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Instrumental Variables*

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Estimating the Effect of Elite Communications on Public Opinion Using Instrumental Variables

Abstract

A central question in the study of democratic polities is the extent to which elite opinion about public policy shapes and potentially manipulates public opinion on those issues. Existing empirical estimates of the effect of elite communication on individual opinion formation are, however, characterized by a number of serious methodological problems, and consequently, there is little in the way of compelling evidence that elites actually influence individual opinions. This paper proposes an identification strategy for estimating the causal effect of elite messages on public support for European integration employing instrumental variable estimation. The paper presents three main empirical results. First, we find that more negative elite messages about European integration do indeed decrease public support for Europe. Our analysis suggests that OLS estimates that ignore the endogeneity, omitted variables, and measurement problems that typically occur in estimating the effects of elite communication are biased, underestimating the magnitude of the effect of elite messages by fifty percent. Second, we find no evidence that this effect of elite messages varies for more politically aware individuals. Third, our estimates are inconsistent with a mainstreaming effect in which political awareness increases support for Europe in those political settings in which elites have a favorable consensus on the benefits of integration. This result is in sharp contrast to the OLS analysis that incorrectly suggests a mainstreaming effect.

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1 Introduction

The relationship between mass and elite opinion is a central issue to the study of voting behavior, parties and elections, public opinion, and representation in democratic systems. For a variety of theoretical reasons, scholars expect elite opinion to affect mass attitudes and behavior. The literatures on priming, persuasion, and cue-taking all offer theoretical accounts about how elite opinion shapes how voters approach public policy issues and what attitudes they adopt. In contrast, much of the theoretical literature on representation and electoral competition tells the opposite story: party and elite policy positions respond to voter policy preferences.

This reciprocal relationship raises fundamental methodological problems in attempting to isolate empirically the effect of elite communication on public opinion. While a great deal of research has recognized and attempted to address this problem (for further discussion and examples, see e.g. Bartels 1993; Gerber and Jackson 1993; Sigelman and Rosenblatt 1996; and Kinder 1998), the extant solutions have serious limitations. Time-series analyses designed to exploit temporal dynamics neither solve the endogeneity problem if elites correctly anticipate mass opinion nor account for omitted variables that might jointly determine both public and elite opinion. Experimental methods often cannot examine the elite-mass linkages that theories of elite communication and persuasion imply and the external validity of the findings is an open question.

This methodological problem has gained recent attention in the literature on public support for European integration. Traditionally, the lack of public interest in and knowledge of issues regarding European integration led scholars to characterize mass opinion as derivative of elite opinion. But Carrubba's (2001) study fundamentally challenged this conventional wisdom. He found that mass opinion has a direct effect on party position on European integration. More generally, his work highlighted the difficulty in estimating the elite effect on public support for

integration for the methodological reasons described above. Consequently, whether and to what extent elites have any impact on public opinion about Europe is unknown.

The arguments tested in this paper assess the effects of one particular characteristic of elite messages—the extent of elite consensus—on public opinion in the specific context of European integration. When an elite consensus exists in the member countries of the European Union, it is favorable. Consequently, decreasing consensus or increasing polarization implies less favorable elite messages about Europe. If these communications affect mass opinion, the simplest effect of increasing polarization is for those less favorable messages to reduce public support for European integration. The existing public opinion literature suggests, however, that this effect may depend on the characteristics of individuals. Specifically, it will be only those politically aware individuals who are likely to be exposed to and understand elite messages that are influenced by these communications. Finally, a related argument is that of mainstreaming effects. Zaller (1992: 99) predicts that, when elites agree on a policy question, the level of support for the elite position will increase with levels of political awareness. This suggests that political awareness should increase support for European integration in those countries with a pro-integration elite consensus but that this relationship should weaken as elites become more polarized.

Evaluation of these arguments involves estimating the effect of elite consensus on individual opinion formation and thus faces many of the methodological problems characterizing the literature on the impact of elite communications on public opinion generally. Endogeneity is an obvious concern as changes in elite messages may be responses to changes in the public's evaluations. Alternatively, elites and the public may simply be responding to similar stimuli consistent with the standard omitted variables concern. Measurement error in different operationalizations of elite consensus is also likely to be an important problem.

This paper proposes an identification strategy for estimating the causal effect of elite consensus on public support for European integration employing observational data and instrumental

variable estimation. Specifically, we test the three arguments outlined above about the impact of elite messages on public support for European integration by instrumenting for the relevant features of communication using changes in the salient characteristics of national electoral systems. The paper presents three main empirical results. First, we find that more negative elite messages about European integration do indeed decrease public support for Europe. Our analysis suggests that OLS estimates that ignore the endogeneity and omitted variables problems in estimating the effects of elite communication are biased, underestimating the magnitude of the effect of elite messages by fifty percent. Second, we find no evidence that this effect of elite messages varies for more politically aware individuals. Third, our estimates are inconsistent with a mainstreaming effect in which political awareness increases support for Europe in those political settings in which elites have a favorable consensus on the benefits of integration. This result is in sharp contrast to the OLS analysis that incorrectly suggests a mainstreaming effect.

The remainder of the paper is divided into four sections. The next section defines the problem of estimating the impact of elite communications on mass public opinion. The following section develops our arguments about the expected effects of variation in elite consensus on public support for European integration. The fourth section introduces the data used to test these arguments, proposes a set of instrumental variables to address the possibility that elite messages may be endogenous to mass opinions, and finally reports the empirical findings. The final section of the paper concludes.

2 Elite Influence on Public Opinion: The Problem

Questions related to whether and how elites influence mass opinion about politics have been a central concern of social scientists since at least the beginning of the 20th century. Increased literacy, the development of radio and television technologies, and the spread of democratic political regimes led all students of politics including the practitioners themselves to be keenly

interested in how elite political communications affected the political opinions and behavior of citizens. It is well beyond the scope of this paper to review the development of the massive body of research that engages these questions (for reviews, see e.g. Mutz, Sniderman, and Brody 1996; Kinder 1998; Druckman and Lupia 2000). We do, however, want to highlight a set of widely recognized methodological problems in this literature that has significantly limited how much is actually known about how elites affect mass political opinions.

Since there are hundreds of different theories about how elites affect the political opinions of citizens, we begin by simply describing a general form shared by many of these theories. The generic argument defines some form of elite *communication* that is hypothesized to affect some specific aspect of individual *opinion*. Thus, empirical studies generally attempt to estimate the effect of *communication* on *opinion*. For example, studies of priming are interested in whether media attention to certain issues (*communication*) leads citizens to evaluate candidates based on those issues (*opinion*) (e.g. Iyengar and Kinder 1987). Similarly, studies of persuasion often focus on whether variation in characteristics of the source of information (*communication*) affect the degree to which citizens are persuaded (*opinion*) (e.g. Lupia and McCubbins 1998). And, studies of political parties and electoral competition examine how the polarization of the party system (*communication*) activates voter partisanship and shapes voting behavior (*opinion*) (Hetherington 2001).

The natural starting point for estimating the effect of elite communication on mass political opinion is estimates of the contemporaneous (partial) correlation between some measure of the former and the later. These correlations, however, may be poor estimates of the causal effect of elite communication on opinion for numerous reasons including poor measurement of the theoretical concepts (measurement error), failure to account for other unobserved or unmeasured determinants of opinion (omitted variable bias), and ignoring the possibility that *opinion* may be an important determinant of *communication* (endogeneity). In short, estimating the effect

of elite communication on mass political opinion using contemporaneous (partial) correlations is especially vulnerable to the usual limitations of cross sectional analysis of observational data.

These problems are widely recognized by public opinion scholars and have been so from a very early stage in the development of the literature (see e.g. Bartels 1993; Gerber and Jackson 1993). Setting aside, for the moment, the problem of measurement error, we focus on considering the methods used by researchers to address the problems of omitted variable bias and endogeneity for making reliable inferences about the impact of elites on mass opinion. The endogeneity problem is straightforward. Most studies of political competition assume that candidates for political office take positions on policies in order to maximize their vote shares. In this common framework, any correlation between elite and mass policy opinions is determined by the influence of public opinion on elite policy positions rather than the reverse. For many problems investigated in the literature on elite communication, it would be surprising if the public was not exercising at least some influence on elites. To the extent that this is even partially true, estimates of the effect of elite communication on mass opinion from contemporaneous correlations are biased and inconsistent.

