**Fear, anger and enthusiasm about the EU:**

**Effects of emotional reactions on public preferences towards European integration**

**Abstract**

How do emotions affect public opinion on the EU? This article advances the literature that focuses on cue-taking, utilitarianism and identity by arguing that emotional reactions are important to understanding citizen EU attitudes. This is because discrete emotions such as fear, anger and enthusiasm affect how individuals deal with threats and how they seek out, process and use information. We hypothesise that, compared to anxious citizens, those angry with the EU are more likely to wish to leave the EU, less receptive to cost-benefit considerations and less nuanced in their opinions about integration. Our analyses, carried out using a survey conducted in the UK in April 2015 (n=3.000), support our hypotheses. These results help us predict the effectiveness of political strategies, e.g. in referendum campaigns.

**Introduction**

What explains public preferences towards European integration? A recent review article of EU public opinion identifies three prominent explanatory approaches: cue taking, utilitarianism and identity (Hobolt and de Vries, 2016). The cue taking approach postulates that citizens evaluate the EU through proxies, such as national institutions (e.g. Anderson, 1998; Armingeon and Ceka, 2014; Sanchez-Cuenca, 2000) or party cues (De Vries and Edwards, 2009; Steenbergen et al., 2007). The utilitarian approach posits that support for integration is a function of economic utility related to either the individual’s cost-benefit analysis of European integration or the country’s economy (e.g. Anderson and Reichert, 1995; Gabel and Whitten, 1997; Gomez, 2015). The identity approach suggests that European identity may act as a buffer against hostility towards the EU. Exclusive conceptions of national identity and perceptions of threat posed by other cultures are associated with opposition to the EU (e.g. Carey, 2002; Hooghe and Marks, 2009; McLaren, 2002; see also review by Kentmen-Cin and Erisen forthcoming on anti-immigrant attitudes). Other explanations include the interrelationship between identity and economic context (Garry & Tilley, 2009), the role of media (e.g. De Vreese, 2007), transnationalism (Kuhn, 2011) and religion (e.g. Boomgaarden and Freire, 2009; Hobolt et al., 2011).

This article advances the literature by taking into account individuals’ emotional reactions to the EU. As pointed out by Damasio (1994), fully understanding decision-making requires researchers to consider the interplay between emotions and cognition (Erişen 2013). Individuals’ discrete emotions such as anger, fear and enthusiasm affect how they deal with threats, how they form preferences, and how they seek out, process and use information. The core insight of research into emotions is that anger activates a different mental system from fear (Cacioppo et al., 1999; MacKuen et al., 2010; Marcus and MacKuen, 1993; Weber, 2012). Anger activates the approach/disposition system, lowers risk estimates, and leads individuals to try to remove perceived threats while relying on instinctive routines. In contrast, fear is related to the avoidance/surveillance system, makes individuals more risk-averse and cautious, and leads to an increased search for information (Brader et al., 2010; Carver and Harmon-Jones, 2009; Druckman and McDermott, 2008; Lerner and Keltner, 2000, 2001; Valentino et al., 2009, 2011; Smith et al., 2008). In addition, research has found that enthusiasm is different from anger and fear due to its positive valence. In terms of its behavioural consequences, enthusiasm is associated with positive goal-oriented behaviour, but tends to be more similar to anger than to fear in that it tends to reinforce people’s habitual behaviours and existing political choices (e.g. partisanship), minimises perceived risks and reduces reliance on information (Isbell et al., 2006; Lerner and Keltner, 2001; Marcus et al., 2000; Valentino et al., 2008; see also Ladd and Lenz, 2008; Ridout and Searles, 2011).

Despite the fact that the study of emotions is a key strand in political behaviour literature, only one published study has thus far examined their role in understanding EU attitudes, specifically in the context of vote choice in the Irish referendum on the fiscal compact treaty (Garry, 2014). The study finds that emotional reactions tend to condition the extent to which voting is driven by attitudes towards domestic politics. Risky framing matters for vote choice: because voting against the treaty was successfully painted as the riskier option, fearful citizens were more likely to vote yes, with angry voters more likely to choose no. This analysis also shows that instrumental, issue-based considerations such as the perceived economic consequences of the vote mattered more to fearful voters, while angry voters decided more on the basis of ‘second-order’ concerns such as partisanship or government performance.

Our argument builds directly on Garry (2014) and extends his argument by considering the direct and moderating impact of emotional reactions on preferences towards European integration. In line with recent research, we expect emotions and affect to be ‘both a motivational component underlying information processing strategies and a direct source of information that individuals consult in making social judgments’ (Erişen, 2013: 117). Hence, emotions concerning the EU are likely to be influential at three stages of opinion formation: as a direct source of opinions, as a moderator of cognitive considerations and as a moderator of information-seeking strategies. First, emotional reactions exert a distinct direct influence on support for integration because different emotional reactions influence how individuals deal with perceived threats (Druckman and McDermott, 2008). We argue that those who experience anger should be the most likely to want to leave the EU. In contrast, fearful voters should be those who most want to renegotiate their country’s relationship with the EU. Enthusiastic citizens should unsurprisingly be least in favour of either option since continued membership on current terms will be attractive. Second, emotional reactions affect how individuals use other considerations to form opinions on EU integration (e.g. Garry, 2014; Valentino et al., 2011). We posit that instrumental considerations are more directly related to support for EU membership for fearful citizens, while underlying affect towards the EU is more important for those experiencing anger. Finally, emotional reactions also influence how individuals seek out and process information (e.g. Brader et al., 2008; Valentino et al., 2008; Merolla and Zechmeister, 2009). Because angry voters tend to be less active in finding and considering information, we suggest that they will have less varied and nuanced opinions regarding European integration than fearful voters.

