

THE EFFECT OF INFORMATION ON EU SUPPORT AND ATTITUDE AMBIVALENCE

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ABSTRACT

FLORIAN STOECKEL: The Effect of Information on EU Support and Attitude Ambivalence
(Under the direction of Liesbet Hooghe.)

The ambivalence of EU citizens towards the European integration project is an attitude dimension which has largely been neglected, but promises to answer important puzzles. In this paper I measure ambivalence in individual level support for the EU based on how respondents answer two items on the EU. I show empirical support for that more self-assessed and more objective knowledge on the EU decrease ambivalence in EU support. This effect persists among highly educated people, which is taken as evidence that the dependent variable measures ambivalence instead of how nuanced people's attitudes are. I also show that a strong attachment to both one's country and the EU ("a dual identity") decreases ambivalence. The relationships are confirmed when tested by using a heteroskedastic regression in which ambivalence is understood as response variation. A final analysis reveals that standard predictors (economic rationality, identity, political cues) explain attitudes towards the EU much more for unambivalent Europeans than for ambivalent ones.

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Introduction

Do Europeans display well-defined and unambiguous attitudes towards the European Union (EU) or do they tend to be ambivalent towards it, that is, do they simultaneously display positive and negative attitudes towards the EU? This paper analyzes how individual attitudes towards the EU are affected by increasing knowledge on the European Union and its institutions. More precisely it examines whether increasing knowledge decreases or intensifies ambivalence, or whether it leads to more nuanced attitudes. The role of ambivalence receives increasing attention in the American public opinion literature but has rarely been discussed in the context of European public opinion research. This paper thus seeks to discuss and apply the insights of American public opinion literature to the context of European integration.

Numerous studies on American public opinion find that many people are ambivalent when it comes to political issues (Zaller and Feldman 1992; Alvarez and Brehm 1995, 1997). With increasing attention being paid to attitude structure, more sophisticated tools have been developed to measure ambivalence (for an overview see Miller and Peterson 2004). This in turn has contributed to more rigorous analyses of ambivalence and its consequences for political outcomes. Studies in political science and social psychology find that increasing ambivalence leads to less attitude stability, a lower predictability of vote choices, as well as a greater susceptibility to temporarily salient information and contextual cues (Basinger and Lavine 2005; Huckfeldt and Sprague 2000). Thus, understanding ambivalence of attitudes towards European integration is crucial in understanding Euroskepticism, the success of anti-EU parties and the dynamics of EU related referendums.

The theoretical part of the paper introduces the literature on ambivalence and discusses different operationalizations of ambivalence. The concept of ambivalence has not received much attention by scholars of European public opinion. Unsurprisingly then, measures for ambivalence are not included in large-N surveys such as the Eurobarometer or European Election Study. Given the absence of a direct measure, I develop a new measure of ambivalence based on variation among answers towards different survey items gauging EU support.

The empirical part of the paper has three sections. I find that increasing knowledge and a dual identity, that is an identification with both, one's nation and the EU, decrease ambivalence in EU support. The first section presents a heteroskedastic regression model. In this modeling tradition

ambivalence is understood as response variation. In the next section I discuss the weaknesses of this approach and construct a more direct measure to capture response variation, which is based on two EU related question items. I refute the criticism that this measure of ambivalence only assesses how nuanced someone’s view on European integration is, rather than measuring ambivalence. With increasing knowledge highly educated people should be expected to form more nuanced attitudes towards the EU. According to my results, however, knowledge decreases response variation and this effect is particularly strong for highly educated people. This finding contradicts the view that such a measure of ambivalence just captures more nuanced attitudes. The last section tests how well standard models predicting EU support perform for unambivalent and ambivalent respondents. The results suggest that ambivalent Europeans make up their minds on the EU in a different way than their non-ambivalent peers. Apparently, the most widely cited explanations for levels of EU support pertain primarily to unambivalent Europeans.

EU Support and Ambivalence

Public sentiments toward the EU have been analyzed for more than three decades. Past research has looked at developments of EU support over time (Eichenberg and Dalton 1993, 2007), and a rich tradition of cross-sectional analyses helps us understand which factors shape individual level support for European integration. Economic rationality (Gabel and Palmer 1995; Gabel 1998), identity (Hooghe and Marks 2004, 2005), and cues (Steenbergen et al. 2007; Steenbergen and Jones 2002) turn out to be powerful predictors for EU support. The dependent variables in these studies vary between the crude three-category variable “support for EU membership of one’s country”, the more nuanced desired speed of European unification (Brinegar et al. 2004), preferences for an EU government (Rohrschneider 2002) or authority transfer to Brussels (McLaren 2007). Alternatively, other authors use a combination of these items to construct a more fine grained scale (De Vries and Van Kersbergen 2007; Hooghe and Marks 2005). This body of research claims to talk to one another because the goal in each study is to operationalize the underlying latent concept “support for European integration” (Brinegar and Jolly 2004). The unifying assumption is that someone’s attitude towards European integration is indeed best captured by one dimension ranging from low support to high support.

A citizen’s *level* of support is however just one property of an individual’s attitude structure towards a political object. Other important properties of attitudes include their accessibility, importance or relevance to the individual, or extremity (Eagly and Chaiken 1993; Krosnick et al. 1993). For the political context, attitude certainty and ambivalence are particularly consequential attitude properties and have received wide attention in social psychology and American public

opinion research. In their widely cited work on the mechanism of public opinion formation, Zaller and Feldman conclude “most people possess opposing considerations on most issues, that is, considerations that might lead them to decide the issue either way” (1992, p.585). But by measuring support for European integration only on one dimension, one fails to pick up the extent to which respondents actually possess opposing considerations. Answering in favor of EU membership of one’s country can stem from much certainty in this attitude. But a respondent could just as well be torn between considerations speaking very much for and against EU membership. Surveys usually force respondents into providing a specific level of support. A respondent might answer pro EU membership because considerations for the EU slightly win over those against it. This person could end up in exactly the same EU support category as someone who has much certainty in her attitude. Survey data analyses usually treat the two as if their attitude towards the EU was similar.

American public opinion research literature tells us that this difference in the attitude structure is not at all trivial. In their analysis of the relationship between inconsistency and stability in abortion attitudes, Huckfeldt and Sprague (2000) find that those who carry opposing considerations have more difficulty in retrieving their attitude. Also, ambivalence is connected to less certainty in one’s attitude and with less self-assessed attitude stability over time – i.e. people who are ambivalent on an issue think themselves that they might change their attitude rather quickly. Unsurprisingly then, ambivalence makes political attitudes less predictable (Alvarez and Brehm 1995, 1997, 2002; Rudolph 2005). Basinger and Lavine (2005) explain low predictability of voting behavior with ambivalence in party identification. They also demonstrate that ambivalence changes which cues people use for making their vote choice. Economic voting replaces party identification for ambivalent respondents. Generally, the empirical evidence supports that ambivalence makes political choice processes more difficult for individuals. Among ambivalent people, policy preferences and attitudes are much more dependent on what information is salient at a specific point in time. Lavine et al. (1998) find experimental evidence for the greater importance of temporarily salient information for ambivalent people. Since one’s immediate environment or context is always most salient, they can also show ambivalent people’s greater susceptibility to context effects. Ambivalent individuals seem more likely to draw random samples of considerations from their memory when retrieving an attitude. Since negative information is often more salient than positive information, McGraw et al. (2003) find that candidate evaluations of ambivalent respondents tend to be more negative.

Against the background of strong evidence for the importance of ambivalence, most American surveys include at least some items with which it can be measured.¹ Surveys on attitudes

¹ The popular National Election Study (NES) asks participants to mention good and bad things that come

towards European integration, such as the Eurobarometer or European Election Study, lack such direct items with which ambivalence can be measured. Consequently, studies on the extent to which Europeans are ambivalent about European integration, as well as on the sources and consequences of their potential ambivalence, are lacking. To date, only Steenbergen and de Vries (2011)² have researched a study on this issue. In the absence of items tapping ambivalence directly, their measure is rather indirect. They use an inferential approach that models response variation in support for European unification as ambivalence. The authors employ a heteroskedastic regression model that follows Harvey (1976), as well as Alvarez and Brehm (1995, 1997, 2002). Steenbergen and De Vries (2011) find evidence for ambivalence among Europeans in regard to European unification. According to their results, knowledge is not related to ambivalence in EU support, while EU media salience slightly increases ambivalence. Interestingly, a dual identity – i.e. identification both with one’s country and the EU – decreases ambivalence. They also find that obscurity of party positions on the EU increases ambivalence; and they have evidence for a curvilinear effect for the timing of EU membership and perceived party differences on ambivalence.