The omitted variable problem in the cross-sectional setting is also straightforward. Evidence of a contemporaneous (partial) correlation between elite messages and opinion on a policy issue may be simply due to the fact that the researcher has failed to measure or cannot observe how the objective costs and benefits of policy alternatives vary across cases. These factors surely influence elite and public assessments of policies and thus their omission may often lead researchers to find elite effects where there are none.

The two most common solutions to these problems have been the use of time series analyses and survey/laboratory experiments. Time series analyses attempt to solve ambiguity about the direction of causation by looking at the timing of changes in elite messages and public opinion. Do elite *communications* lead public *opinions*? This strategy is a clear improvement

on cross-sectional research designs but has at least two limitations. First, elites may appear to lead mass opinion simply because they correctly anticipate changes in opinion rather than cause them. Second, time series analyses do little to address the omitted variables problem. Elite and mass opinions may change roughly at the same time in response to changes in the political environment. For example, approval of engagement in a foreign war may change among elites and the public as a consequence of changes in events/expectations about the costs and benefits of the conflict (Berinsky 2004). Many of these time-varying omitted factors may be difficult or impossible to measure and control for.

The most common alternatives to cross-sectional or time series observational studies are laboratory and survey experiments. These experiments are not subject to endogeneity and omitted variable bias problems because there is experimental control of political *communications* from elite sources. For the most part, the internal validity of these studies is quite sound and this approach has been the source of most of what has been learned so far about the empirical effects of elite *communications* on *opinion*.

The main limitations of the laboratory and survey experimental studies are that it is not clear whether the results generalize to the natural political environments in which elites and the public interact and further that the experiments actually test the most important theories of elite opinion leadership. The first point is simply the well known problem of external validity in laboratory and survey experimentation. For example, a laboratory experiment might provide solid evidence that the content of an experimentally controlled newscast changes the criteria subjects use in assessing political candidates (priming effects) but this is not direct evidence that the content of actual newscasts primes voters. Druckman (2004) shows that experimental results about elite effects on public opinion are highly sensitive to the specification of the character of elite competition and voter deliberation. Indeed, he finds that many experimental framing effects disappear when the experiment is modified to incorporate more realistic assumptions

about the elite informational environment.

The second limitation of laboratory and survey experimentation is that many of the theories to be tested involve patterns of elite communication that are difficult if not impossible to replicate in a lab or survey questionnaire. In particular, theories that depend on general characteristics of the informational environment are virtually impossible to directly test in a laboratory or survey setting. One such example discussed in greater detail below may be claims about the effect of elite consensus about policy issues on individual opinion formation. It is arguably not possible to replicate the preponderance of elite messages in a lab or survey. Failure to do so, however, means that at least the most direct observable implications of many theories about the effects of elite consensus cannot be evaluated with these methodologies.

Another alternative research design to estimate the effect of elite political communications on public opinion are field experiments. This approach has all the advantages discussed above for laboratory and survey experiments but with fewer questions about the external validity of the findings (Green and Gerber 2002). While much more could be learned about the effects of elite communications on mass opinion from more field experimentation, it again seems likely that many of the theories to be tested involve patterns of elite communication that cannot be experimentally manipulated in a way directly consistent with the theoretical arguments. The degree of elite consensus on issues of national importance is arguably one such pattern of communication.

The general problem addressed in this paper is how to generate more reliable estimates of the effect of elite political *communications* on public *opinions*. We are specifically interested in producing better estimates using observational data for which endogeneity, omitted variable bias, and measurement error are salient concerns. Our approach is to argue that theories of electoral systems and electoral competition suggest a number of potentially valid instrumental variables that are correlated with variation in key dimensions of elite *communication* but are

otherwise uncorrelated with the specific aspects of *opinion* thought to be affected by elites. Instrumental variable (IV) estimation purges the potentially endogenous regressor—in our case *communication*—of variation that is not a function of exogenous variables. IV estimates can also eliminate bias due to omitted variables and measurement error.

IV estimation is not, however, a costless solution to the methodological problems facing researchers interested in the causal effects of elite communications on public opinion. IV estimates are inefficient compared to ordinary least squares estimation and can be badly biased if the assumptions of the model are violated (see e.g. Bartels 1991). Moreover, experimental approaches, despite the limitations discussed earlier, will typically constitute an important component of a compelling research design for many substantive questions in this literature. The claim of this paper is simply that IV research designs provide a viable, but to date, underemployed strategy for estimating the effects of elite political communications on public opinions particularly for those theories of communication that emphasize characteristics of the overall informational environment that cannot be easily manipulated in any type of experiment. The next section introduces the specific empirical problem addressed in the paper.

3 Elite Communication and Support for Europe

In this paper, we estimate the effect of elite communications on public support for membership in the European Union (EU) among the national publics of the EU. We focus on public opinion on this policy—membership in the European Union—for three reasons. First, EU citizens do not appear to treat this policy as a “motherhood issue.” Many previous studies show sometimes dramatic public disagreement on this issue and some evidence of popular reluctance to follow elite opinion (e.g. Franklin, Marsh, and McLaren 1994). Zaller (1992: 100) argues that these conditions are particularly appropriate for testing the effects of elite messages on mass opinion. Second, previous studies indicate that the national political environments, both in terms of

media coverage and political party competition, vary in the mean and variance of support for EU membership (Ray 1999; Banducci, Karp, and Lauf 2002; Peter, Semetko, and de Vreese 2003). Third, public opinion survey data and information about the national political environments are available for multiple years and countries. Given the myriad of national and temporal factors that might affect public opinion on a policy issue, these data allow us to control for a variety of potentially confounding factors.

Existing Literature

While a great deal has been written about public opinion on membership in the EU, only a handful of studies have addressed how elites shape mass opinion. A long research tradition characterizes European integration as an elite-driven enterprise executed before an uninterested and poorly informed public (e.g., Lindberg and Scheingold 1970). In this context, scholars have often attributed variation in public opinion to cue-taking from party elites. One argument is that voters evaluate membership through their attachment or appraisal of the governing parties. Franklin, Marsh, and McLaren (1994), Gabel (1998a), Ray (2003a), and Hooghe and Marks (forthcoming) present evidence that public support for EU membership varies with citizens' support for the incumbent party. A second argument is that parties take public positions on European integration and voters cue off the position of their favored party. Gabel (1998a, 1998b), Wessels (1995), and Steenbergen and Jones (2002) show evidence that voters' opinions vary with their partisanship. Ray (2003b) evaluates the effect of party positions on partisans' support for European integration across four points in time when experts were surveyed about party positions on integration. He finds that party positions correlate with their partisans' opinions on European integration, and that this effect increases with the unity of the party position, the strength of the voter's partisan attachment, and the level of variation in party positions.

However, all of these studies suffer from the methodological problems highlighted above. For example, most of these studies present cross-sectional evidence that party positions relate to their voters' positions, but the partial correlations presented may well be biased by omitted factors. One indication that this might be the case is that the studies do not demonstrate that changes in party cues affect changes in public opinion. In fact other studies have shown this not to be the case. Evans (1998, 2002) uses panel surveys of British voters to demonstrate that partisans did not change their positions on issues of European integration when they perceived their parties to have shifted on these issues. The problem of reverse causality is also acute in the literature on cue-taking and support for European integration. If voters' opinions on integration affect the positions parties take on the issue, then findings of a linkage between party and voter positions on this issue cannot be clearly attributed to cue-taking. Several studies have shown evidence that this methodological concern is pertinent. Medrano (2003) uses qualitative studies of elites and citizens to show that the relationship is reciprocal. He concludes that, while elites may largely define the public discourse, the public does not simply echo elite concerns regarding integration (Medrano 2003: 256). Carrubba (2001), using an instrumental variable for voters' opinions, demonstrates that national parties have changed their positions on integration in response to the opinions of their electoral base.¹

Very few studies have investigated how the broader informational environment affects mass opinions toward the EU. Norris (2000) has shown that the tone of newspaper coverage of monetary union affects mass attitudes toward monetary union specifically and EU membership more generally. Banducci, Karp, and Lauf (2002) examined whether television coverage of political

¹Note that in his estimates of cue-taking Ray (2003b) recognizes the problem that party positions may be endogenous and employs an IV estimation to address the problem. The analysis does not, however, present a valid test of whether the instrument is correlated with the endogenous regressor and the paper makes implausible assumptions for the exclusion restrictions (in fact, replication of the analysis shows that it fails a specification test evaluating the assumption that the overidentification assumptions are valid). While these issues are not critical for the research presented in this paper, it is important to keep in mind that, as discussed below, Ray's analysis does not treat elite polarization as endogenous.

parties affected public opinion on European integration during the 1999 European elections campaign. Specifically, they focused on how media coverage conditions the effect of party cues on public opinion as the level of elite consensus varies. They measured consensus with expert surveys—the same surveys that we use in the next section—but they also ignore the identification problems discussed above.