Our study significantly extends Garry’s (2014) findings in three ways. Most importantly, we put forward an overall theoretical model of how emotional reactions affect public preferences on the EU. We suggest that emotions are important to understanding three distinct stages of opinion formation. In proposing this model, we also offer an entirely new perspective by considering how emotional reactions affect the extent to which opinions on EU integration are varied and nuanced. Second, we examine general preferences concerning a member state’s relationship with the EU rather than voting decisions in a referendum. By incorporating emotionality into our empirical analysis we demonstrate that discrete emotional reactions have divergent effects on people’s preferences towards European integration. Finally, we also examine the distinct effects of enthusiasm, which Garry (2014) does not consider, showing that in terms of its behavioural consequences, enthusiasm is more similar to anger than to fear. In sum, we provide an important complement to existing work explaining support for EU integration (Hobolt and de Vries, 2016), and contend that future work explaining preferences over EU integration should integrate emotional reactions.

We test our argument using evidence from an online survey conducted in the UK in April 2015 (n=3.000); this sample was selected from an access panel to be representative of the general British population in terms of age, gender and region. The context of increased politicisation of the EU in light of the Brexit debate makes the UK an ideal case for testing our model. Overall, our findings concerning the direct and moderating effects of fear, anger and enthusiasm confirm our hypotheses. Empirically, our results regarding the effects of emotions on EU public opinion are robust because our data allow us to incorporate and control for the major explanations in the literature, including cue-taking, utilitarianism and identity, as well as for other possible confounders, such as ideological views, demographics and interest in current affairs. In the conclusion, we propose further empirical strategies that should be implemented in future research. Taken together, our findings have important implications for understanding EU citizen attitudes and voting behaviour and help us predict the effectiveness of campaign strategies in referendums.

**Emotional reactions and opinions about European integration**

Early research into emotional reactions either used one simple positive-negative dimension or a two-dimensional valence model (Marcus, 2003; Marcus et al., 2000). More recently, researchers have shown that emotions are not well summarized in such reduced ways (Larsen and McGraw, 2011) and have instead argued that distinct emotions may characterise individuals’ reactions (e.g. Petersen, 2010; Huddy et al., 2007; Smith et al., 2008; Valentino et al. 2008, 2011; Weber, 2012; see also Conover and Feldman, 1986). Appraisal theories of emotions suggest that various distinct emotions arise due to individuals’ cognitive interpretation of the situation they experience (e.g. Smith and Ellsworth, 1985; Roseman, 1991; for a review, see Brader and Marcus, 2013). Neuroscientific theories based on the neural processes that generate emotional responses have also increasingly turned towards a three-dimensional model of emotions that distinguishes between fear, anger and enthusiasm (Brader and Marcus, 2013; Lerner and Keltner, 2001). Research in political psychology building on both appraisal and neural process theories has therefore focused in particular on the causes and consequences of anger, fear[[1]](#endnote-1) and enthusiasm as distinct emotions (Petersen, 2010; Carver and Harmon-Jones, 2009; Conover and Feldman, 1986; Huddy et al., 2005, 2007; Lerner and Keltner, 2000, 2001; Smith and Ellsworth, 1985; Valentino et al., 2011).

One important question is how distinct emotions arise. To simplify, neuroscientific approaches tend to emphasise immediate, bodily reactions to experienced situations, while cognitive appraisal approaches focus more on individual interpretations and evaluations of situations (Oatley and Johnson-Laird, 2014). In the latter view, the kinds of emotions we experience depend on the judgements we make about events and circumstances (Carver and Harmon-Jones, 2009). In this article, we do not address whether emotions are ‘preconscious’ or ‘postawareness’ appraisals, and the type of emotion expressed in survey responses may reflect both processes.

Overall, fear, anger and enthusiasm are likely to arise depending on how individuals react to, appraise and evaluate the situation and their circumstances. It has been argued that both fear and anger are the result of threats and dangers (e.g., Merolla and Zechmeister, 2009), with fear caused more by uncertainty when perceptions of control are low and anger more by a sense of control and by external agents who are perceived as illegitimate (Carver and Harmon-Jones, 2009; Oatley and Johnson-Laird, 2014; Wagner, 2014). In their review of the literature, Brader and Marcus (2013) argue that the causes of enthusiasm have been studied to a lesser extent, but have been linked to positive outcomes and success in reaching goals (Oatley and Johnson-Laird, 2014). Politically, this emotion tends to be tied to positive and reassuring news stories (Brader et al., 2008).

Applied to political phenomena, distinct emotions cause different types of actions and attitudes: fear leads to caution and openness and anger to more confident and aggressive responses (Druckman and McDermott, 2008; MacKuen et al., 2010). For instance, whereas fear and anger both tend to increase intolerance and threat perceptions (e.g. Erisen and Kentmen-Cin forthcoming), they lead to distinct ways of reacting to terrorist threats (Lerner et al., 2003). Fearful citizens are more wary of the increased risk and turn to isolationism, while angry citizens are less risk-averse and tend to favour pro-active intervention (Huddy et al., 2007). Anxious citizens are also more likely to seek out new information and process this carefully (Brader et al., 2008; Marcus et al., 2000; Merolla and Zechmeister, 2009; Valentino et al., 2008). Finally, enthusiasm increases the willingness to participate in politics, but like anger it also increases less careful forms of information processing (Brader, 2006; Marcus et al., 2000).