Ambivalence has mainly been defined in two ways: as a conflict of values , and as the coexistence of positive and negative views on an issue (for an overview see Miller and Peterson 2004). According to the conceptualization as value conflict, ambivalence is the result of conflicting core beliefs. Alvarez and Brehm (1995) give the example of people who experience ambivalence in their attitude towards abortion policies because they hold both strong beliefs about women’s rights and respect for human life. Thus, when forced to reconcile these positions, people need longer to answer (“response time latency”) or express more response variation. Other research in political science (Zaller 1992; Zaller and Feldman 1992; Lavine 2001; Thompson et al. 1995; Holbrook and Krosnick 2005) uses the broader understanding of ambivalence as coexistence or endorsement of positive and negative evaluations on one issue or object. This follows the dominant conceptualization in social psychology (e.g. Kaplan 1972; Cacioppo et al. 1997; Fazio 1995). While conceptualizing ambivalence as value conflict can be seen as a reasonable approach and definition, Steenbergen and Brewer (2004) note that ambivalence rooted in a conflict of core beliefs is just one manifestation of it and consider different, broader notions. Indeed, many of the findings on the consequences of ambivalence are based on the broader understanding of

to their mind when thinking about the two major parties. Those who mention both positive and negative considerations about both parties are considered ambivalent (Basinger and Lavine 2005). Some surveys measure response time latencies (Huckfeldt and Sprague 2000). Other set ups include to let people first rate positive aspects of an object and then negative ones, assuming that simultaneously held strong positive and negative evaluations identify ambivalence, while strong positive and weak negative ones (or vice versa) characterize the absence of ambivalence (Lavine 2001). And some studies include items that directly ask respondents about the extent to which they have mixed feelings on an issue Tourangeau et al. (1989).

² I am very grateful to the authors for providing me with a draft of their paper.

simultaneously held good and bad evaluations of one object (e.g. Basinger and Lavine 2005; Lavine et al. 1998). The understanding of ambivalence in this paper follows this second, broader conceptualization rooted in social psychology.

In the absence of a literature on ambivalence in regard to EU support, it is helpful to look more closely at how the process of opinion formation and the role of ambivalence is conceptualized in the American context to formulate hypotheses. In Zaller’s “Receive-Accept-Sample” (RAS) model (1992), American voters are differentiated between politically sophisticated attentive people, politically unsophisticated and inattentive people, and a majority of people who fall in between those poles. All people are constantly bombarded with a large volume of mostly opposing considerations on many political issues which can potentially enter their memory. Zaller notes that people with low political sophistication are unlikely to carry numerous opposing considerations on political issues due to their inattention to politics. Politically very sophisticated people follow politics, but they have the cognitive means to reject considerations (e.g. from a party or person they do not support) right away, so that they are also not carrying many opposing considerations – or at least have very consistent attitudes on most political issues and are therefore low in ambivalence. However, the majority falls in between and can be expected to be ambivalent on an issue like European integration: most people somewhat follow political news and have some political skills. But most do not necessarily reject most (opposing) considerations on an issue right away and they therefore carry around considerations with which they can potentially support either side of an issue. When asked to give an opinion or answer a survey question, people engage in sampling considerations from whatever is accessible on an issue in their memory. They are more likely to oversample from very salient information, such as current news and recent experiences (Zaller 1992; Zaller and Feldman 1992; Lavine 2001). Thus, politically sophisticated people can sample from already coherent considerations, even though they might be aware of counterarguments. This also means that samples are less affected by temporarily salient information and that politically sophisticated people’s attitudes are more stable, as well as more consistent. People with medium levels of sophistication and attention to politics would have opposing considerations on the same issue in their mind and to have less stable and consistent attitudes. Subsequently, one can expect that at least a share of Europeans is indeed ambivalent about European integration. These people possess a variety of views allowing them to decide the issue either way. In this model, more knowledge on the EU should lead to a more crystallized, consistent attitude towards European integration.

Steenbergen and De Vries (2011) refine this model in their theory of response variation and add the importance of cues. Accordingly, people do not consider each and every piece of (potentially opposing) information on a complex issue such as European integration, but they

resort to cues that help them find their position. In this conceptualization, people are expected to be ambivalent about European integration in case they do not possess enough cues to come to a clear position, or when the cues they possess are contradictory. From this perspective, knowing more about the EU means that more cues are available and people are less ambivalent about European integration. Steenbergen and De Vries (2011) also emphasize that people with more knowledge on an issue are better able to integrate new and competing cues in their memory. The capability to make sense of counter attitudinal information helps people with high levels of EU knowledge to maintain a lower level of ambivalence. This makes the expectation of a negative relationship between knowledge on the EU and ambivalence in EU support more reasonable.

H 1: Some Europeans feels ambivalent about European integration. And this ambivalence is reduced by more knowledge on the EU.

There are also reasons to expect the opposite, i.e. that it is knowledge on the EU which makes opposing considerations on the integration project available in people's memory – the result would be that people high in knowledge would have very nuanced views on the EU, rather than them being ambivalent. Since this is a very crucial theoretical difference and differentiating empirically between people with nuanced or ambivalent attitudes is challenging, addressing this issue will be a focal point of the empirical part of the paper.

There are however other ways for people to make a quick judgment on how they stand in regard to European integration. Identities have been found to be very important in this context. For instance, people with an exclusive national identity – those unable or unwilling to allow for a European identity side by side their national one – have been found to be significantly less supportive of the EU. This suggests that someone's identity configuration also plays a role for ambivalence and that clear identity cues make people less ambivalent. Identifying both strongly with one's nation and with the EU can however mean two things. On the one hand, it can mean the availability of opposing cues and therefore ambivalence. On the other hand it can mean that people who identify with both communities successfully integrated a European identity into their national identity, so that the successful coexistence of these social identities is a source for a clear position on the EU, rather than for ambivalence.

H 2: A dual identity decreases ambivalence about the European integration project.

If Europeans are ambivalent about European integration, and it is expected that some are, this paper wants to make a first step in the direction of exploring the consequences of an ambivalent attitude structure. The literature on EU support emphasizes three main predictors that

help people determine their stance on European integration: economic rationality, identity, and political cues (Hooghe and Marks 2005). The cue taking based theory of response variation outlined by Steenbergen and De Vries (2011) suggested that cue availability and ambivalence are closely connected. In their heteroskedastic regression model, the authors assume that respondents, whose EU support value can be less well predicted, are ambivalent. I test this with my hypothesis three. I argue that for people who are ambivalent about European integration, temporarily salient information – including current events and media reports – play a much more important role for their current EU support than such things like occupation or education (Lavine et al. 1998). However, standard models explaining EU support use only those socioeconomic variables to predict EU support. Subsequently, such a standard model should perform much better for unambivalent respondents than for those who are ambivalent about European integration.

H 3: A standard socioeconomic variables based model to explain and predict individual level EU support can explain much more variance among unambivalent respondents than among ambivalent respondents.

Data, Model, and Measurement

Data and Model

The data for the quantitative analyses comes from Eurobarometer survey 68.1, for which the data collection took place in September and October 2007. The data consists of representative samples of around 1000 respondents from all EU member states. The survey includes standard Eurobarometer items gauging EU support, as well as detailed questions on the self-assessed and objective knowledge of Europeans on the EU.

A popular approach in the literature to deal with ambivalence is to estimate a heteroskedastic regression model.³ By presenting the results from this approach, one can directly compare the modeling and results of this tradition with my suggestion. To connect to this literature, I will estimate the heteroskedastic regression first. In a second step, I will employ my modeling and present ordered logit models in which ambivalence is the dependent variable. This provides evidence on the validity of hypotheses one and two. Hypothesis three is about how a standard model of EU support performs differently for ambivalent individuals compared to unambivalent respondents. In order to test this, I estimate models with EU support as dependent variable.

³ In this model, ambivalence is defined as response variation.

Then I compare the results for an unambivalent and ambivalent sample.⁴

Dependent Variables

Most studies of EU public opinion deal with individual *level* of support for European integration. Therefore, items such as someone’s support for EU membership, attitude about European integration, or image of the EU are used or combined to tap the latent concept “support for European integration”. This study is about people’s ambivalence in their “support for European integration.” Since European public opinion surveys have never been concerned with ambivalence, no items that directly capture the concept are available.