Perhaps most relevant to our analysis, Ray (2003b) evaluated whether elite consensus in terms of party positions affects support for European integration. Specifically, he tests an “elite consensus” hypothesis that the effect of party positions on their partisans’ opinions of integration will increase as the variation in party positions in a nation increases. This is not the same as the hypotheses we examine though we are interested in the effects of elite consensus. His test does, however, raise relevant measurement and methodological questions for our study. First, he measures the level of elite consensus by calculating the standard deviation of party positions—as defined by an expert survey—in a nation in a year. As we will employ the same data in our analysis, we defer further description of the expert survey. But it is important to note that Ray (2003b) did not examine the validity of this measure. We can imagine other measures of the level of consensus in the political environment on this issue and we would like to identify a valid measure for a test of the effects of elite consensus. Second, Ray (2003b) treats the level of elite consensus as exogenous to public opinion. As discussed above, this is probably unwarranted, as parties may become more polarized about this issue due to anticipation of changes in citizens’ opinions about integration or simply because they (and the public) are responding to new (and omitted) stimuli in the political environment.² Consequently, we assume rather that the degree of consensus in party positions on European integration and public opinion on integration are jointly determined.

²Note that Hooghe and Marks (forthcoming) follow Ray’s measurement strategy and estimate the direct effect of elite consensus on public support for integration, hypothesizing that greater elite divisions are associated with less support. They find that elite divisions have a strong impact on public support.

Theoretical Framework

Given the vast literature on political communications generally and the research described above on elite effects on public support for Europe more specifically, there are a wide array of ideas about precisely how elites influence public opinion about European integration that we might want to examine. Our analysis focuses on three specific elite effects, all of which are related to the impact of elite consensus or polarization about Europe on individual support for integration.

Standard arguments about the effects of elite communication suggest that support for integration should decline as the elite consensus supporting integration weakens. When elites send a consistent and positive message, we expect the mass public to express more favorable attitudes toward integration than when the public is exposed to a heterogenous set of elite messages. In practice, the only elite consensus about Europe has been favorable. Thus, increasing polarization in this context means less favorable messages about Europe which we hypothesize decrease public support for integration. This is the most direct form of elite influence on public opinion and has informed the work of public opinion and communication scholars from at least Lippmann (1922) forward.

The work of Zaller (1992) and others suggests that the impact of elite messages on individual opinion formation may depend on various individual characteristics. Zaller, in particular, focuses on how the influence of elite communications depend on an individual's level of political awareness. Political awareness means the ability of the survey respondent to receive and understand information, messages, and cues from the elite-driven informational environment. Zaller's model is rich with implications for opinion formation about European integration but we focus our attention on just two which constitute our second and third hypotheses about the effects of elite consensus and polarization on public support for Europe.

The second hypothesis that we evaluate is based on Zaller's argument that elite communi-

cations are likely to have little effect on an individual's policy opinions if the individual does not receive or understand the message. Zaller (1992: 42) states that "the greater a person's level of cognitive engagement with an issue, the more likely he or she is to be exposed to and comprehend—in a word, to receive—political messages concerning the issue." This implies that consistent elite messages supporting a policy position will only affect voters who are politically aware. For the case of support for European integration, this suggests that the negative effect of elite polarization on opinion discussed above is limited to or at least substantially larger for politically aware respondents who are likely to be exposed to and understand elite messages.

Finally the third hypothesis that we evaluate is that citizens' support for European integration should increase with their level of political awareness when elites have a supporting consensus. Zaller argues that the effect of elite consensus on mass opinion is stronger among politically aware than among politically unaware voters. In an informational setting where elites primarily send the same message, Zaller (1992) predicts a "mainstream effect" of elite communication. Specifically, Zaller (1992: 98) predicts that, "...the greater a person's level of political awareness, the greater the number of mainstream messages the person would internalize in the form of considerations and hence, all else equal, the greater the person's level of expressed support for the mainstream policy." Further, he suggests that "if the mainstream argument is correct, correlations between awareness and support for a policy should be strongest when elite consensus is strongest and less strong when elite consensus is less strong or non-existent" (Zaller 1992: 99). This has clear implications in the context of public support for integration. In those countries with broad support for integration among the major political parties and elites, we expect politically aware EU citizens to express greater support for integration than the less politically aware. This effect is likely to decline if not disappear all together as elites become more polarized about integration.

To summarize, we evaluate three hypotheses about how elite communications affect public

support for European integration:

Hypothesis 1: Elite polarization about European integration implies more negative elite messages which have a negative effect on public support for Europe.

Hypothesis 2: The negative effect of increased elite polarization about European integration on support for Europe holds only for politically aware citizens who are likely to be exposed to and understand elite messages.

Hypothesis 3: Political awareness increases support for Europe when an elite consensus exists—a mainstreaming effect—but does not as polarization increases.

4 Support for the European Union

Data and Model

Our analysis employs data at the individual and the national level. We use the Eurobarometer survey to measure public opinion toward the EU, political awareness, and other individual-level controls. We use expert survey data to measure the degree of elite consensus in each national political environment. While we expect that some Europeans may receive politically meaningful messages from sub-national and supranational sources, we assume that the primary venue for political discourse on this topic in the EU member-states is national. Since EU membership is a national policy, we believe this assumption is warranted.

We restrict our analysis to the two standard Eurobarometer surveys conducted in the years corresponding to the expert survey: 1984, 1988, 1992, 1996, and 1999. The dependent variable, *Europe*, is defined based on answers to the following question asked in all ten surveys:

Generally speaking, do you think that (your country's) membership of the European Community [common market] is: (1) a bad thing, (2) neither good nor bad, or (3) a good thing.

For the more recent surveys, “European Union” replaced “European Community [common market].” This variable measures support for the policy of interest here: membership in the European Union. While European integration involves more than just the EU—i.e., Europe has integrated politically and economically through other organizations—the EU is far and away

the most profound and the broadest example of integration. Thus support for the policy of EU membership is support for European integration. Not surprisingly, previous research shows that responses to this question also reflect respondents' support for integration generally and support for a variety of specific policy components of EU membership (Gabel 1998a; Gabel 1998b).

The main independent variables in this study are elite polarization and political awareness. We measure elite polarization with data from an expert survey conducted by Gary Marks, Marco Steenbergen, David Scott and Carole Wilson in 1999, which extends a survey by Leonard Ray (1999).³ The survey asked country experts to evaluate the nation's political parties' positions on European integration in 1984, 1988, 1992, 1996, and 1999. All nations except Luxembourg were included. Based on the average expert evaluation, each party was assigned a score, ranging from 1-7, where 1 represents strong opposition to integration and 7 represents strong support.

We want to use these data to construct a valid measure of the level of elite—not simply political party—consensus regarding European integration. We considered three possibilities: the range of party positions, the standard deviation of party positions, and the weighted standard deviation, which weights by the most recent vote percent of each party. Conceptually, we prefer the weighted standard deviation, as we would expect that all parties do not have an equal impact on the informational environment and that their impact should increase with their electoral success.⁴

To examine the validity of these different measures empirically, we estimated the correlation between the three possible measures and an independent measure of elite consensus. In 1996, the European Commission executed an elite survey called “The Top Decision-Makers” (TDM) Survey.⁵ This survey included elected politicians, senior civil servants, business and labor lead-

³The data are available at: <http://www.unc.edu/~gwmmarks/>.

⁴Following Warwick (1994), we calculate the weighted standard deviation for each nation as $\sqrt{\sum_i^n v_i (x_i - \bar{x})^2}$ where v_i is the party's vote share, x_i is the party's position on Europe, and \bar{x} is the mean position of all the parties in a given country.

⁵Flash Eurobarometer No. 39, February/March 1996.

ers, media leaders, and persons playing leading roles in the academic, cultural or religious life of their countries. The study consisted of 3500 interviews designed to provide a representative sample by type of elite within each country and with an equal number of interviews in each category of elites. That is, within a group (e.g., elected politicians) the study used a representative sample. Thus, the weighting scheme we used with the party data is unnecessary here.⁶ All elites interviewed were asked the same survey question as the one we use for our dependent variable. This elite survey, therefore, provides information about a broad range of elite opinion, not just political parties. If this survey had been administered over time, it would provide an attractive measure of elite consensus.