The process of European integration is likely to elicit distinct emotional responses from citizens. The EU is a complex institutional framework that has expanded its jurisdictional authority over a number of key policy areas. In terms of the negative emotions elicited by the EU, we might consider aspects such as beliefs about the negative impact of the EU, perceptions of one’s influence over political decisions and assumptions about the motivations of EU actors. For some citizens, transposing sovereignty to the EU may therefore be perceived as a threat to domestic economic stability, cultural homogeneity, and national identity and sovereignty. For other individuals, the EU may inspire enthusiasm by appealing to common identities, solidarity and belonging as well as projects associated with economic prosperity. Those who view the EU with enthusiasm may associate it with positive past experiences as well as a feeling of future positive impact, coupled with perceptions of influence and control over those circumstances.

We suggest that these emotional reactions can subsequently influence support for European integration at three stages of the opinion formation process. First, emotional reactions can have a direct influence on attitudes towards EU membership; second, emotional reactions can affect the impact of other evaluations of the EU on opinions and attitudes about integration; and finally, emotional reactions can influence how individuals seek out and process information about the EU. These distinct points of influence are shown in Figure 1; below, we elaborate on our expectations for each way in which emotional reactions affect opinion formation on support for EU integration.

Figure 1 about here

Our first set of hypotheses concerns how emotional reactions directly affect support for EU integration, so whether and how individuals want to re-order their country’s relationship with the EU.[[2]](#endnote-2) Angry citizens should be more in favour of cutting ties with the EU. This is because angry individuals are more confrontational and less risk-averse. Risk propensity has been found to be connected with immigration beliefs and Euroscepticism (Steenbergen and Siczek forthcoming). Anger leads to more confident and aggressive responses to a given threat that are meant to remove it completely (Druckman & McDermott, 2008). In contrast, anxious citizens are more open to compromise than angry individuals (Huddy et al., 2005; MacKuen et al., 2010). Anxious citizens also tend to perceive higher levels of risk, coupled with a greater sense of uncertainty and lack of control (Huddy et al. 2005). Hence, they are also generally more risk-averse, preferring caution over radicalism. Anxious citizens should therefore be more likely to support re-negotiation of their country’s relationship with the EU. Finally, while enthusiasm is generally linked to political interest and mobilisation (Marcus et al., 2000), its status as a positive emotion means that these citizens should not want to leave the EU or renegotiate the terms of membership. Our first three hypotheses are thus:

*H1a: Anxious citizens are more likely to favour renegotiation than angry citizens.*

*H1b: Angry citizens are more likely to favour leaving the EU than anxious citizens.*

*H1c: Enthusiastic citizens are less likely to favour renegotiation or leaving the EU than anxious or angry citizens.*

Our second set of hypotheses concerns the effect of emotional reactions on how individuals use broader evaluations of the EU to form their opinion about European integration. In general, anger and enthusiasm lead citizens to take detailed and balanced information less into account: their opinions are formed more heuristically (Garry, 2014; MacKuen et al., 2010). In contrast, anxious individuals are less likely to rely on habitual responses and more likely to form their judgements based on careful consultation of the available information (Garry, 2014; MacKuen et al., 2010; Valentino et al., 2009). The surveillance system activated by anxiety will thus lead citizens to ‘stop and seek [relevant] information’ (Merolla and Zechmeister, 2009). As a result, the opinions of fearful citizens should be based more on effortful information processing.

If different emotions lead to different kinds of information-seeking and information-processing on European issues, then the resulting EU attitudes should also vary in their relationship with utilitarian concerns and affective evaluations. Specifically, the EU stances of fearful citizens should be more strongly linked to utilitarian, cost-benefit analyses of the EU. We know that such utilitarianism in the form of perceived costs and benefits of European integration provides a robust explanation of people’s EU attitudes, with those who perceive that integration benefits themselves and/or their country more likely to support the EU (e.g. Gabel, 1998; Gabel and Whitten, 1997). In contrast, angry and enthusiastic citizens may base their stance less on their perceptions of the costs and benefits of the EU. Indeed, such citizens should base their overall opinions more on affect-based evaluations of the EU (Garry, 2014; MacKuen et al., 2010). When asked about their opinion regarding political matters, angry and enthusiastic individuals tend to rely on heuristics based on their overall views – ‘an automatic reliance on relevant convictions’ (Brader and Marcus, 2013: 185). We thus hypothesise that:

*H2a: The attitudes of angry and enthusiastic citizens towards the EU are less conditional on utilitarian considerations concerning EU integration than those of anxious citizens.*

*H2b: The attitudes of angry and enthusiastic citizens towards the EU are more conditional on affect-based considerations concerning EU integration than those of anxious citizens.*

Finally, emotional reactions may affect how individual seek out and process information. On the one hand, anger and enthusiasm lead individuals to have stronger opinions and to be less open in their search for more information. There is evidence that anger in particular leads individuals to seek out less information and to look for sources that tend to confirm their pre-existing opinions (MacKuen et al., 2007, Valentino et al., 2008, 2009). In contrast, anxiety and fear lead individuals to engage in more careful information-seeking behaviour (Brader et al., 2008; Huddy et al. 2007; Marcus et al., 2000, Valentino et al., 2008). This is because this emotion leads individuals to be more deliberate and open in forming opinions. Applied to the EU, this would mean that angry citizens focus more on negative news and spend less time searching for information than anxious citizens; in contrast, enthusiastic citizens will focus on positive news, but will also work less hard at integrating challenging information.