To deal with this problem, Steenbergen and De Vries (2011) follow an approach in American public opinion research (Alvarez and Brehm 1995, 1997, 2002) and operationalize ambivalence as response variation. This means that heteroskedasticity is treated as manifestation of ambivalence. Usually, one assumes homoskedasticity in a regression: that errors follow a normal distribution with constant variance; each y_i has a similar probability to deviate from its prediction. Heteroskedasticity means that this variance is not constant for all observations and that the error variance for some y_i is much larger for some observations than others (i.e. some predictions are much worse than others). This can also be understood as if some observations that are very similar to one another in their characteristics differ much more in regard to their level of EU support than others. This is the conceptualization of ambivalence when modeled as response variation. Ambivalence is revealed by the fact that some respondents’ error variances are significantly larger than others. This operationalization has its limitations. Being similar in many respects but showing different levels of EU support must not necessarily indicate ambivalence among the respondents. In fact, an individual might not be at all ambivalent and thus differ (much) from others in his or her EU support value.⁵

Following the understanding that ambivalence is the simultaneous presence of good and bad evaluations on one and the same object, a proper measurement of ambivalence is to ask people both how positively they evaluate an object and how negatively they see the same object – or how much they like and dislike something (Cacioppo et al. 1997). The crux is to measure positivity/approval and negativity/disapproval separately. Neither the Eurobarometer, nor the

⁴ This set up follows the assumption that causality runs from knowledge to ambivalence to EU-support. The notion here is that a certain level of ambivalence might or might not affect someone’s support for the EU, but that a level of EU-support is unlikely to create attitudinal ambivalence.

⁵ Furthermore, this modeling of ambivalence has been criticized for the limitation that it can only report on whether ambivalence is present in a given sample. But with this approach one cannot identify the individual respondents who are ambivalent, nor to what extent they are ambivalent (Miller and Peterson 2004). Another problem is that any kind of heteroskedasticity can be due to model misspecification, such as an omitted variable problem, and would therefore be caused by the researcher. Confidence in that the measured heteroskedasticity does in fact reveal ambivalence is warranted only to the extent that no specification error created it.

European Election Study, or any other large-N survey on the EU include such items.

In Eurobarometer 68.1 people are asked to rate the EU on closely related scales. Respondents are asked if they support the EU membership of their country and what their image of the EU is. A couple of unrelated questions follow in between of these items, so that response bias should be limited.⁶ Both of these scales range from a negative value (no support, very negative image) to a positive value (support, very positive image) and have a neutral middle category (neither/nor, neutral image).⁷ The two items are no replacement for the measurement of ambivalence by employing two dimensions, one running from neutral to a positive value, the other one running from neutral to a negative value. But these two scales allow us to get an idea of how consistent a respondent's attitude towards the EU is. Consistent answers include the combinations of no-support and negative image, neither/nor and neutral image, as well as support and positive image. In their overview of measurement approaches to ambivalence, Steenbergen and Brewer (2004) emphasize that the consistency of attitudes across items is one way of conceptualizing ambivalence. Respondents are considered to be unambivalent if they expressed a consistent attitude. Respondents who express an answer on one item that is in the opposite direction of their answer on the second item are considered highly ambivalent. Such a combination would be "EU membership support" and a "negative image of the EU" (or vice versa). Ambivalence was defined as holding both good and bad evaluations on the same issue. Such a response pattern expresses the presence of both good and bad evaluations on European integration. These highly ambivalent respondents can be found in the dark grey cells in table 1. Finally, there are respondents who chose the neutral category on one of the two items (light grey cells). They are treated as in being in between of the first two groups and to express medium levels of ambivalence. This procedure yields three groups of respondents: unambivalent ones (coded 0), medium level ambivalent respondents (coded 0,5), and highly ambivalent respondents (coded 1).

This way of measuring ambivalence poses at least two concerns. One limitation is that different answers on both items could be the result of a nuanced opinion on European integration, rather than ambivalence. The second weakness is that highly ambivalent respondents could have selected the middle category on both items. The measure so far would treat those respondents as unambivalent. The subsequent analysis will deal with both challenges.

⁶ I am very grateful to Jonathan Kropko for discussing with me on many occasions the pro's and con's of different measures for ambivalence given the absence of the optimal two-dimensional scale used in psychology.

⁷ To be precise, EU membership support has three categories, while the image of the EU has five categories. The five categories were merged into three: For this analysis it does not matter if someone supports the EU but has only a "somewhat positive image" of it rather than a "very positive" image. By merging the categories "very negative" and "somewhat negative", as well as "somewhat positive" and "very positive" one can more precisely pick up if the valence of someone's answer on both items changed.

For the test of hypothesis three, as well as for the heteroskedastic regression model, the level of EU support is the dependent variable (rather than ambivalence). EU support will be measured as a respondent's mean of the two items "EU membership support" and "image of the EU". The image item was rescaled so that both variables have equal weights in the index.⁸

Independent Variables

The independent variables to test the hypotheses are knowledge on the one hand and dual identity on the other hand. Knowledge will be measured in two ways, an objective and a subjective one. The measure for objective knowledge is based on seven factual knowledge questions that respondents were asked to answer. To ease the comparison with the effect of other variables, the variable has been rescaled to range from 0 (no correct answer) to 1 (everything answered correctly). Subjective knowledge is based on three equally weighted items: how respondents assess their knowledge of the EP with regards to its role within the EU, with regard to the Member of Parliament (MEPs), and how well respondents feel informed about the EP. This variable has again be rescaled to range from 0 (no subjective knowledge on the EU) to 1 (high subjective knowledge). Further variables in the context of cognitive mobilization are an index for opinion leadership (frequency of discussing politics and convincing friends), as well as years of education after the age of 14. A dual identity is measured with a dummy variable for respondents who both feel very much attached to their country (4 on a 1 to 4 scale) and feel very much attached to the EU (4 on a 1 to 4 scale) at the same time.

Since there is no literature on ambivalence in support for European integration, suggestions for control variables are lacking. However, the literature on EU support is rich and suggests a number of important predictors. These will be included to control for confounding influences. This body of research can be summarized by the finding of three major groups of predictors: economic calculation, identity, and political cues. Economic rationality will be controlled for by using dummies for occupation, as well as a variables capturing peoples personal economic prospects and subjective national economic prospects (Gabel and Palmer 1995; Gabel 1998). It has been shown that people's identity and multiculturalism affect EU support (McLaren 2002, 2007; Carey 2002; Hooghe and Marks 2004). In the absence of a literal question on people's identities, it will be controlled for attachment to ones country, as well as whether respondents support further enlargement of the EU. Finally, political cues have been found to drive support for European integration (Steenbergen et al. 2007; Steenbergen and Jones 2002). The data set does not offer which party respondents identify with. It can therefore only be controlled for political left-right orientation.

⁸ For a frequency distribution of the EU support variable, see table 7 in the appendix.

Table 1: Cross tabulation: EU membership support and image of the EU

<i>all figures in percent</i>		EU image			
		negative	neutral	positive	total
EU membership	no support	7,4	3,5	1,6	12,5
	neither/nor	4,8	17,6	6,5	28,9
	support	1,4	13,9	43,3	58,6
	total	13,6	35	51,4	100

(white cell)	unambivalent respondents	68,3%
(light grey)	medium level ambivalence	28,7%
(dark grey)	high level ambivalence	3%

Results: Understanding Ambivalence in Support for European Integration

Heteroskedastic Regression

In order to connect to the literature in which ambivalence is understood as heteroskedasticity in a regression model (Steenbergen and De Vries 2011; Alvarez and Brehm 1995, 1997, 2002), I test my hypotheses first with a heteroskedastic regression. The procedure follows closely the examples in the literature and uses Stata’s “reghv” command (Harvey 1976; Alvarez and Brehm 1997; Steenbergen and Brewer 2004). The level of EU support is the dependent variable and the extent of heteroskedasticity in the model is taken as indication for ambivalence. This involves the estimation of a mean model (common regression), which includes all major predictors known to affect EU support (vector X_i). The model also includes an error term ϵ_i . One usually assumes these errors to be normally distributed with a constant variance ($\sigma_i^2 = \sigma^2$). In a heteroskedastic regression, one assumes that the variance is not constant ($\sigma_i^2 \neq \sigma^2$), but that the deviations are driven by covariates (vector z_i).

$$\begin{aligned}
 y_i &= x_i^T \beta + \epsilon_i \\
 \epsilon_i &\sim N(0, \sigma_i^2) \\
 \sigma_i^2 &= \exp(z_i^T \delta)
 \end{aligned}$$

The mean model includes the following predictors for EU support: cognitive mobilization (education, opinion leadership, knowledge), economic rationality (personal economic prospects, national economic prospects, dummies for occupational groups), and identity (country attach-

ment, attitude towards enlargement), as well as political orientation, age, and gender. The covariates included in the variance part (predictors for heteroskedasticity, z_i) are subjective knowledge, objective knowledge and a dual identity. The results of the mean part of the heteroskedastic regression confirm the suggestions from the literature. Cognitive mobilization and economic rationality (a positive evaluation of one's economic situation) increase EU support. Similarly, attachment to one's country, being for EU enlargement, and having a right-of-center political orientation increases EU support.