The single survey does, however, allow us to evaluate the validity of the different measures constructed from the expert survey of party positions. Specifically, we estimated the correlation between the aforementioned three measures and the standard deviation of a nation's elite opinion about EU membership derived from the TDM survey for the fourteen countries of the expert survey regarding party positions. The weighted standard deviation performed the best, with a 0.53 correlation. The correlation for the standard deviation of party positions was 0.13. The correlation for the range of party positions was 0.50.⁷ These results indicate that the weighted standard deviation, which we labelled *Elite Polarization*, serves as a reasonable proxy for the level of elite consensus.⁸

Figure 1 presents the relationship between the level of consensus and the mean level of

⁶We could not weight by party in any event. The survey does not identify the elites interviewed or their party affiliation.

⁷We also examined the correlations between these three measures and the variation in party positions reflected in their election manifestos (Budge, Klingemann, Volkens, Bara, and Tanenbaum 2001). Following Carrubba (2001), we subtracted the percent of negative from the percent of positive statements about the European Community (or European Union) in each party's manifesto and used that to estimate the weighted standard deviation in party positions in each member-state. The correlation between the variation in party positions from the expert survey and variation in party positions from the most recent manifestos was highest for the weighted standard deviation of party positions.

⁸Note that the study by Ray (2003b), which is the only other study to use party positions to measure elite consensus, used the simple standard deviation, which performed the worst of the three measures.

support.⁹ A key assumption in our empirical analysis is that when a national informational environment approaches or arrives at a one-message setting, that one-message or mainstream position is pro-EU, and thus that increasing polarization implies more negative elite messages about Europe. Figure 1 shows that as the level of consensus increases (i.e., the weighted standard deviation decreases) the weighted mean level of party support for the EU increases. Indeed, for all national contexts with a level of elite polarization lower than one, the mean position is never less than five. On the 1-7 scale of the expert survey, a four is neutral and higher values are positive appraisals of EU membership. Thus, all of these low polarization cases have a high level of support. Furthermore, the correlation between the weighted standard deviation of party positions and the weighted mean of party positions is -0.63. That is, high support for the EU is associated with low variation in party positions.

Zaller (1992) provides a thorough discussion of different measures of political awareness. Political awareness means the ability of the survey respondent to receive information, messages, and cues from the elite-driven informational environment. He considers four types of measures: factual political knowledge; education; media exposure; and interest or participation in politics. Factual political knowledge performed best, but he deemed education a good substitute. Unfortunately for our study, a measure of factual political knowledge is unavailable. Although two of the ten surveys include some questions of factual knowledge regarding the EU (e.g., questions about the European Parliament), these questions are not repeated consistently. We should also note that we suspect respondents who are favorably predisposed toward the EU are more likely to acquire such specific information about the EU than respondents who are less supportive. Consequently, these neutral factual questions are probably poor measures of political awareness for our purposes. Furthermore, we cannot use education to measure political awareness.

⁹The mean party support for integration is weighted by the party vote shares in the most recent national legislative elections.

Although we do have a measure of education, we use it to control for human capital, which theoretically and empirically has been shown to affect attitudes toward European integration independent of political awareness (Gabel 1998a; Scheve 2000). This leaves us with two options: self-reported media use or interest in politics. Price and Zaller (1993) and Zaller (1992: 334) argue persuasively that media exposure, particularly self-reported media use, is a poor measure of political awareness. Krosnick and Brannon (1993) show that, when evaluated in the same model, these different aspects of political sophistication can have distinct effects on how voters receive and process elite communication. But they also show that political knowledge, political interest, and media exposure have fairly similar effects as proxies for political awareness when each is considered separately as we do here with political interest. As a result, we use political interest, which is measured with the following survey question:

When you get together with your friends, would you say you discuss political matters frequently, occasionally, or never?

For *Political Awareness*, we coded never as (1), occasionally as (2), and frequently as (3).¹⁰

In addition to our measures of elite polarization, political awareness and their interaction, we include several control variables for factors that influence individual support for Europe: education, gender, income, and occupational status as manual worker or as unemployed. We constructed the variable *Education* as a nine point indicator of increasing educational attainment based on the individual's age at the time he or she finished formal education. The variable *Female* is a dummy variable equal to 1 for women and 0 for men. *Income* indicates the income quartile of the respondent's income relative to the distribution in his or her country and ranges from 1 to 4. The variables *Manual Worker* and *Unemployed* are dichotomous measures indicating the relevant occupational category of the respondent. We also included controls for country and year to account for various possible omitted factors that are either time constant features

¹⁰Responses of "don't know" were coded as missing.

of each country or common shocks over time that may affect support for European integration.

Table 1 reports the summary statistics for the variables used in the empirical analysis.

We model support for European integration in the following way:

$$Europe_{i,c,t} = \beta_0 + \beta_1 EP_{c,t} + \beta_2 PA_{i,c,t} + \beta_3 PA_{i,c,t} * EP_{c,t} + \Gamma Z_{i,c,t} + \alpha_c + \delta_t + \epsilon_{i,c,t}. \quad (1)$$

where i , c , and t index individuals, countries, and years respectively; EP indicates *Elite Polarization*; PA indicates *Political Awareness*; Z is the vector of control variables described above; β_0 , β_1 , β_2 , β_3 , Γ , α_c , δ_t are parameters to be estimated with α_c and δ_t indicating country and year effects respectively; and $\epsilon_{i,c,t}$ is the error term.

As discussed above, we examine three hypotheses about the effects of elite polarization on public support for European integration. First, increasing polarization implies more negative messages about European integration and thus the marginal effect of *Elite Polarization* on *Europe* should be negative (Hypothesis 1). Formally,

$$\beta_1 + \beta_3 * Political\ Awareness < 0$$

Second, we expect that elite messages only affect those politically aware individuals likely to receive and understand the content of the message and so the marginal effect of *Elite Polarization* is negative only for respondents with relatively high levels of *Political Awareness* (Hypothesis 2). Formally,

$$\beta_1 + \beta_3 * Political\ Awareness < 0 \text{ if } Political\ Awareness \text{ is high}$$

$$\beta_1 + \beta_3 * Political\ Awareness = 0 \text{ if } Political\ Awareness \text{ is low}$$

Of course, this hypothesis could be restated to say simply that the absolute value of the effect was larger for politically aware respondents. Our estimates will allow us to evaluate both versions of this argument.

Finally, we look for evidence of a mainstream effect. Recall again that where there was elite consensus about Europe it was in support of European integration. Therefore, one test of Zaller’s mainstreaming hypothesis as applied to public support for European integration is that individuals who are more politically aware are more likely to support European integration in countries and times for which elite polarization is low (Hypothesis 3). In contrast, political awareness is unlikely to have a systematic effect on support for Europe in those countries and times for which elite messages are polarized. Formally,

$$\beta_2 + \beta_3 * Elite Polarization > 0 \text{ if } Elite Polarization \text{ is low}$$

$$\beta_2 + \beta_3 * Elite Polarization = 0 \text{ if } Elite Polarization \text{ is high}$$

Instrumental Variables for Estimation of Elite Polarization Effects

To evaluate these hypotheses, we need consistent estimates of β_1 , β_2 , and β_3 in Equation 1. Estimation by ordinary least squares (OLS) is an obvious starting point. The concern highlighted above is that *Elite Polarization* and its interaction with political awareness are endogenous. Elites may converge or polarize in their views about Europe in response to changes in mass opinion or in anticipation of changes in mass opinion. Alternatively, both elites and the public may simply be responding to specific events that are unmeasured and omitted from the model. It is also possible, despite our evidence for the validity of the *Elite Polarization* measure that the variable is measured with error. In the presence of all three of these problems, OLS is biased and inconsistent. The direction of the bias depends on the relative importance of each of these issues. If the main problem is that elites are responding to changes in mass opinion, this suggests that the OLS estimates will overestimate the effect of elites on opinion. In contrast, if random measurement error is in fact the chief issue, this suggests that the OLS estimates will underestimate the impact of elites.

The simplest alternative estimator for Equation 1 is to employ instrumental variables for the potentially endogenous regressors. To do so, we have to identify measures that are correlated with polarization and its interaction with political awareness but otherwise uncorrelated with individual support for Europe. More specifically, the instruments must have a significant partial correlation with *Elite Polarization* and *Political Awareness*Elite Polarization* controlling for all the other exogenous determinants of support for European integration (*Europe*)—including the country and year dummy variables—while being uncorrelated with the error term ϵ in Equation 1. Note that because of the inclusion of the country and year indicator variables identification comes from within country variation over time in the instruments.