We do not test directly how emotions moderate information-seeking and information-processing. Instead, we consider one likely consequence that should be observable if emotions moderate citizens’ cognitive behaviour. We argue that the impact of emotions on information-seeking influences how nuanced and differentiated citizen opinions are. The EU is a complex institutional arrangement that covers a wide array of different policy areas. It is reasonable to support EU integration in some areas more than in others. However, emotions will affect the extent to which individuals want, look for and process information about the EU. If anger or enthusiasm lead to less information-seeking relevant to integration, citizens associating the EU with those emotions will have more uniform opinions about EU integration across policy areas. In contrast, anxiety is likely to lead individuals to seek out more information, which should also lead fearful individuals to be less uniform in their support or opposition across policy areas. Of course, some anxious voters will still develop uniform views on the EU, but their tendency to seek out more information should on average counteract these tendencies, at least compared to angry and enthusiastic voters. We thus hypothesise that:

*H3: Angry and enthusiastic citizens’ opinion on European integration is likely to be more uniform across policy areas than that of anxious citizens.*

**Data and methods**

We test the above hypotheses through an examination of the UK case. This provides an ideal environment to test the effect of emotional reactions on public preferences towards European integration. The debate in light of the Brexit referendum increased the ‘politicisation’ of the EU issue, defined as ‘higher levels of salience, polarisation of opinion and the expansion of actors and audiences involved in EU issues’ (De Wilde et al., 2016: 3).

We rely on data collected from a large-n cross-sectional online survey (n=3.000) conducted in the UK in April 2015, about 14 months before the Brexit referendum. The survey was managed by ResearchNow, a market research company, which recruited participants using online panels of approximately 500.000 respondents from a wide variety of Internet sites to avoid the bias associated with limited source recruitment. Our survey is representative of the British population in terms of gender, age and region (see appendix table A1). Online surveys tend not to be fully representative of populations in terms of education and income, as higher educated and more affluent citizens are more likely to have Internet access. Given that research has shown that in-person and on-line survey data tend to yield similar results both in terms of estimating parameters and the overall explanatory power of competing models (e.g., Sanders et al., 2007), we consider this problem to be limited for our analysis. We control for education and income in our models, also accounting for the fact that the less-educated and less well-off citizens voted in favour of Brexit (Hobolt 2016). The survey was presented in exactly the same way to all respondents. We included a note at the beginning of the survey explaining the purpose of the study and ensuring respondent anonymity.

*Measures of EU support*

For the outcome variable, our analyses use two questions that measure different aspects of opinion about the EU. First, we capture an individual’s willingness to renegotiate EU membership based on answers to the agree-disagree statement ‘The UK should renegotiate the terms of its EU membership’. Second, we examine an individual’s decision on whether the UK should leave the EU based on the agree-disagree statement ‘Irrespective of renegotiation, the UK should leave the EU’. Answers to both questions were measured on a seven-point Likert scale ranging from 1 (‘strongly disagree’) to 7 (‘strongly agree’). The points in between were labelled: ‘disagree’, ‘slightly disagree’, ‘neither agree nor disagree’, ‘slightly agree’ and ‘agree’. Figure 2 presents two histograms with the distribution of both dependent variables. While the majority of respondents wish to renegotiate the terms of the UK’s EU membership, opinion is much more varied when it comes to leaving the EU.

[Figure 2 about here]

To measure the degree of attitude uniformity across EU policies, we asked respondents a series of questions to capture how much authority they think the EU should have in nineteen policy areas. Specifically, we asked ‘To what extent do you agree or disagree that the EU should have more authority over the EU Member States in the following policy areas’.[[3]](#endnote-3) Agreement was again measured on seven-point scales. To assess attitude uniformity we calculated the standard deviation of each individual’s responses across these nineteen policy areas. Larger values indicate greater opinion spread.

*Measures of emotional reactions*

Our main independent variables of interest relate to emotions. We conceptualise emotions as distinct reactions, especially fear, anger and enthusiasm. Our survey asked: ‘Which, if any, of the following words describe your feelings about Britain’s membership of the EU (choose up to four words).’ In line with the British Election Study question (e.g. Whiteley et al., 2014; see also Wagner, 2014), respondents were able to choose from: angry, disgusted, uneasy, afraid, happy, hopeful, confident, proud and indifferent. Out of these nine emotions, they could choose up to four. The left panel of Figure 3 shows a histogram of all emotional reactions. The most prominent reaction to Britain’s membership of the EU among the respondents is ‘uneasy’ at 49.3 per cent followed by ‘hopeful’ at 25.3 per cent. The least chosen emotion is ‘proud’, at 7.4 per cent. Note that about a quarter of respondents say that they feel ‘indifferent’ about Britain’s membership the EU, so it is not the case that everyone has a clear emotional reaction.

[Figure 3 about here]

We combine these emotions into four groups, as presented in the right panel of Figure 3.[[4]](#endnote-4) We consider responses ‘uneasy’ and ‘afraid’ as indicators of fear, with an individual being categorised as afraid if she ticked either uneasy or afraid or both (e.g. see Wagner 2014). We regard ‘angry’ and ‘disgusted’ as indicators of anger, with an individual being categorised as angry if she ticked either angry or disgusted or both.[[5]](#endnote-5) We measure enthusiasm based on whether individuals choose ‘happy’, ‘hopeful’, ‘confident’ or ‘proud’ (Marcus and Mackuen, 1993). Brader and Marcus (2013: 175) point out that while these terms may seem to tap into different emotions, they tend to be very similar observationally, especially in terms of their consequences. Finally, we measure indifference as those people who ticked that box in the question; note that most people who are indifferent chose no other emotions.