The more interesting part are the results of the simultaneously estimated variance model. Subjective knowledge, objective knowledge, as well as a dual identity significantly decrease response variation. In this model, response variation (extent of heteroskedasticity) is understood as ambivalence. The presence of heteroskedasticity means high response variation: i.e. there are a number of respondents who are very much alike, but differ very much in regard to their level of EU support. The negative and significant effects of subjective knowledge, objective knowledge, as well as dual identity show that respondents with similar characteristics and high knowledge and a dual identity have much more similar EU support levels than those with low knowledge on the EU and no dual identity. Or put differently: people who are very similar in their characteristics but are low in EU knowledge and have no dual identity differ much more in their EU support levels than those with high EU knowledge and with a dual identity. These results confirm hypotheses one and two. Steenbergen and De Vries (2011) also found that a dual identity decreases ambivalence in EU support. However, they find that knowledge has no effect on ambivalence, whereas I find that it does. This approach is a very indirect model of ambivalence and only captures response variation in a sample, rather than within an individual. Apart from that, heteroskedasticity can be a result of model misspecification and therefore be caused by the researcher.⁹

⁹ I follow Steenbergen and De Vries (2011) in providing the log likelihood as a measure for model fit in the results of table 2. Since this measure is only meaningful when compared across nested models, I want to add that the given model has a VWLS R^2 of 0,20 and scores 0,05 on McFadden's pseudo R^2 . The VWLS R^2 is more comparable to an adjusted R^2 and takes the non-constant error variance into account. McFadden's pseudo R^2 compares the deviance of a given model that includes covariates to the deviance of an intercept-only-model.

Table 2: Heteroskedastic regression, DV: EU support (range 0-10)

Variable	Coeff.	SE
<i>Mean Model</i>		
<i>Cogn. Mobilization</i>		
opinion leadership (1-4)	0,13***	0,02
education (0-11)	0,10***	0,01
<i>Econ. Rational</i>		
pers. econ. prospects (0-2)	0,12***	0,03
country econ. prosp. (0-2)	0,25***	0,03
self-employed	0,32***	0,11
manager	0,38***	0,10
white-collar	0,21*	0,08
manual	0,01	0,09
house work	-0,06*	0,03
retired	0,26**	0,08
student	0,63***	0,09
<i>Identity</i>		
attach. to nation (1-4)	0,37***	0,03
enlargement (0/1)	1,16***	0,04
<i>Pol. Cues</i>		
polor (1-10)	0,08***	0,01
age	0,00	0,00
gender (1=male)	0,20***	0,05
Constant	1,02	0,23
<i>Variance Model</i>		
subj know	-0,52***	0,08
obj know	-0,23***	0,07
dual identity	-0,26***	0,05
N	15316	
log likelihood	-34517,589	
*** sign. at .001 level, ** sign. at .01 level		
* sign. at .05 level;		
country dummies not displayed;		
baseline model: UK, female,		
and unemployed respondents;		
SE: robust standard errors		

Explaining Ambivalence

In contrast to assuming that the presence of heteroskedasticity can capture ambivalence, I want to capture response variation more directly. To this end, I construct a measure that captures how differently a respondent answers two questions on the EU. This is the dependent variable in the following models.¹⁰ It takes on the value of 0 when both answers are consistent in their direction, a value of 1 if the answers are in an opposite direction, and a value of 0,5 if a respondent selected the middle category in regard to one of the two items. Because the

¹⁰ See table 1 for more information.

dependent variable has three categories which do not necessarily need to be of equal distance, I run ordered logit models. The models use country dummies (not displayed) as well as robust standard errors to cope with unequal error variances.

Table 3 shows the results of four models. The first model only includes the three independent variables subjective knowledge, objective knowledge, and dual identity. All of the three variables have a significant and negative effect. In an ordered logit model, the coefficients refer to a linear effect of a one unit change in x on y in standard deviation units, when all other variables are held constant. Alternatively, the coefficients can be interpreted with respect to their effect on the probability of being in a higher category of the dependent variable. In this case, higher values refer to more ambivalence. The odds of moving from no-ambivalence to medium ambivalence or from medium ambivalence to high ambivalence decrease by 46 percent ($\exp[-0,79]=0,46$) as subjective knowledge increases from 0 to 1 (i.e. from its minimum to its maximum). The chances of a switch from no ambivalence to medium ambivalence or medium ambivalence to high ambivalence decrease by 71 percent ($\exp[-0,34]=0,71$) when objective knowledge increases from 0 to 1. Having a dual European and national identity also decreases the probability of moving from no ambivalence to medium ambivalence or medium ambivalence to high ambivalence. A dual identity decreases the chance for such a switch by 50 percent ($\exp[-0,68]=0,5$).

Higher subjective knowledge, higher objective knowledge, and a dual identity make it less likely that respondents are in the medium or high ambivalent group of respondents. Calculating predicted probabilities allows for a more intuitive understanding of this result. Figures 1, 2, and 3 show the predicted probabilities for being in each of the categories of the dependent variable as one of the independent variables changes from a low value to a high value. In order to compare reasonable and empirically existing values, each independent variable was set to a value one standard deviation (sd) below the mean and then to one sd above the mean, and everything else is held constant. Looking at figure 1, one finds that a switch from one sd below the mean to one sd above the mean increases the probability of a respondent to be unambivalent, while the probabilities for being in the group of medium or high level ambivalent respondents decrease.¹¹ Although smaller in effect size, a similar pattern is revealed by figure 2. Having both a national and European attachment (dual identity) results yet again in the same pattern. The probability for being unambivalent increases for respondents with a dual identity, while at the same time the probability to be in an ambivalent group decreases.¹²

¹¹ Table 8 in the appendix provides the exact figures for each change.

¹² Since the log likelihood as a measure for model fit is only comparable among nested models with a similar N , McFadden's pseudo R^2 statistic can be more helpful for evaluating model fit of the results in table 3. Model 1: 0.02, model 2: 0.03, model 3: 0.07, model 4: 0.04