Our approach for identifying valid instruments is to specify characteristics of national electoral systems that are theoretically expected to be correlated with policy polarization among competing political parties and the interaction of these institutional characteristics with our measure of political awareness. These variables are expected to be correlated with *Elite Polarization* and *Political Awareness*Elite Polarization* but uncorrelated with the error term in this equation. The overall strategy for forming the instruments is based on the idea that electoral institutions generate incentives for elite polarization/consensus about European integration that are exogenous to public opinion about Europe.

Electoral laws affect the degree to which parties and candidates differentiate their policy positions and the degree of ideological dispersion among political elites. One way this happens is through the effect of electoral laws on the number of parties in a party system (Grofman 2001; McGann 2000). We would expect that electoral laws and social conditions that promote a relatively large number of parties will also produce a relatively heterogeneous set of party positions over various public policies. This provides a useful starting point for identifying instruments, since we have a now very well-developed body of research on how a variety of electoral laws affect party systems (see e.g. Ordershook and Shvetsova (1994), Cox(1997), Cox

and Neto (1997), Chhibber and Kollman (2004), and Clark and Golder (forthcoming).¹¹ It is important to note that some electoral laws do not change over time for the time period relevant for this study. Since we include controls for national fixed effects in our model, we must therefore focus on those electoral laws that demonstrate some intra-national variation.¹² With this in mind, we selected the following variables used to explain the number of electoral parties in the party system:

1. the logarithm of the median legislator’s district magnitude (lower tier) interacted with the level of ethnic heterogeneity ($LML*Ethnic$)¹³
2. the percent of legislative seats awarded in the upper tier ($Upper$)¹⁴

Cox(1997), Cox and Neto (1997) and Ordershook and Shvetsova (1994) demonstrate that $LML*Ethnic$ is positively related to the number of parties, as greater district magnitude in the first-tier allocation of seats combined with greater social heterogeneity provide opportunities for more parties to win seats. Cox (1997) also finds that the number of parties increases with the percent of legislative seats distributed at the upper tier. Since most upper-tier allocations are designed to compensate for disproportionality in the lower-tier allocation of seats, as the upper tier portion increases we expect more parties to enter the elections as small parties have an increased chance of winning seats. Note that some electoral systems (e.g. Greece and Austria) permit changes in the percent of upper-tier seats from one election to the next, depending

¹¹See also Orellana and Monroe (2004) for a study that shows that not only can changes in electoral laws lead to greater diversity in party policy positions but also that this diversity is reflected in media coverage of politics.

¹²We exclude, for example, measures of the temporal proximity of presidential elections because most of our cases do not have presidential elections. Note also that our interest is only in identifying instruments that are correlated with the endogenous regressors but not otherwise correlated with the dependent variable. Thus, the important specification and interpretation issues related to modelling the effects of social heterogeneity and political institutions raised in Clark and Golder (forthcoming) are not pertinent to our analysis.

¹³The measure of median district magnitude is reported in Golder (forthcoming). Our measure of ethnic fractionalization is from Alesina, et. al (2002).

¹⁴The percentage of legislative seats allocated in electoral districts or constituencies above the lowest tier, reported in Golder (forthcoming).

on the distribution of votes. When the percent upper increases, it raises the potential for smaller parties to win seats and therefore increases the effective number of legislative parties. Given that, particularly between elections, legislative parties dominate discourse among political parties, we expect this intra-national variation in *Upper* to be positively related to the level of elite polarization.

Recall that one of the two endogenous variables for which we are devising instruments is the interaction between political awareness and the level of elite polarization on European integration. Thus, we interacted each of these electoral law variables with our measure of political awareness so that they would correlate with the endogenous interaction variable as well as with elite polarization itself.

Although we draw on a substantial theoretical and empirical literature to make our instrumentation strategy plausible *ex ante*, it is still necessary for us to provide as much evidence as possible that the chosen instruments meet the assumptions for IV to provide consistent estimates. The assumption that the instruments are not correlated with the error term cannot be verified in the data directly. However, since our model is overidentified, we can provide some evidence that the overidentifying assumptions are valid. We will defer presenting this evidence until the next section where we present the main empirical results in the paper. In the remainder of this section, we focus on the question of whether the instruments are in fact significantly correlated with the endogenous regressors in our data.

Variation in these electoral laws within countries appears to track changes in the level of disagreement among parties on European integration. For example, the value of $LML*Ethnic$ for Belgium increased monotonically by 12 percent from 1984 to 1999 and the weighted standard deviation of Belgian party positions on European integration increased from 0.78 to 1.45. In Italy, the adoption of new electoral laws in 1993 increased the percent of seats awarded at the upper tier and this was associated with an increase in the level of party polarization on European

integration. The average *Upper* score was 11.89 in the pre-1993 and 25 afterwards. The level of elite polarization rose from 1.23 pre-1993 to 1.73 afterwards.

To evaluate these relationships systematically, Table 2 reports the results of an ordinary least squares regression of *Elite Polarization* on our instruments and all the included exogenous variables specified in Equation 1. Our interest is whether the instruments are significantly correlated with the *Elite Polarization* controlling for the included exogenous variables in the model including country and year fixed effects. Identification in this regression thus comes from within country variation over time.

We evaluate whether the instruments are jointly significant with an F-test adjusted for clustering. The $F(4,31)$ -statistic is equal to 3.08 which is significant at the 0.03 level. Moreover, the corresponding F-statistic for the OLS regression with the interaction between *Political Awareness* and *Elite Polarization* as the dependent variable (unreported) is equal to 9.71 which is significant at the 0.001 level. This is clear evidence that the instruments are correlated with the endogenous regressors and thus satisfy the assumption that the selected instruments are relevant.

Empirical Results

This section discusses the results of the estimation of Equation 1, testing our three hypotheses for the effect of elite communications on public support for European integration.

Table 3 reports the OLS estimation of this equation. The coefficient estimates are consistent with Hypothesis 1 that increasingly diverse and negative elite messages on Europe decreases support for integration. There is virtually no evidence for Hypothesis 2 that this effect is stronger among respondents with higher levels of political awareness. There is, however, some evidence consistent with Hypothesis 3 that political awareness has a positive effect on support for Europe when elites have a pro-integration consensus, that is, of mainstreaming effects.

To evaluate Hypotheses 1 and 2, it is necessary to calculate the marginal effect of *Elite Polarization* at various levels of *Political Awareness*. Figure 2 plots the magnitude of this effect along the vertical axis against different levels of *Political Awareness* along the horizontal axis. The solid line traces out the values of $\beta_1 + \beta_3 * \textit{Political Awareness}$ while the dashed lines indicate the bounds of the 95% confidence interval for this estimate.

Across all values of *Political Awareness*, a one unit change in *Elite Polarization* reduces support for integration by roughly 0.2 and this result is significantly different from zero. This estimate is consistent with the argument that more diverse and negative elite messages about Europe have a negative effect on public opinion but inconsistent with the idea that this effect varies across individuals with different levels of political awareness.

To test Hypothesis 3 of mainstreaming effects, we want to evaluate the marginal effect of *Political Awareness* at different levels of elite consensus about European integration. Figure 3 plots the magnitude of this effect along the vertical axis against different levels of *Elite Polarization* along the horizontal axis. The solid line traces out the values of $\beta_2 + \beta_3 * \textit{Elite Polarization}$ while the dashed lines indicate the bounds of the 95% confidence interval for this estimate.

At the highest level of consensus observed in our data—*Elite Polarization* between 0.5 and 1.0—political awareness is positively related to support for European integration. That is, as predicted by Zaller, more politically aware citizens are more likely to support Europe when the informational environment is characterized by consistent elite messages favoring the process of integration. This effect of political awareness, however, is sensitive to varying levels of elite consensus. As the elite informational environment polarizes, the difference in support for European integration between citizens with higher and lower levels of political awareness decreases and become statistically indistinguishable from no effect as elite polarization rises above its mean value of 1.3 in the sample. So, in short, political awareness is positively correlated with support for European integration when elite polarization is low (consensus high) and is uncorrelated

with opinion when polarization is high (consensus low). These estimates are consistent with the mainstream hypothesis proposed by Zaller.

The results for the control variables included in the analysis are also consistent with theoretical expectations and prior research. Support increases with human and financial capital, and women express less support on average than men.