The design of the survey question means that emotions can co-occur, so respondents can state that they have different feelings at the same time, e.g. anger *and* fear. This is implied by and consistent with current approaches to studying emotions, which show that fear and anger are often present simultaneously (Carver and Harmon-Jones 2009: 197; Tellegen et al. 1999). In our survey, 36 per cent reported feeling fear and not anger, 6 per cent reported feeling anger but not fear, and 16 per cent reported anger and fear.[[6]](#endnote-6) In other words, most people who are angry are also somewhat anxious; our analysis assesses the distinct impact of each emotion.[[7]](#endnote-7)

In addition to examining the direct impact of these emotions (H1a-H1c), we also aim to test whether the presence of certain emotions moderates the impact of other attitudes on preferences concerning European integration. First, we hypothesised that the effect of cost-benefit considerations varies by emotional reaction (H2a). To test this, we interact our emotion indicators with a variable measuring the perceived costs and benefits of membership. This is assessed by asking respondents whether they agree or disagree with the statement that ‘Britain has greatly benefited from being a member of the EU’; higher levels of this seven-point variable indicate lower perceived benefits.[[8]](#endnote-8)

Second, we suggested that the effect of the general underlying stance towards the EU also differs by emotional state (H2b). To test this, we interact our emotion indicators with a variable measuring overall support for the EU; this is measured by extracting the first component of a principal components analysis of three items: first, how much integration the respondent would like to see, where 0 means ‘the integration of Europe has already gone too far’ and 10 that ‘European integration should be pushed further’; second, trust in EU institutions, measured on a scale from 0 to 10 where 0 means ‘do not trust at all’ and 10 means ‘trust completely’; and, third, satisfaction with democracy in the EU, on a scale from 0 to 10 where 0 means ‘completely dissatisfied’ and 10 means ‘completely satisfied’. This variable captures a respondent’s overall positive or negative evaluation of the EU.

*Control variables*

In order to assess the extent to which emotions shape attitudes and decision-making, our models have to include important potential confounders. Emotional reactions towards the EU may be caused by characteristics and attitudes that also predict attitudes towards the EU. For instance, an individual who opposes immigration may be more likely to be both angry at Britain’s EU membership and more likely to support Britain leaving the EU, without anger having a direct effect on the outcome variable at all. It is necessary to control for such potential confounders in our analyses in order to arrive at a proper estimate of the impact of emotions on attitudes.

First, we know that partisanship and party cues are pivotal in structuring people’s EU attitudes (e.g. De Vries and Edwards, 2009; Steenbergen et al., 2007) but also influence emotions (Ladd and Lenz, 2008). To control for partisanship, we include variables for party sympathy for Conservatives, UKIP, Labour, Liberal Democrats, Greens and any other party. For each party, respondents were asked to assess, on a scale of 0-10: ‘How likely is it that you would ever vote for this party?’. This is known as the propensity-to-vote question (van der Eijk et al., 2006); results do not differ if we use a standard party identification question instead.

Another potential concern is that our emotions measures are simply proxies for attitudes concerning EU integration. We therefore include those attitudes in our models to account for these confounders. Specifically, we control for the items that make up our EU opinion scale used to test H2, i.e. how much integration the respondent would like to see; trust in national and EU institutions often considered to be used as a proxy for attitudes towards European unification (e.g. see Anderson, 1998; Armingeon and Ceka, 2014; Sanchez-Cuenca, 2000); and a respondent’s satisfaction with democracy in the EU. We also include a measure of European identity in our models, with higher values indicating strong feelings of European identity (e.g. Carey, 2002; Hooghe and Marks, 2009; McLaren, 2002).

Our controls also comprise variables related to the utilitarian approach to European integration (e.g. Gabel, 1998; Gabel and Whitten, 1997; Gomez, 2015). These include questions that capture an individual’s personal economic evaluation and her assessment of the country’s economic situation. These are measured from 1 to 5, with lower values indicating improvement compared to 12 months ago. We also control for the respondent’s attribution of responsibility to the EU for her country’s economic situation, measured on a scale from 0 to 10, with higher values indicating full attribution of responsibility to the EU. Next, we know that cognitive mobilisation influences an individual’s view of European integration (Inglehart, 1970), so we control for education levels. This four-point variable, with 1 ‘less than secondary school exams’, 2 ‘secondary school exams (e.g. GCSEs or equivalent)’, 3 ‘college exams (e.g. A-Levels, NVQ, or equivalent)’ and 4 ‘university (e.g. Degree, Professional qualifications)’.

We also add controls that relate to ideology (Hooghe and Marks, 2009), including an individual’s self-placement of the left-right dimension; attitudes on state intervention and redistribution, with higher values indicating leftist attitudes; attitudes on immigration, with larger values denoting right-wing attitudes; and attitudes towards addressing climate change, with higher values indicating a positive stance. Finally, other individual-level controls include gender, age, income and the frequency of following current affairs on TV, the internet and in the newspapers. For information on descriptive statistics, see appendix Table A2.[[9]](#endnote-9)

**Results**

*Direct effects on support for EU membership*

Table 1 below reports our findings from three models using ordinary least squares (OLS) regression to predict attitudes towards renegotiation (model 1) and leaving the EU (models 2 and 3). First, we test whether anxious citizens are more likely to favour renegotiation than angry citizens. We expect this because anxious and fearful citizens tend to be more risk-averse and more willing to accept compromise compared to angry citizens who tend to be much more confrontational. Model 1 supports this hypothesis. In addition to emotional reactions, Model 1 includes our set of controls, including attitudes towards leaving the EU; it is necessary to control for this to isolate preferences for renegotiation as distinct from leaving the EU.