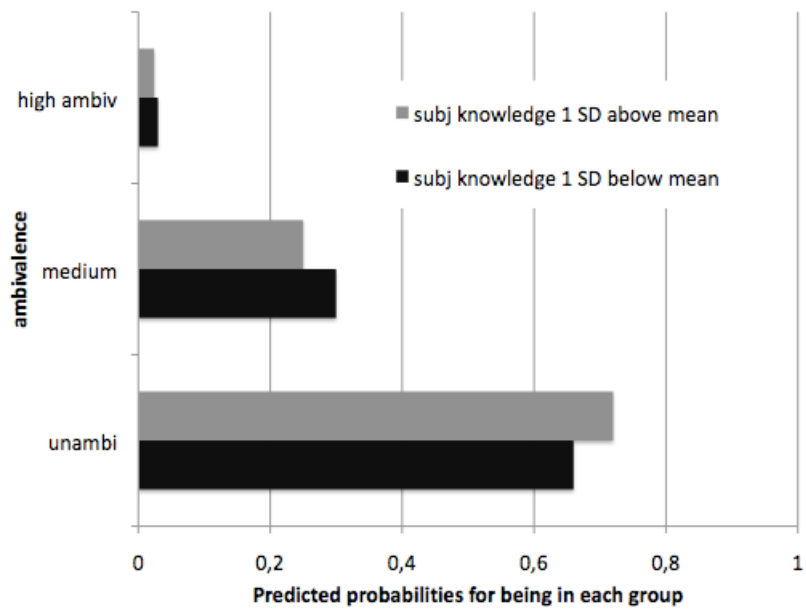


Fig. 1: Predicted probabilities: low and high subjective knowledge

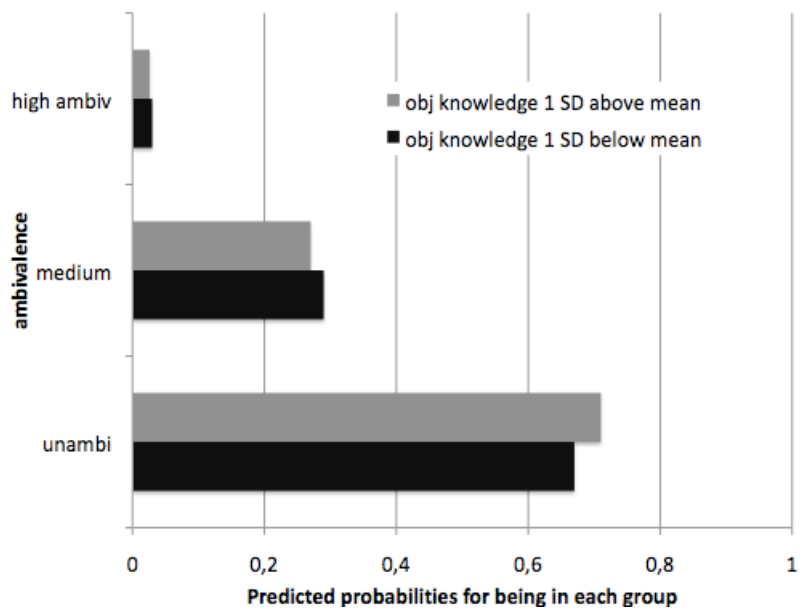


Fig. 2: Predicted probabilities: low and high objective knowledge

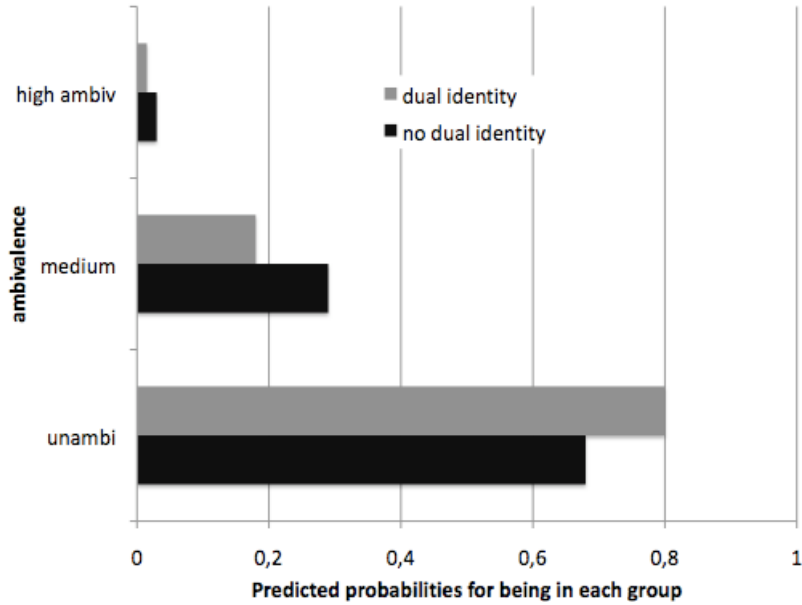


Fig. 3: Predicted probabilities: presence/absence of dual identity

The results from model one confirm hypotheses one and two, as well the initial results from the heteroskedastic regression. This model does not control for confounding effects. Model two in table 3 is calculated by employing a number of individual level control variables. Since there is no literature on which variables affect ambivalence in EU support, such variables are used which are known to affect the level of EU support. I control for cognitive mobilization, economic rationality, identity, political cues, as well as age and gender. If the effect of knowledge and dual identity is stable even after introducing these controls, one can have more certainty in that it is not for example education or occupation that leads to less ambivalence. Looking at the coefficients for subjective and objective knowledge, as well as dual identity in model two, one finds little change. All of the relevant coefficients are still negative and significant; the sizes of the coefficients only changed by a small amount. Only a few of the various control variables are significant, leading to the conclusion that knowledge and dual identity are the major explanatory factors for ambivalence. Among the controls, positive national economic prospects and being retired or a student (rather than being unemployed) lead to a smaller probability of being ambivalent. Also seeing further EU enlargement positively and being politically more conservative significantly decreases someone's probability of being more ambivalent.¹³

The results from model two are further support for hypotheses one and two. Yet, this

¹³ EU support and ambivalence in EU support are negatively correlated. In order to ascertain that the results in table 3 are not driven or affected by people's level of EU support, the models have also been run with EU support as additional control variable. This does not affect the conclusions. Since causality is not assumed to run from knowledge to EU support to ambivalence, the models with EU support as additional control variable are not displayed.

analysis still faces the problem that my measure for ambivalence might be picking up more nuanced attitudes rather than more ambivalence. It is therefore helpful to look at the effect of knowledge just among highly educated respondents. Highly educated people are more likely to have very nuanced attitudes on European integration than any other group in the sample. Model three is calculated as an example and test on the subset of respondents with eight or more years of education after the age of 14.¹⁴ The coefficients for subjective and objective knowledge, as well as a dual identity are still negative and significant. Thus, even among highly educated people more knowledge and a dual identity decrease the probability of having a higher value on the dependent variable. If these higher values were picking up nuanced attitudes rather than ambivalence, these results would indicate that more knowledge on the EU leads to less nuanced attitudes – a result that is rather implausible.

¹⁴ Changing this particular cutt-off point does not affect the results.

Table 3: Regression results, dependent variable: ambivalence in EU support (0/0,5/1)

Variable	Model 1 restricted model		Model 2 full model		Model 3 high edu. subset		Model 4 n/n amb. excl.	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
<i>Cogn. Mobili.</i>								
sub.know.(0-1)	-0,79***	0,08	-0,75***	0,10	-0,73***	0,22	-0,90***	0,10
obj.know.(0-1)	-0,34***	0,06	-0,29**	0,08	-0,59**	0,19	-0,26**	0,09
dual identity (0/1)	-0,68***	0,06	-0,61***	0,07	-1,06***	0,16	-0,73***	0,07
opinion leader (1-4)			-0,03	0,02	-0,04	0,04	-0,01	0,02
education (0-11)			-0,01	0,01	0,00	0,03	-0,02	0,01
<i>Econ. Rational</i>								
pers.econ.prosp. (0-2)			-0,01	0,03	-0,09	0,06	-0,04	0,03
nat.econ.prosp. (0-2)			-0,06*	0,03	-0,09	0,06	-0,09	0,03
self-employed			-0,16	0,08	-0,24	0,19	-0,13	0,09
manager			-0,04	0,08	-0,14	0,16	-0,04	0,08
white-collar			-0,08	0,07	-0,13	0,17	-0,09	0,08
manual			-0,08	0,07	-0,17	0,17	-0,07	0,07
house work			0,01	0,03	0,04	0,05	0,01	0,03
retired			-0,24**	0,08	-0,45*	0,20	-0,28*	0,08
student			-0,20*	0,09	-0,20	0,19	-0,27	0,10
<i>Identity</i>								
attach. to nation (1-4)			-0,08	0,03	-0,07	0,06	-0,10	0,03
enlargement (0/1)			-0,16***	0,04	-0,27*	0,08	-0,24*	0,04
<i>Pol. Cues</i>								
polor (1-10)			-0,03**	0,01	-0,06*	0,02	-0,03*	0,01
age			0,00*	0,00	0,01*	0,00	0,01*	0,04
gender (1=male)			0,03	0,04	-0,09	0,08	-0,02	0,01
Intercept 1	0,52	0,05	-0,12	0,16	-0,56	0,47	-0,58	0,17
Intercept 2	0,33	0,06	0,26	0,16	0,21	0,48	2,19	0,17
N	24748		15385		3706		13573	
Log likelihood	-17498,867		-10849,837		-2573,04		-10006,13	

*** significant at .001 level, ** significant at .01 level, * significant at .05 level; SE: robust std. errors
country dummies not displayed; baseline model: UK, female, and unemployed respondents

The second weakness of my conceptualization of ambivalence is that it assigns respondents a value of zero (no ambivalence) when they select the neutral category both in regard to whether they support the EU membership of their country and when they are asked about the image that the EU has for them. This combination of answers can mean indifference just as much as it can stem from a truly ambivalent respondent who expresses his or her ambivalence in this way. When psychologists use two scales to measure ambivalence, one going from zero to approval and one going from zero to disapproval, they can easily distinguish between indifference and ambivalence. A respondent who has low values on both scales is indifferent rather than ambivalent, since her answers do not indicate the simultaneous presence of both approval and

disapproval. In order to distinguish indifference from ambivalence among the respondents who selected the middle category on both items, I use the following criteria: The Eurobarometer survey asks respondents also if they ever heard of institutions such as the European Parliament (EP), the European Council, or the European Commission. Additionally, it asks people if they discuss politics with friends often, sometimes, or never. I argue that if respondents never discuss politics and have never heard of the EP, the Council, or the Commission but still selected the middle category in regard to whether they support the EU and what their image of the EU is, they are indifferent rather than ambivalent. In order to feel ambivalent about something, one needs to have considerations on the corresponding object in mind. If someone has never heard of the most important institutions of the EU, it is unlikely that such considerations are accessible. The remaining group that selected the middle category on both questions (around three/quarters) is treated as (neither/nor-)ambivalence.