The main conclusions from the OLS analysis are that increasingly diverse and negative elite messages on Europe decrease support for integration among all citizens but that more politically aware citizens are more likely to take a mainstream view of Europe if elites are in agreement on the issue. These inferences, however, are based on the OLS analysis that assumes that elite messages about European integration are exogenous to mass opinions about this issue, that there is not unmeasured/unobserved stimuli simultaneously driving changes in elite messages and mass opinion, and that measurement error is not a significant problem. The discussion above suggests that these assumptions may not hold and that it is especially likely that elites respond to and/or anticipate changes in mass opinion. This later concern is especially problematic because it suggests that the OLS estimates overestimate the effect of elites on mass opinion. Consequently, the OLS results do not provide convincing evidence of an elite effect at all much less compelling evidence about how elite appeals interact with political awareness.

To address this issue, we reestimate the model employing the instrumental variables introduced in the previous section. Table 4 reports the results of the IV estimates of the model. These results are important in the extent that they provide a rigorous identification strategy for estimating the causal effect of elite messages on public opinion about European integration. Substantively, the results contrast to those based on the OLS analysis in two ways. First, the magnitude of the marginal effects of elite polarization on mass opinion are over twice as large in the IV framework. There is robust evidence consistent with Hypothesis 1 that increasingly diverse and negative elite messages on Europe decreases support for integration and, further,

there is evidence that the OLS estimates are too small. This relationship between the OLS and IV estimates suggests that measurement error and/or omitted variable bias rather than endogeneity are quantitatively the most important issues for this empirical problem. This result is consistent with Bartels (1993) claim that measurement error accounts for why many media studies have failed to find large effects for media exposure on opinion. Second, the IV estimates are inconsistent with Zaller’s mainstream model. The modest evidence consistent with Hypothesis 3 in the OLS framework is likely due to significant biases in the OLS estimator.

Again, we can evaluate Hypotheses 1 and 2 by calculating the marginal effect of *Elite Polarization* at various levels of *Political Awareness*. Figure 4 plots the magnitude of this effect using the IV estimates from Table 4. Across all values of *Political Awareness*, a one unit change in *Elite Polarization* reduces support for integration by on average about 0.4 and this result is significantly different from zero. This estimate provides compelling evidence that more diverse and negative elite messages about Europe have a negative causal effect on public support for Europe. The estimate declines modestly in magnitude for individuals who are more politically aware which is precisely the opposite effect suggested by Hypothesis 2 that elite polarization would have its biggest effect on individuals who were the most politically sophisticated.

To assess Hypothesis 3 of a mainstreaming effect, we again calculate the marginal effect of *Political Awareness* at different levels of elite consensus about European integration. Figure 5 plots this effect ($\beta_1 + \beta_2 * Elite Polarization$) against *Elite Polarization*. At high levels of consensus (low *Elite Polarization*), the effect of *Political Awareness* is statistically insignificant. As the level of elite polarization increases, the marginal effect of political awareness increases and becomes significantly positive at high levels of polarization. These estimates that take into account the potential endogeneity and omitted variable problems with the OLS results are inconsistent with mainstream effects.

One possible explanation for a lack of a mainstream effect is the possibility of “cartelization”

among party elites. One reason unrelated to voter opinion that parties converge on a policy position is that they collude with one another to keep particular issues off the agenda so as to maintain their cartel in legislative seats (Mair 1997). Some scholars contend that party consensus on the issue of membership in the European Union is an important component of these cartels (Blythe and Katz, forthcoming). In so far as the politically aware are most cognizant of and dismayed by the formation of party cartels, we could imagine that the explicit efforts by parties to avoid competition on European integration actually lead to rejection of elite cues among the politically aware. This dynamic would work directly against any mainstreaming effect.

As in the OLS estimates of the model, the control variables have the expected effect on support for European integration in the IV estimation. Support increases with education and income and is lower for manual workers, the unemployed, and women.

The two most obvious objections to this analysis are that the instruments may not be valid either because they are not correlated with the endogenous regressors or because they are not actually exogenous. In the previous section, we presented clear evidence on the first point that indeed the instruments are significantly correlated with both *Elite Polarization* and its interaction with *Political Awareness*. Although we cannot directly verify in the data that the instruments are exogenous and thus uncorrelated with the error term, Table 4 reports a test of the assumption that the model's overidentifying restrictions are valid. Hansen's J-statistic is equal to 0.258 and given that we have four instruments and two endogenous regressors, it is distributed χ^2 with 2 degrees of freedom.¹⁵ The p-value for testing the null hypothesis that the overidentifying restrictions are valid is 0.879 indicating that there is not evidence for rejecting this assumption.

¹⁵This test is implemented to take into account the fact that we have grouped data for which the errors are correlated within groups. Standard overidentification tests can be badly biased with grouped data.

5 Conclusion

A long tradition in the study of political communication has focused on explaining and estimating the relationship between elite and mass opinion. A fundamental issue in this research is how to estimate the effect of elite messages on public opinion. This is a difficult problem because elite opinion may reflect or anticipate mass opinion, particularly since political elites in democracies often have incentives to respond to voters' opinions. In addition, changes in both mass opinion and elite opinion may reflect a common stimulus. These problems of endogeneity and omitted variables as well as measurement error are difficult to solve, even with time-series data. Experimental methods have proven to be a useful approach but some important theories of elite communication are impossible to test in this setting and the external validity of the experimental results are a significant concern. In this paper, we have proposed an alternative and complementary approach to estimating the causal effect of elite communication on mass behavior using observational data and instrumental variables.

The arguments tested in this paper assess the effects of one particular characteristic of elite messages—the extent of elite consensus—on public opinion in the specific context of European integration. When an elite consensus exists in the member countries of the European Union, it is favorable. Consequently, decreasing consensus or increasing polarization implies less favorable elite messages about Europe. If these communications affect mass opinion, the simplest effect of increasing polarization is for those less favorable messages to reduce public support for European integration. The existing public opinion literature suggests, however, that this effect may depend on the characteristics of individuals. Specifically, it may be only those politically aware individuals who are likely to be exposed to and understand elite messages that are influenced by these communications. Finally, a related argument is that of mainstreaming effects. Zaller (1992) predicts that, when elites agree on a policy question, the level of support for the elite

position will increase with levels of political awareness. This suggests that political awareness should increase support for European integration in those countries with a pro-integration elite consensus but that this relationship should weaken as elites become more polarized.

We test these three arguments by instrumenting for the relevant features of communication using changes in the salient characteristics of national electoral systems. The paper presents three main empirical results. First, we find that more negative elite messages about European integration do indeed decrease public support for Europe. Our analysis suggests that OLS estimates that ignore the endogeneity, omitted variables, and measurement error problems in estimating the effects of elite communication are biased, underestimating the magnitude of the effect of elite messages by fifty percent. Second, we find no evidence that this effect of elite messages varies for more politically aware individuals. Third, our estimates are inconsistent with a mainstreaming effect in which political awareness increases support for Europe in those political settings in which elites have a favorable consensus on the benefits of integration. This result is in sharp contrast to the OLS analysis that suggests a mainstreaming effect. These findings indicate that an identification strategy sensitive to the problems of endogeneity, omitted variables, and measurement error that characterize studies of political communication can yield substantively different and important results.

Of course, our findings are not definitive for any particular theory of persuasion and opinion formation including Zaller's model of mainstreaming effects. However, our findings do raise important questions about interpreting past evidence supporting various theories of elite communication and for conducting future research on these questions.

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Variable	Mean	Standard Deviation
<i>Europe</i>	2.452	0.744
<i>Political Awareness</i>	1.876	0.658
<i>Elite Polarization</i>	1.313	0.388
<i>Female</i>	0.500	0.500
<i>Education</i>	4.420	2.923
<i>Income</i>	2.528	1.109
<i>Unemployed</i>	0.057	0.232
<i>Manual Worker</i>	0.149	0.356
<i>Upper</i>	12.246	16.678
<i>LML*Ethnic</i>	0.289	0.324
Observations		85,012

Table 1: *Summary Statistics.*

Regressor	Coefficient (SE)
<i>Upper</i>	0.061 (0.024)
<i>LML*Ethnic</i>	1.317 (0.785)
<i>Upper*Political Awareness</i>	0.00029 (0.00016)
<i>LML*Ethnic*Political Awareness</i>	0.009 (0.006)
Included Exogenous Individual-level Regressors	Yes
Country Fixed Effects	Yes
Year Fixed Effects	Yes
Standard Error of Regression	0.18
Observations	85,012
F-statistic for test of excluded instruments:	3.08
<i>F</i> p-value	0.0303

Table 2: *Ordinary Least Squares Estimates of Elite Polarization*. This table reports the OLS coefficient estimates and their robust standard errors clustered on country and year (in parentheses). The dependent variable is *Elite Polarization*.