[Table 1 about here]

Model 1 provides evidence that fearful and anxious citizens wish to renegotiate the terms and conditions of the country’s EU membership, with enthusiastic citizens less likely to do so. Note that the variables for each emotional reaction can change independently from each other, as different emotions can co-occur. Interestingly, the effect for anger is not statistically significant; it is, however, statistically significantly different from the effect of anxiety (p<0.001). The effects of emotions on preferences over renegotiation are shown in Figure 4, which shows the predicted level of support for renegotiating EU membership on a 1-7 scale for voters reporting the three distinct emotions. The Figure shows that anxious respondents most strongly supported renegotiation, followed by angry and enthusiastic citizens. Perhaps angry and enthusiastic voters are more likely to have already made their mind up with regard to the UK’s EU membership, so that renegotiation no longer matters for their decision. Indifferent voters are similar to angry and enthusiastic voters.

[Figure 4 about here]

This resonates well with our findings in Model 2, where we test our second hypothesis, i.e. that angry citizens are more likely to favour leaving the EU than anxious citizens. In Model 2, we see a strong relationship between anger and the wish to fundamentally change the UK’s constitutional relationship with the EU. Enthusiastic citizens are less likely to want to leave the EU. Fear has a small but statistically significant positive effect on wanting to leave the EU compared to enthusiasm; moreover, anxious citizens are statistically significantly less likely to support leaving than angry citizens. Indifferent voters are similar to anxious voters.

Our findings related to the relationship between emotions on the one hand and willingness to renegotiate and preference for leaving the EU on the other are robust. Our models include a number of variables controlling for the main confounders of the relationship between emotional reactions and attitudes towards the EU. Party sympathy does not seem to have a strong effect across the models, with two exceptions: those who support the openly Eurosceptic United Kingdom Independent Party (UKIP) are more likely to wish to leave the EU; and those who support the Conservatives are more likely to support renegotiation. Our variables relating to the EU also have a mixed impact. For example, lower perceived benefits decrease the willingness to renegotiate and increase support for leaving the EU. The attribution of responsibility variable is positive and significant across models, i.e. the more an individual attributes responsibility to the EU for the UK’s economic situation, the more likely they are to support both renegotiation and withdrawal. Higher EU trust, satisfaction with EU democracy and support for deeper integration also decrease the desire for renegotiation, but these variables have a far weaker effect on wanting to the leave the EU. Finally, we find that there is a relationship between willingness to renegotiate and leaving the EU, i.e. individuals who want to renegotiate are more likely to wish to leave the EU and vice versa.

Interestingly, our results show that higher levels of education mean a voter is more likely to wish to renegotiate the terms and conditions of the UK’s EU membership but less likely to wish to leave the EU (see also Hobolt 2016). This indicates that among educated voters a preference for renegotiation does not necessarily lead to a desire for withdrawal. Subjective perceptions of one’s personal economic situation compared to last year are associated with a wish to leave the EU; but there is no effect on willingness to renegotiate. Negative perceptions of the country’s economic situation are related with less support for renegotiation, but have only a weak positive effect on wish for withdrawal. Ideological dimensions relating to the economy and immigration are also important, and we note that the immigration scales in general have a larger impact than the economic scales. Finally, higher levels of trust in the UK government increase the desire both to renegotiate and to leave the EU.

*Emotions as moderators of cost-benefit and affective considerations*

Our second set of hypotheses concerned how emotions moderate the impact of general EU attitudes and cost-benefit perceptions. To test these hypotheses, we interact cost-benefit perceptions and overall EU attitudes with our emotion indicators. Given the difficulty of interpreting interaction effects directly from the coefficients in regression models, we present more detailed results in Figure 5. This shows the marginal effect of each attitude for angry, fearful, enthusiastic and indifferent voters, respectively.[[10]](#endnote-10) The dependent variable in each case is willingness to leave the EU. The top half of the Figure shows the marginal effect of general EU attitudes depending on emotional reactions, while the bottom half shows the marginal effect of cost-benefit perceptions. In order to read Figure 5 correctly, note that, unlike in Figure 4, the x-axis here is the predicted marginal effect of cost-benefit perceptions and general attitudes; in Figure 4, the x-axis was the predicted level of the dependant variable.

Turning first to cost-benefit perceptions (bottom half of Figure 5), we can see that the marginal effect of this variable is clearly larger for anxious than for angry or enthusiastic voters. While cost-benefit perceptions are important for voters with all emotional reactions, the effect is about twice as large for anxious than for angry or enthusiastic individuals. Indifferent voters are between anxious voters on the one hand and angry or enthusiastic voters on the other. Overall, H2a is confirmed.

The top half of Figure 5 shows that the effect of general EU evaluations is negative for angry individuals, who are the only group for whom the marginal effect is statistically significantly smaller than 0. Enthusiasm appears to increase the positive effect of general EU attitudes. The moderating effect of enthusiasm also statistically differs from that of anxiety (F=6.09, p=0.01), which itself is only slightly positive and far from statistical significance. Finally, there is no clear moderating effect of indifference. We can confirm H2b: overall, it seems that angry and enthusiastic individuals are indeed more likely to rely on heuristic decision-making and therefore on general EU opinions, while anxious citizens base their decisions more on cost-benefit considerations.

[Figure 5 about here]

*Effects on information-seeking*

To test the third hypothesis, we present indicative evidence that fear and anger differ in their effects on information-seeking and opinion formation. In Table 2, Model 1 tests H3 and predicts the standard deviation of opinions concerning integration in nineteen policy areas. We include our controls differently in this model: we control for the extremity of opinion, since those with extreme opinions should have lower variation in opinions about EU policy areas. Turning to the results, we can see that fearful citizens have a higher variation in opinions than angry citizens, confirming H3, i.e. that fearful citizens are less uniform across policy areas. The effects of anger and fear are statistically significantly different (F=30.5, p<0.001). This is in line with literature that suggests that angry citizens tend to rely on heuristics based on their overall views and as such seek less information.