Since this group of neither/nor-ambivalent respondents can have biased the results as long as it was grouped together with unambivalent respondents, I calculate the model again. In model four, all respondents that expressed their ambivalence by answering the middle category on both items ("neither-nor-ambivalent" respondents) are excluded. All those that have never heard of the central EU institutions are left in the sample, as they can be seen as indifferent and therefore also unambivalent. These changes do not affect the results. The coefficients for subjective and objective knowledge, as well as the one for dual identity are still negative and significant.

Calculating a regression on a subset by simply excluding the "neither/nor-ambivalent"-group can also introduce bias. Grouping these respondents together with the medium or highly ambivalent respondents, or merging all three groups are options, but there is a better alternative. The model can be calculated again with a multinomial logit regression. In this regression, one does not rank the categories of the dependent variables and only specifies the different categories in which respondents are grouped. In our case we have four categories: unambivalent respondents, medium level ambivalence, highly ambivalent people, and the (new) group of neither-nor-ambivalent respondents. The result tables of a multinomial regression are extensive and not displayed.¹⁵ Holding everything else constant, more subjective knowledge, more objective knowledge, as well as a dual identity make higher level ambivalence less likely. Figure 4 makes the results of the multinomial regression accessible. It shows the predicted probability of a respondent to be in each of the categories as subjective knowledge (x-axis) increases and when everything else is held constant. The most apparent patterns are the upward slope of the line of unambivalent respondents and the downward trend of the line for medium level ambivalence. While the line for high ambivalence stays relatively stable, being in the category of neither/nor

¹⁵ The results can be obtained from the author.

ambivalence also decreases when respondents have more knowledge on the EU. The probability plot for different values of objective knowledge (figure 5) shows slopes that are less steep. In contrast to subjective knowledge, more objective knowledge on the EU seems to decrease the probability of respondents to be in the medium level ambivalence group – and the probability of people being unambivalent increases. Figure 6 refers to the probabilities for being in each group depending on whether a respondent has or has not a dual identity. A dual identity increases the probability of being in the group of unambivalent respondents, while it decreases the probabilities for being in each of the other categories, including medium and high level ambivalence, as well as neither-nor-ambivalence. These results serve as further support for the initial finding that knowledge and a dual identity decrease ambivalence in EU support.

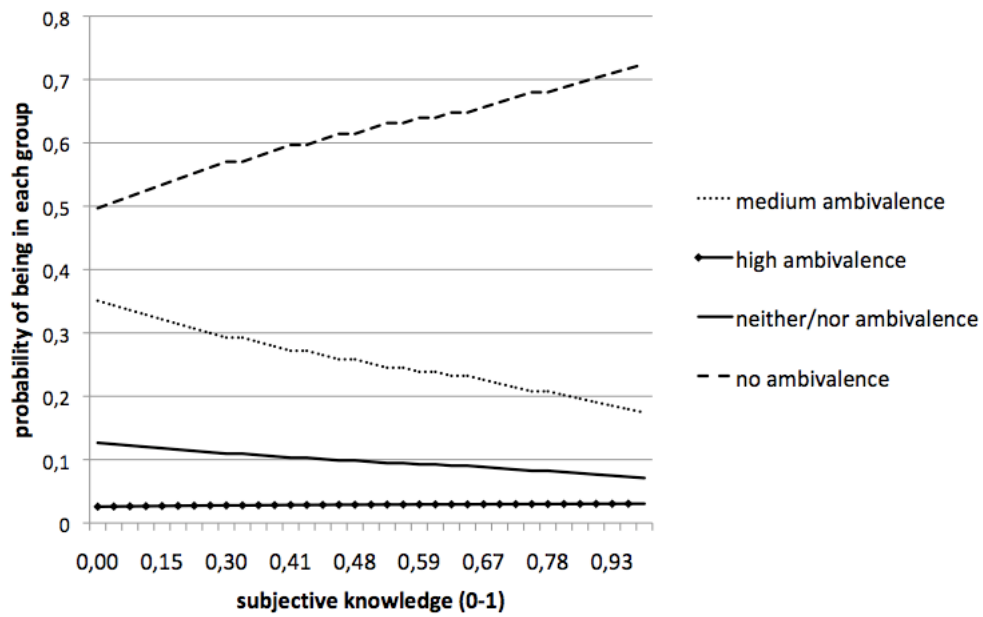


Fig. 4: Results of multinomial regression: predicted probability plot 1

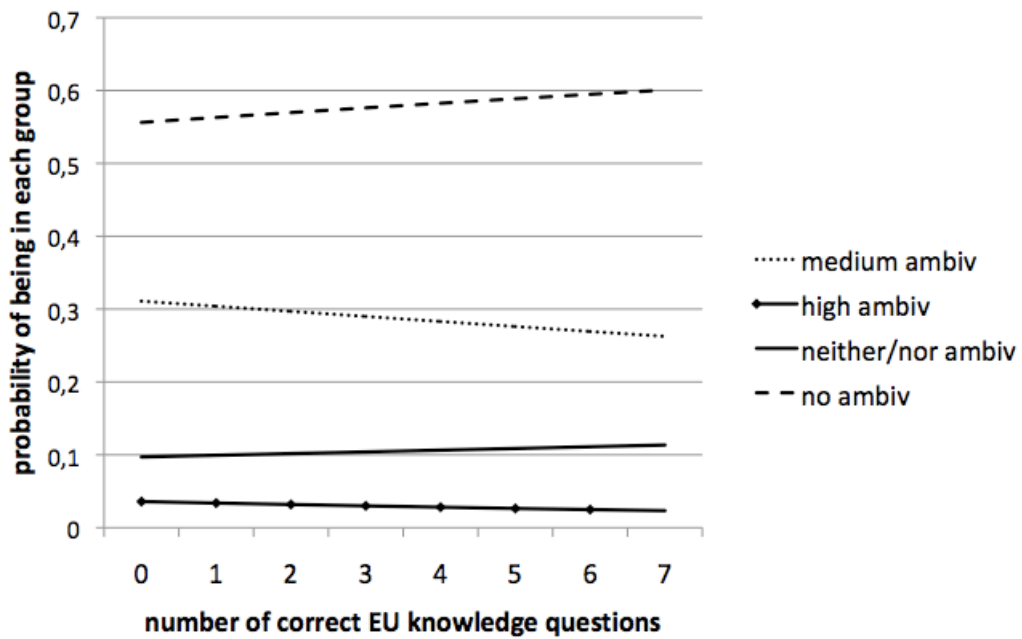


Fig. 5: Results of multinomial regression: predicted probability plot 2

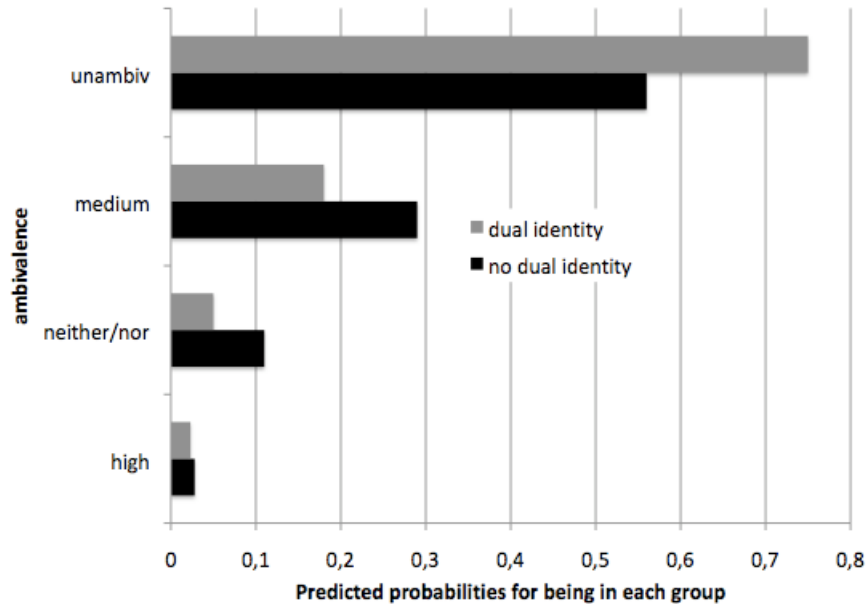


Fig. 6: Results of multinomial regression: predicted probability plot 3

EU Support among Ambivalent and Unambivalent Citizens

Hypothesis three stated that a standard socioeconomic variables based model to explain EU support performs much better among unambivalent respondents than among ambivalent respondents. To test this hypothesis, I estimate three OLS regression models with (level of) EU support as dependent variable.¹⁶ The models use country dummies (not displayed), as well as predictors for cognitive mobilization (knowledge on the EU, opinion leadership, and education), economic rationality (personal economic prospects, national economic prospects, and dummies for occupation), identity (attachment to one's country and attitude towards enlargement), political orientation, age and gender. The left column in table 4 shows a model based on a full sample. The column in the middle refers to a model calculated only with respondents who are unambivalent. The right column is based on a subset of the sample only with respondents who are considered ambivalent¹⁷.