Regressor	Coefficient (SE)
<i>Elite Polarization</i>	-0.160 (0.058)
<i>Political Awareness</i>	0.050 (0.036)
<i>Political Awareness*Elite Polarization</i>	-0.019 (0.028)
<i>Female</i>	-0.071 (0.012)
<i>Education</i>	0.026 (0.002)
<i>Income</i>	0.047 (0.003)
<i>Unemployed</i>	-0.087 (0.015)
<i>Manual Worker</i>	-0.084 (0.014)
<i>Constant</i>	2.475 (0.103)
Country Fixed Effects	Yes
Year Fixed Effects	Yes
Standard Error of Regression	0.695
Observations	85,012

Table 3: *Ordinary Least Squares Estimates of Support for European Integration.* This table reports the OLS coefficient estimates and their robust standard errors clustered on country and year (in parentheses). The dependent variable is *Europe*.

Regressor	Coefficient (SE)
<i>Elite Polarization</i>	-0.566 (0.184)
<i>Political Awareness</i>	-0.084 (0.059)
<i>Political Awareness*Elite Polarization</i>	0.084 (0.045)
<i>Female</i>	-0.070 (0.012)
<i>Education</i>	0.025 (0.002)
<i>Income</i>	0.047 (0.003)
<i>Unemployed</i>	-0.089 (0.015)
<i>Manual Worker</i>	-0.084 (0.014)
<i>Constant</i>	3.125 (0.321)
Country Fixed Effects	Yes
Year Fixed Effects	Yes
Standard Error of Regression	0.700
Observations	85,012
Hansen J-statistic:	0.258
$\chi^2(2)$ p-value:	0.879

Table 4: *Instrumental Variable Estimates of Support for European Integration*. This table reports the IV coefficient estimates and their robust standard errors clustered on country and year (in parentheses). The dependent variable is *Europe*. The variables *Elite Polarization* and *Political Awareness*Elite Polarization* are the endogenous regressors. The instruments are *Upper* and *LML*Ethnic* and their interactions with *Political Awareness*.

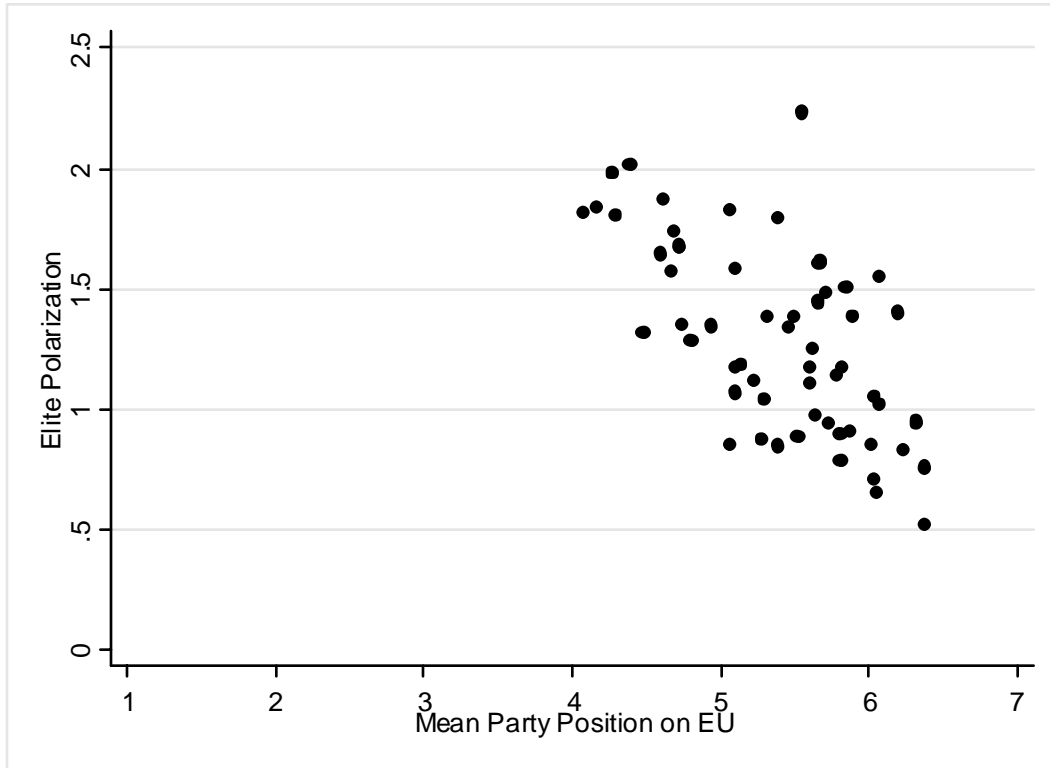


Figure 1. *Elite Polarization by Mean Party Position*. This figure plots the weighted standard deviation of party positions on the EU, *Elite Polarization*, by the weighted mean party position for the 59 country years in our sample.

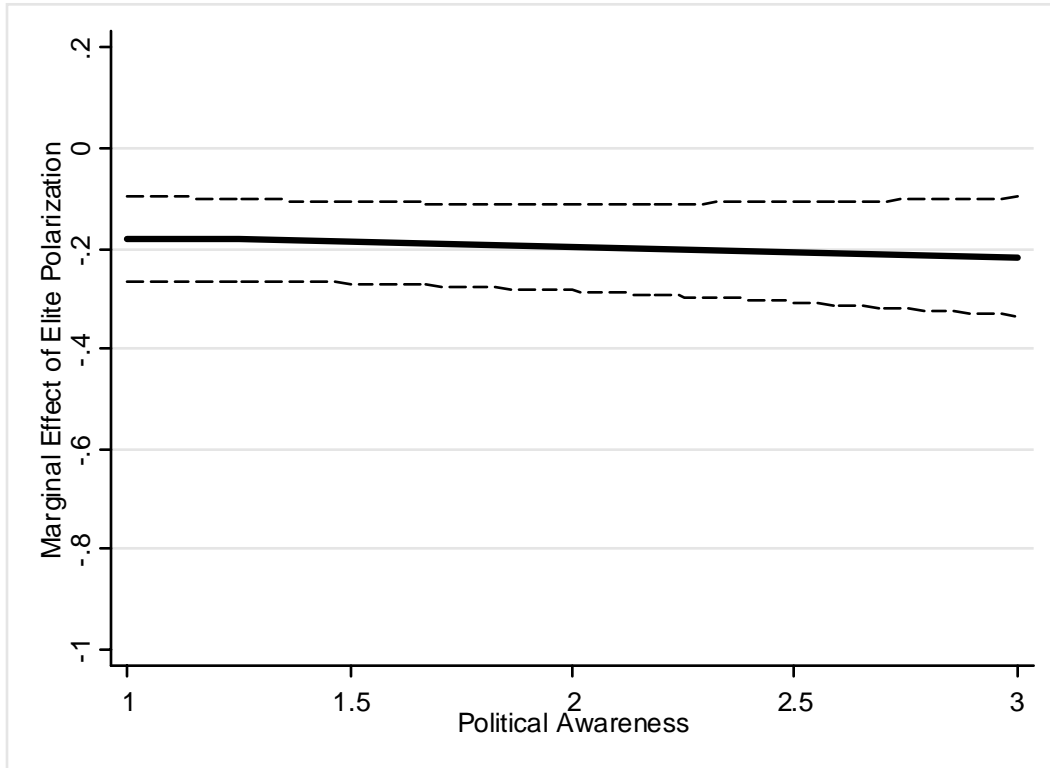


Figure 2. *Conditional Effect of Elite Polarization on Support for European Integration: OLS Estimates.* This figure plots the magnitude of the effect of a one unit change in *Elite Polarization* on the dependent variable *Europe* at different levels of *Political Awareness* based on OLS estimates. The solid line traces out the estimated conditional effect while the dashed lines indicate the bounds of the 95% confidence interval for this estimate.

