Robert C. 1990. "Explaining Political Sophistication." *Political Behavior* 12(4): 331–61.
- Luttbeg, Norman R., and Michael M. Gant. 1985. "The Failure of Liberal-Conservative Ideology as a Cognitive Structure." *Public Opinion Quarterly* 49(1): 80–93.
- MacKuen, Michael B., Robert Erikson, and James Stimson. 1989. "Macropartisanship." *American Political Science Review* 83(4): 1125–42.
- Mayer, William G. 1993. *The Changing American Mind: How and Why American Public Opinion Changed Between 1980 and 1988*. Ann Arbor: University of Michigan Press.
- Niemi, Richard G., and Herbert F. Weisberg. 1993. *Classics in Voting Behavior*. Washington, DC: Congressional Quarterly Press.
- Parker, Glenn R. 1979. "Trends in Party Preferences." *American Politics Quarterly* 7(2): 132–46.
- Pierce, David A., and Larry D. Haugh. 1977. "Causality in Temporal Systems: Characterizations and a Survey." *Journal of Econometrics* 5(3): 265–93.
- Pierce, John C. 1970. "Party Identification and the Changing Role of Ideology in American Politics." *Midwest Journal of Political Science* 14(1): 25–42.
- Robinson, John P. 1984. "The Ups and Downs, and Ins and Outs of Ideology." *Public Opinion* 7(1): 12–15.

- Smith, Eric R. A. N. 1989. *The Unchanging American Voter*. Berkeley: University of California Press.
- Sniderman, Paul M. 1993. "The New Look in Public Opinion Research." In *The State of the Discipline II*, ed. Ada W. Finifter. Washington, DC: American Political Science Association.
- Sowell, Fawell. 1989. "Maximum Likelihood Estimation of Fractionally Integrated Time Series Models." Typescript. Pittsburgh: Carnegie Mellon University.
- Stimson, James A. 1975. "Belief Systems: Constraint, Complexity, and the 1972 Election." *American Journal of Political Science* 19(3): 393–417.
- Stimson, James A. 1991. *Public Opinion in America: Moods, Cycles, and Swings*. Boulder, CO: Westview Press.
- Stimson, James A., Michael B. MacKuen, and Robert S. Erikson. 1995. "Dynamic Representation." *American Political Science Review* 89(3): 543–65.
- Weisberg, Herbert F., and Chuck Smith, Jr. 1991. "The Influence of the Economy on Party Identification in the Reagan Years." *Journal of Politics* 53(43): 1077–1092.
- Williams, John T. 1992. "Dynamic Change, Specification Uncertainty, and Bayesian Vector Autoregression Analysis." In *Political Analysis*, vol. 4, ed. John Freeman. Ann Arbor: University of Michigan Press.
- Zaller, John R. 1992. *The Nature and Origins of Mass Opinion*. Cambridge, MA: Cambridge University Press.

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