The results of the full sample model confirm the literature on attitudes towards European integration (Hooghe and Marks 2005). All variables capturing cognitive mobilization have a positive and significant effect on EU support. A more positive personal and national economic situation assessment increases individual level EU support. Being for EU enlargement increases EU support. Attachment to the EU is a fairly strong predictor for EU support. A right of center

¹⁶ EU support is operationalized as a respondent's mean of the two items "membership support" and "image of the EU".

¹⁷ Includes respondents in the categories "medium ambivalence", "high ambivalence", and "neither-nor-ambivalence".

political orientation also increases EU support significantly.

The differences in model fit of the three models reveal an intriguing pattern. The adjusted R-square of the model calculated using the full sample is .23. The R-square for the model estimated by using only unambivalent respondents is .28. In contrast, the model fit of the regression using only ambivalent respondents is much lower with 0.09. This shows that a standard model predicting EU support performs much better when including only unambivalent respondents. The same model can explain much less of the variance when respondents are ambivalent in regard to their support for the EU. Put differently, a standard model for EU support explains much more which factors drive attitudes towards European integration for people who are unambivalent on this issue, than for people who are ambivalent. This connects to the heteroskedastic regression approach to modeling ambivalence. In this tradition the authors argued that ambivalence is revealed by response variation. This implied that any regression model performs worse for ambivalent respondents and that their attitudes can be much less reliably predicted. This convergence of the heteroskedastic regression approach and my one provides support for that both approaches to ambivalence talk to one another.

The large gap in model fit between the low and high ambivalence samples confirms my third hypothesis. It also emphasizes that the process through which unambivalent Europeans determine their stance on European integration is different for ambivalent respondents. My results imply that we have a more limited understanding of which factors drive attitudes toward the EU when people are ambivalent - and that ambivalent Europeans are different from their unambivalent peers. One reason that such a standard model to explain EU support performs worse for ambivalent respondents is that they might be much more affected by temporarily salient information as suggested by the literature on ambivalence in American public opinion research (e.g. Lavine et al. 1998). This analysis is weakened by the fact that the differentiation between ambivalent and unambivalent respondents uses the same two variables ("EU membership support" and "image of the EU") that also make up the dependent variable "level of EU support". This problem cannot be circumvented in the absence of a third variable that measures ambivalence in EU support independently. The substantive significance of these preliminary results suggests clear hypotheses for further research. Future research would need to test if standard socioeconomic and identity based models explaining EU support pertain indeed more to unambivalent respondents and if this can be explained with the fact that for ambivalent respondents, current events and temporarily salient information are more important for their extent of support for European integration than all other variables..

Table 4: EU support: unambivalent and ambivalent Europeans

	Model 1		Model 2		Model 3	
	full sample		unambiv. subset		ambiv. subset	
Variable	Coeff.	SE	Coeff.	SE	Coeff.	SE
<i>Cogn. Mobilization</i>						
subj. knowledge (0-1)	1,97***	0,11	2,40***	0,16	0,27*	0,12
obj. knowledge (0-1)	0,88***	0,09	1,21**	0,13	0,13	0,09
dual identity (0/1)	1,12***	0,05	0,91***	0,06	0,37***	0,08
opinion leadership (1-4)	0,02	0,02	0,01	0,03	0,00	0,02
education (0-11)	0,08***	0,01	0,08***	0,01	0,04***	0,01
<i>Econ. Rational</i>						
pers. econ. prospects (0-2)	0,10***	0,03	0,10*	0,04	-0,02	0,04
country econ. prosp. (0-2)	0,19***	0,03	0,19***	0,04	0,02	0,03
self-employed	0,12	0,09	0,09	0,12	0,15	0,09
manager	0,18*	0,08	0,11	0,11	0,22*	0,08
white-collar	0,08	0,08	0,00	0,11	0,10	0,08
manual	-0,01	0,07	-0,04	0,10	0,02	0,07
house work	-0,05	0,03	-0,06	0,04	-0,04	0,03
retired	0,17*	0,08	0,12	0,12	0,07	0,08
student	0,47***	0,09	0,40***	0,12	0,40***	0,10
<i>Identity</i>						
attach. to nation (1-4)	0,19***	0,03	0,20***	0,05	0,07*	0,03
enlargement (0/1)	1,16***	0,04	1,53***	0,06	0,43***	0,04
<i>Pol. Cues</i>						
polor (1-10)	0,07***	0,01	0,07**	0,01	0,03***	0,01
age	0,00	0,00	-0,01*	0,00	0,00	0,00
gender (1=male)	0,02	0,04	-0,03	0,06	0,05	0,04
Constant	2,87	0,18	2,86	0,26	4,27	0,18
N	15316		8684		6632	
Adjusted R-Square	0,23		0,28		0,09	
*** significant at .001 level, ** significant at .01 level, * significant at .05 level, country dummies not displayed; baseline model: UK, female, and unemployed respondents SE: robust standard errors						

Conclusion

The goal of this paper was to examine if there is ambivalence in EU citizen's support for European integration and whether knowledge on the EU makes people less or more ambivalent. A growing body of literature in social psychology and American public opinion research finds that ambivalence in political attitudes has a direct impact on political outcomes. Ambivalent individuals have less stable and less predictable attitudes and are more susceptible to temporarily salient cues. Thus, ambivalence can play an important role for European integration when it comes to the cueing effect of anti-EU extremist parties, campaigns before referendums on European integration, or salient EU level events such as the crisis of the Euro.

EU public opinion survey research is not yet concerned with ambivalence, so that no question item in current large-N surveys offers a direct measure of ambivalence. Therefore, ambivalence was measured by the extent to which someone's answers to two questions on the EU – support for EU membership and image of the EU – differed from one another. Most people answered these questions consistently, i.e. with low deviations from the mean across them. However, some respondents' answers deviated very much from their mean across the items. These answers were considered ambivalent. I find that more self-assessed knowledge, more objective knowledge, and a dual identity make people less ambivalent in their support for European integration.

My analysis also deals with the potential criticism that measures of ambivalence assess how nuanced people's attitudes are rather than measuring ambivalence per se. My results show that knowledge decreases the score of the dependent variable for all respondents, including highly educated respondents. If the measure was picking up nuanced attitudes rather than ambivalence, this would suggest the unlikely result that highly educated people develop less nuanced attitudes when they possess more knowledge on the EU. The analysis also focuses on the problem that some respondents might express their ambivalence by selecting the middle category on both question items with which ambivalence is measured. Even though these respondents do not show response variation, they could indeed be ambivalent. I estimated a multinomial regression in order to test if this concern biased the results. Respondents that selected the middle category on both items were considered to be ambivalent in their own way, side by side with medium level and high level ambivalent ones. As the results of the multinomial regression show, knowledge and a dual identity make people less likely to be in any one of the ambivalent groups.

A common approach in the literature is to conceptualize ambivalence as response variation (Alvarez and Brehm 1995, 1997, 2002). This involves estimating a heteroskedastic regression to assess which predictors affect ambivalence understood as response variation. Among the limitations of this procedure is that respondents are considered ambivalent just because they are similar in many respects but differ much in their value of the dependent variable. Unambivalent respondents would be those who are similar in many respects and in their value on the dependent variable. In order to ascertain that my results are not driven by my operationalization of ambivalence and to connect to this tradition in the literature, I estimated a heteroskedastic regression first. The results contradict the findings of Steenbergen and De Vries (2011), but confirm my claims: subjective and objective knowledge on the EU, as well as a dual identity decrease ambivalence in EU support when conceptualized as response variation.

In the last section of this paper I show that a standard model explaining EU support performs differently for non-ambivalent respondents and ambivalent ones. Using the same predictors, one can explain three times as much of the variance in support for non-ambivalent respondents than

for ambivalent respondents. This leads me to conclude that the process by which ambivalent Europeans form their attitudes on European integration is different from that among their unambivalent peers. The existing literature on EU support applies well to non-ambivalent Europeans whereas our understanding of ambivalent Europeans is limited. A potential reason for this result is that things not included in the model, like cues from current events, play a more important role for ambivalent respondents than for unambivalent ones, and thus EU support among the latter can be explained better than among the former. Due to a lack of a direct measure for ambivalence which is unrelated to EU support, this results must be seen as a hypothesis for future research.