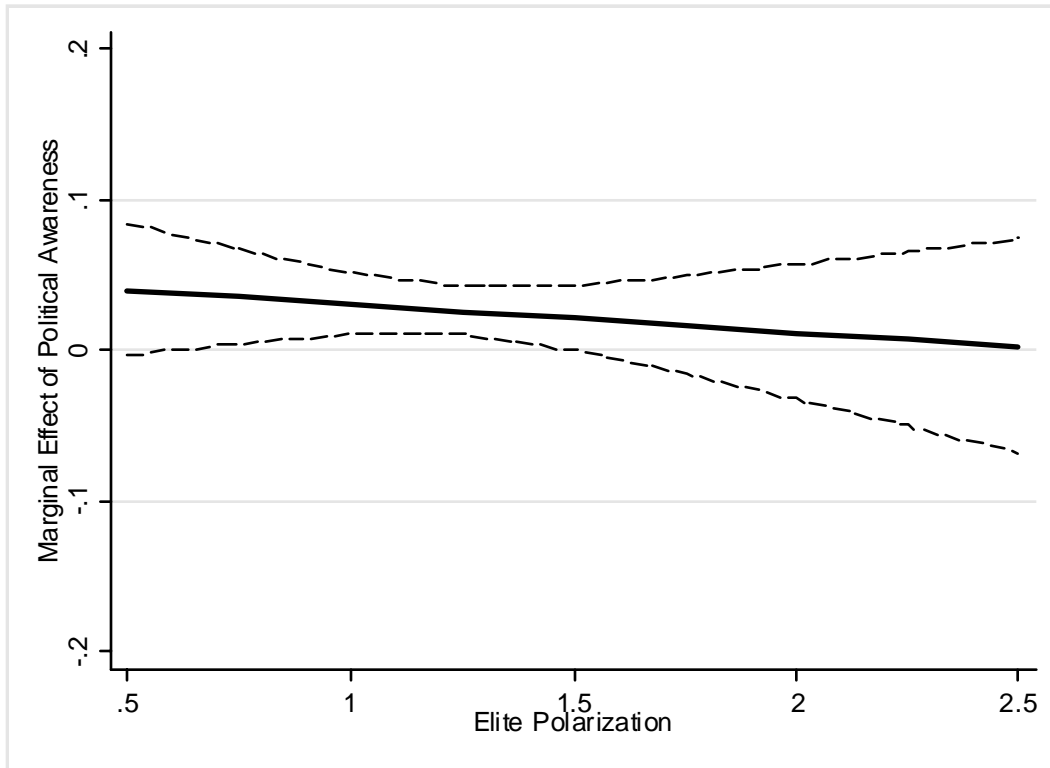


Figure 3. Conditional Effect of Political Awareness on Support for European Integration: OLS Estimates. This figure plots the magnitude of the effect of a one unit change in *Political Awareness* on the dependent variable *Europe* at different levels of *Elite Polarization* based on OLS estimates. The solid line traces out the estimated conditional effect while the dashed lines indicate the bounds of the 95% confidence interval for this estimate.

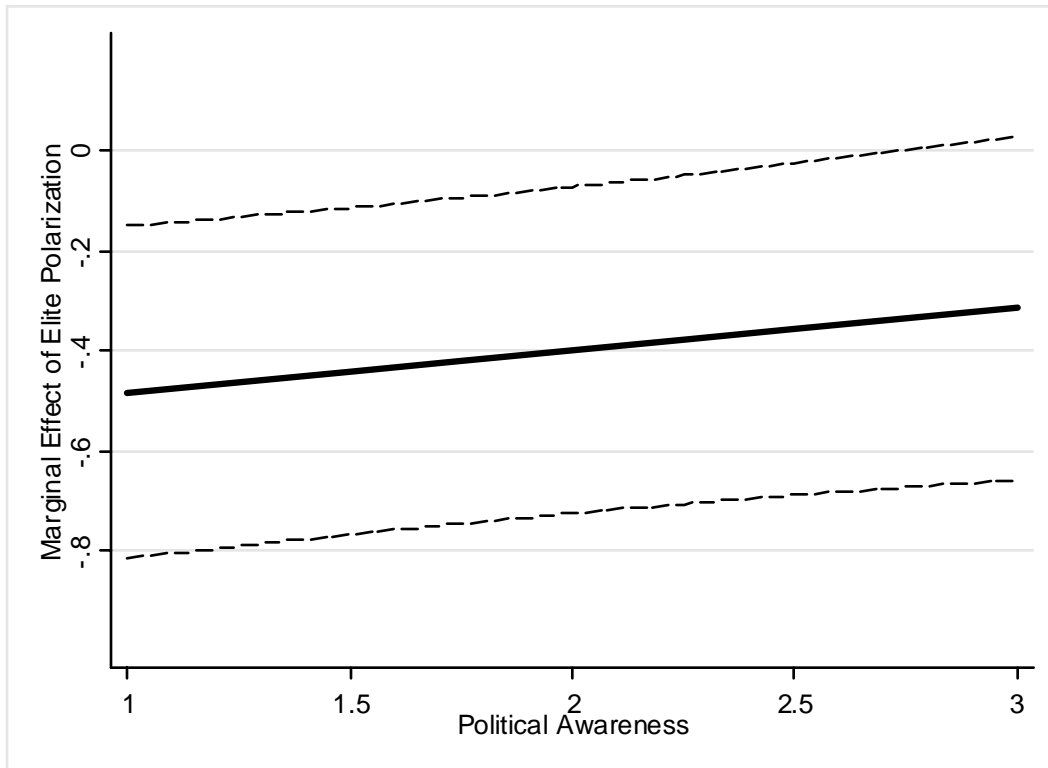


Figure 4. *Conditional Effect of Elite Polarization on Support for European Integration: IV Estimates.* This figure plots the magnitude of the effect of a one unit change in *Elite Polarization* on the dependent variable *Europe* at different levels of *Political Awareness* based on IV estimates. The solid line traces out the estimated conditional effect while the dashed lines indicate the bounds of the 95% confidence interval for this estimate.

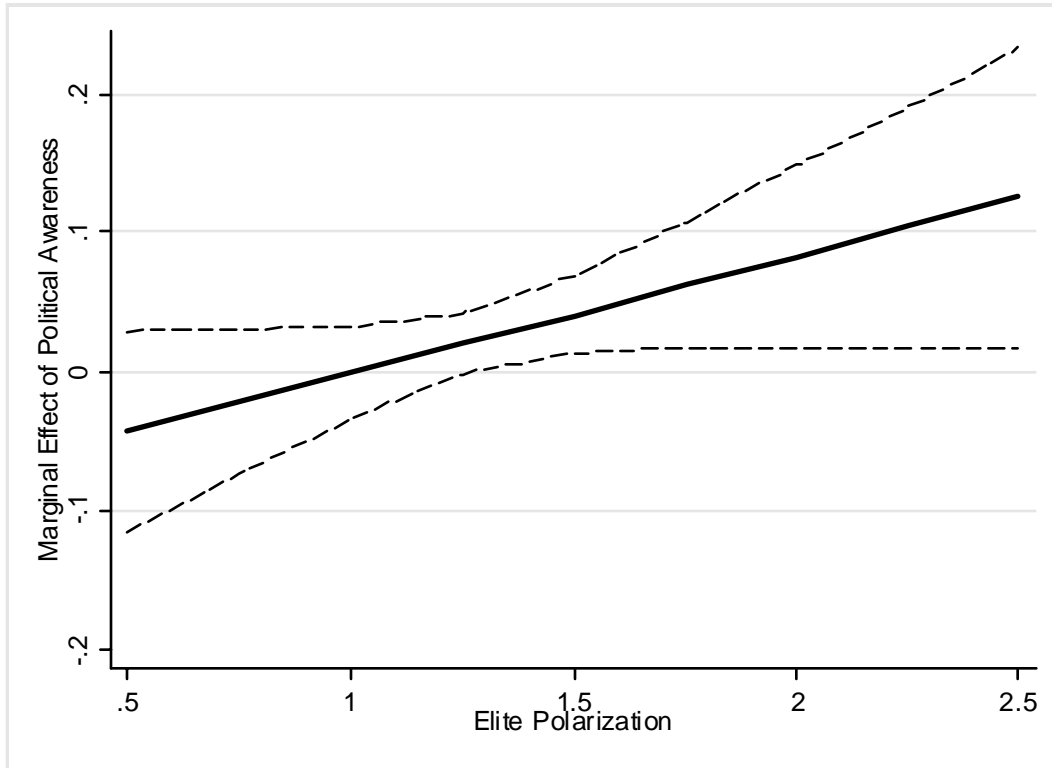


Figure 5. *Conditional Effect of Political Awareness on Support for European Integration: IV Estimates.* This figure plots the magnitude of the effect of a one unit change in *Political Awareness* on the dependent variable *Europe* at different levels of *Elite Polarization* based on IV estimates. The solid line traces out the estimated conditional effect while the dashed lines indicate the bounds of the 95% confidence interval for this estimate.

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