[Table 2 about here]

However, we also partly disconfirm H3 in that we find that enthusiasm is associated with increased variation in opinion, and its impact is in fact similar to that of fear. Hence, while angry citizens have by far the most uniform views, enthusiasm and fear are both associated with less heterogeneous opinions. Perhaps the increased interest in and affect towards the EU implied by enthusiasm are just as important for information-seeking as enthusiasm’s tendency to limit careful information-processing. Overall, it seems that anger most clearly leads to a lack of careful information-seeking and more uniform opinion across different EU policy areas.

**Discussion**

In this article, we have put forward and tested a theoretical framework of how emotional reactions affect public preferences on the EU at three stages of opinion formation. First, we have shown the direct effect of emotional reactions on citizens’ desire to renegotiate their country’s constitutional relationship with the EU and willingness to leave the EU. Second, we have demonstrated that attitudes of angry and enthusiastic citizens towards the EU are less conditional on the perceived benefits of EU integration than those of anxious citizens. Moreover, angry voters’ stances on EU membership are related more to underlying attitudes towards the EU than among fearful and enthusiastic voters. Finally, we have presented indicative evidence of differences in information-seeking and information-processing: we have shown that angry citizens tend to express less nuanced and varied views on specific polices related to the EU.[[11]](#endnote-11)

Our findings are particularly significant in the current context as the EU is highly contested across EU member states. The continued inability of the EU to resolve the on-going economic and refugee crises may well have contributed to feelings of anger and fear among EU citizens, and these feelings have also been strategically exploited by populist politicians, such as Marine Le Pen in France or Nigel Farage in the UK. Our results show that in order to explain support or opposition to the EU, we need to consider how public opinion and behaviour may be conditioned by emotional considerations and how emotions may affect citizens’ rational decision-making. As such, existing approaches to understanding preferences over EU integration should be complemented by considering affective as well as cognitive factors. The role of emotions in opinion formation on the EU therefore has significant implications and may go some way to understanding the increasing success of Eurosceptic parties in the 2014 European Parliament elections as well as the UK’s decision to leave the EU in June 2016.

The findings of our research also have implications for the persuasiveness and effectiveness of EU-related campaigns. Those campaigns that elicit anger are more likely to solidify existing Eurosceptic attitudes, whereas pro-EU groups that manage to create enthusiasm will mobilise citizens in favour of European integration. However, when discussions about the EU are framed in terms of risk, citizens are more likely to have nuanced and varied positions on specific EU policies and base their EU opinion on cost-benefit considerations. Fear and anxiety, while also negative emotions, lead to more information-seeking and more careful decision-making, so a debate that encourages these emotions may mean that voters pay closer attention to the debate and decide more cautiously. A campaign where voters are uncertain about either staying in or getting out might mean that both sides have to marshal good and convincing evidence for their position.

More specifically, our analysis also sheds light on the outcome of the Brexit referendum and the impact of its campaigns. The two official campaigns ‘Britain Stronger In Europe’ and ‘Vote Leave’ set the agenda by transforming the debate into a battle between two issues: economy versus immigration (Hobolt 2016). Whereas the rhetoric was negative in both camps, being referred to as ‘Project Fear’ and ‘Project Hate’ respectively by the other side, each camp elicited different negative emotions. On the one hand, Britain Stronger In framed its campaign in terms of risk and risk avoidance. Its posters included phrases such as ‘Leave Europe and we will lose our seat at the table’, ‘Leave and there is no going back’ and ‘Leaving Europe would be a leap in the dark’[[12]](#endnote-12). These messages evoked personal feelings of uncertainty and fear vis-à-vis an economically risky future. On the other hand, Vote Leave messages such as ‘Turkey (population 76 million) is joining the EU’ and ‘Let’s give our NHS the £350 billon the EU takes every week’ elicited anger driven by a sense of collective threat. Anger was further aroused through the portrayal of the EU as an illegitimate source of this threat. Therefore, by evoking feelings of anxiety, the Remain camp sought to persuade voters to maintain the status quo (as the less risky option), whereas by eliciting anger, the Vote Leave camp enabled more risk-taking behaviours while at the same time promising an ‘Independence day’ and ‘taking back control’. Interestingly neither campaign tried hard to evoke positive emotions.

A factor relevant for future research is the effect of these emotions on turnout. Fear and anxiety tend to be associated with avoidance strategies in order to minimise the experienced threat whereas anger may transform a stimulus into a reaction (Halperin & Pilskin 2015). Enthusiasm tends to be linked to political interest and mobilisation (Brader and Marcus, 2013). While our data do not allow us to test this directly, it is plausible to expect that anxiety is not a good motivator to vote, whereas anger and enthusiasm may induce citizens to turn out (on the participatory effects of emotions, see, e.g., Brader, 2006; Valentino et al., 2011). Future research should therefore examine whether citizens who expressed fear about EU membership were less likely to go to the ballot box as opposed to angry or enthusiastic citizens. If this is empirically verified, then the Vote Leave campaign not only persuaded citizens in terms of its argument but also might have encouraged people to participate in the vote. Put differently, it is possible that if the Remain campaign had managed to create more enthusiasm about the EU, it might have solidified pro-EU attitudes and further mobilised UK citizens.