Both approaches to measuring ambivalence – using response variation across two EU related items and heteroskedastic regression analysis – are rather distant ways of capturing this concept. Since there is evidence that some Europeans are ambivalent about European integration and that they are indeed different from unambivalent Europeans, our understanding of EU support would benefit tremendously from the inclusion of items gauging ambivalence more directly in standard periodical large-N surveys such as the Eurobarometer or the European Election Study. In the American election studies, respondents are for example asked to rate parties and candidates on two separate scales, one being how favorable one's attitudes are, the other one being how unfavorable one's attitudes are towards the same object. Applied to the European context, such an approach would follow the suggestions by Kaplan (1972) and provide a direct measure for ambivalence. This in turn would allow for a more detailed study of which cues ambivalent Europeans use to form their attitude on European integration, under which circumstances EU citizens are more or less ambivalent, and if their attitudes are - as the literature suggests - less stable and more likely to be affected by temporarily salient cues. We would also be able to get a better understanding of why we sometimes see sudden changes in public opinion on the EU, successes of anti-EU campaigns or extremist parties in EP elections. Studying the consequences of ambivalence in EU support should also be an avenue in experiment based political psychology research for its strength in examining differences in people's cue susceptibility.

APPENDIX

Table 5: Summary statistics

Variable	Mean	Std. Dev.	Min.	Max.	N
<i>dependent variables</i>					
Ambivalence in EU support	0.17	0.268	0	1	25933
EU support	6.69	2.60	0	10	25515
<i>independent variables</i>					
<i>Cogn. Mobilization</i>					
education	4.301	3.356	0	11	29532
objective knowledge on EU	0.511	0.263	0	1	26768
subjective knowledge on EU	0.315	0.207	0	1	25412
opinion leadership	1.8	1.08	0	4	29914
<i>Econ. Rational</i>					
national economic prospects	0.796	0.696	0	2	27006
personal economic prospects	0.634	0.727	0	2	26292
self-employed	0.076	0.265	0	1	30281
manager	0.099	0.298	0	1	30281
white-collar	0.102	0.303	0	1	30281
manual	0.206	0.404	0	1	30281
house	0.686	0.832	0	1	29423
unemployed	0.062	0.241	0	1	30281
retired	0.284	0.451	0	1	30281
student	0.078	0.269	0	1	30281
<i>Identity</i>					
country attachment	3.494	0.674	1	4	29629
EU attachment	2.382	0.91	1	4	29201
enlargement	0.597	0.49	0	1	25978
dual identity	.0956	.294	0	1	30281
<i>Pol. Orientation</i>					
political left right o.	5.404	2.244	1	10	24230
<i>Demographics</i>					
age	47.798	18.224	15	98	30281
gender	0.443	0.497	0	1	30281
<i>additional information</i>					
EU membership support	2.462	0.706	1	3	25933
image of EU	3.412	0.939	1	5	29485

Table 6: Question wordings

Variable	Question Wording
EU Support	Index of two equally weighted items 1) Generally speaking, do you think that [our countrys] membership of the European Union is (a bad thing, neither good nor bad, a good thing)? 2) Image of the EU (1= very negative, 5 =very positive) and
Ambivalence in EU support	0 = if both items (above) answered consistently 1 = if one item (above) answered in different direction than the other one 0.5 = if one item of the two items was answered with middle category
<i>Independent Variables</i>	
<i>Cogn. Mobilization</i>	
Objective EU knowledge	7 factual knowledge questions on the EU; all correct = highest score rescaled to to 0-1 scale (number of EU member states, number of EMU members, EP members election, EP creation, EP enlargement approval, EP and the budget, EU presidency rotation)
Subjective EU knowledge	subjective: (1) How would you asses your knowledge of the EP with regards to its role within the EU (1-10), and (2) to the MEPs (1-10) and (3) How well respondents feel informed about the EP (1-4)
opinion leadership	Index of 1) How often does respondent discuss political matters 2) How often does respondent try to persuade friends, relatives, or fellow workers.
<i>Econ. Rational.</i>	
econ. prospects of country	Index of two items measuring respondents expectations (worse; same; better) concerning 1) economic situation in respondents country; and 2) employment situation in their country
personal econ. prospects	Index of three items measuring expectations (worse; same; better) concerning: 1) respondents future life; 2) financial situation; and 3) job situation
<i>Identity</i>	
national attach.	People may feel different degrees of attachment to their town or village, to their region, to their country, or to Europe. Please tell me how attached you feel to [our country]: very attached, fairly attached, not very attached, not at all attached; rescaled: 4 highest attachment
EU attachment	same question as above: 'attached you feel the EU'
dual identity	respondents having a 4 on nationalal and EU attachment rescaled: 4 highest attachment
attit. towards EU enlarg.	If respondent is for or against EU enlargement.
<i>Pol. Cues</i>	
political orientation	Left-Right Self Placement

Table 7: level of EU support: frequency distribution

value	frequency	percent
0	599	2,35
1,25	1328	5,21
2,5	1020	4,0
3,75	1411	5,53
5	5,53	18,19
6,25	1711	6,71
7,5	3702	14,51
8,75	9154	25,88
10	1944	7,62
total	25510	100,00

Table 8: Effect of a 2 sd change on predicted probabilities

variable	unambivalent respond.	medium ambivalence	high ambivalence
2 sd change in subj. know.	+6	-5	-0,6
2 sd change obj. know.	+4	-2	-0,4
2 sd change dual id	+12	-11	-1,5

2 sd change refers to change from 1 sd below mean to 1 sd above mean,
figures show percentage point changes of the predicted probabilities

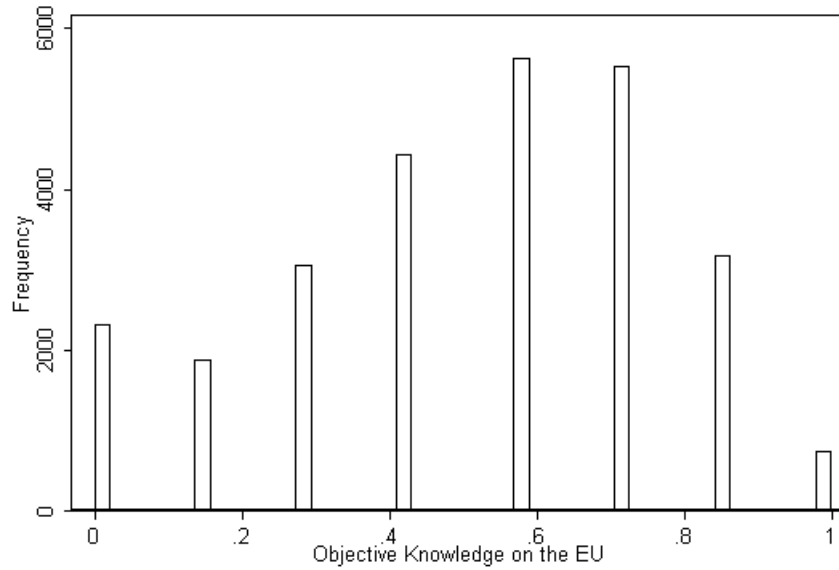


Fig. 7: Histogramm: objective knowledge

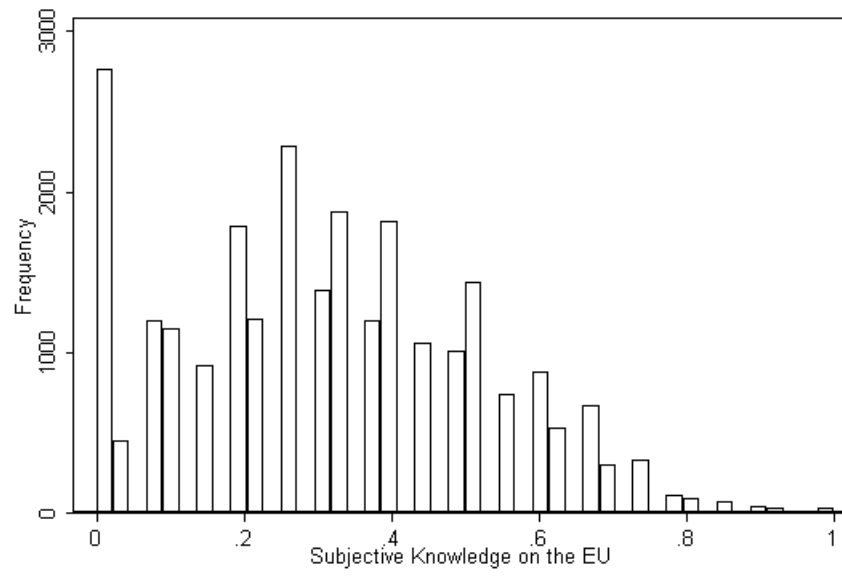


Fig. 8: Histogramm: subjective knowledge

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