Future research should also take a comparative perspective and evaluate the extent to which our propositions hold across the EU. Our theoretical predictions apply in the UK case with regard to wish for renegotiation of the country’s constitutional relationship with the EU and support for Brexit. Similar arguments have been tested in the case of Ireland but with reference to vote choice as opposed to attitudes and preference formation (Garry, 2014). In both cases, the EU issue is relatively salient due to the success of UKIP (Britain) and frequent referendums (Ireland). However, we still do not know whether emotions affect public opinion on the EU in countries where Euroscepticism is low, e.g. Spain and Portugal, or in newer member states such as in Central and Eastern Europe. Future research should also focus on the effect of emotions on specific EU policies, for example on the question of whether emotions have differing effects on how people think about policies traditionally thought to belong to the realm of the nation state, e.g. employment and social affairs, compared to how they evaluate EU policies that might be considered to be more international, such as the environment or digital cooperation.

Overall, research that takes into account individuals’ emotions on the EU promises to improve our understanding of how and when people support and oppose European integration.

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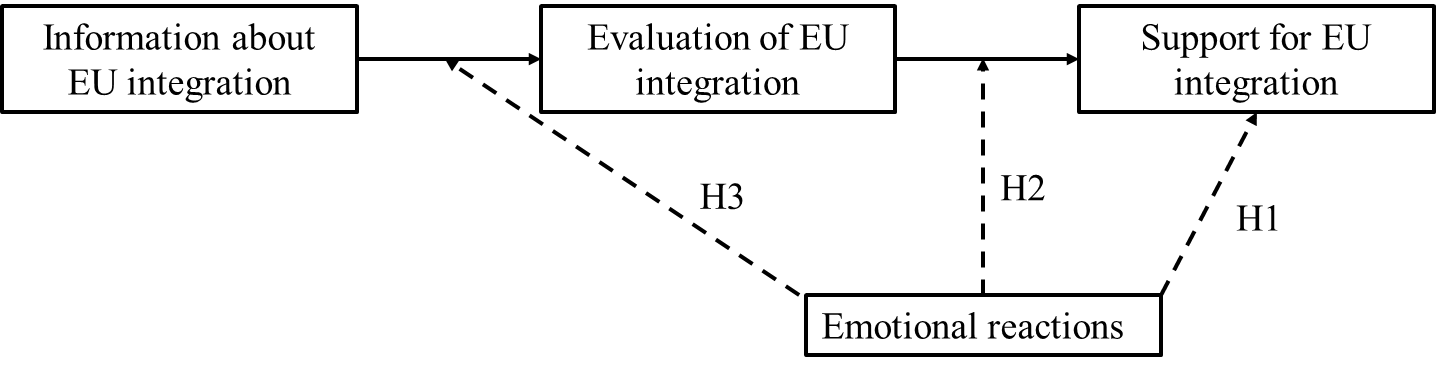
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**Figure 1. Emotional reactions and opinion formation on EU integration**



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**Figure 2:** Attitudes towards renegotiation of the terms of the UK’s EU membership.

*Source*: Data from original survey of 3000 respondents conducted in the period 23/04/2015-05/05/2015.



**Figure 3**: Emotional reactions to Britain's membership of the EU, raw and recoded.

*Source*: Data from original survey of 3000 respondents conducted in the period 23/04/2015-05/05/2015.



**Figure 4:** Direct effect of emotional reactions on support for EU integration

Note: Scales of outcomes variables range from 1 to 7, with 1 labelled as “strongly disagree” and 7 as “strongly agree”. Predicted levels of the outcome variable calculated by varying emotional reactions while holding all other variables at their observed levels.



**Figure 5:** Emotions as a moderator of other considerations

Note: Graph shows the marginal effect of cost-benefit perceptions and general EU attitudes for three groups of voters, based on whether they declared feeling enthusiastic, angry and anxious. The dependant variable is the individual’s position on leaving the EU, measured on a 1-7 scale. Bars show 95% confidence intervals. Marginal effects and confidence intervals calculated based on our results from model 3, Table 1.

**Table 1:** The impact of emotional reactions on attitudes towards renegotiation and preferences for the UK’s constitutional relationship with the EU.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Model 1 | Model 2 | Model 3 |
|  | DV: Renegotiate EU membership | DV: Leave EU | DV: Leave EU |
| Fear (0/1) | 0.342\*\*\* (0.067) | -0.0438 (0.062) | -0.148 (0.184) |
| Anger (0/1) | -0.0322 (0.082) | 0.749\*\*\* (0.074) | 1.502\*\*\* (0.261) |
| Enthusiasm (0/1) | -0.0518 (0.078) | -0.378\*\*\* (0.072) | 0.261 (0.213) |
| Indifference (0/1) | -0.0301 (0.069) | -0.118 (0.063) | 0.155 (0.211) |
| Costs vs benefit (1-7) | -0.0797\*\* (0.028) | 0.427\*\*\* (0.024) | 0.508\*\*\* (0.049) |
| Costs vs benefit \* Fear |  |  | 0.0370 (0.042) |
| Costs vs benefit \* Anger |  |  | -0.178\*\*\* (0.052) |
| Costs vs benefit \* Enthusiasm |  |  | -0.211\*\*\* (0.053) |
| Costs vs benefit \* Indifference |  |  | -0.0393 (0.048) |
| General EU attitude |  |  | -0.0227 (0.058) |
| General EU attitude \* Fear |  |  | 0.0520 (0.049) |
| General EU attitude \* Anger |  |  | -0.110 (0.057) |
| General EU attitude \* Enthusiasm |  |  | 0.186\*\*\* (0.056) |
| General EU attitude \* Indifference |  |  | -0.0558 (0.055) |
| Leave EU (1-7) | 0.194\*\*\* (0.021) |  |  |
| Renegotiate EU membership (1-7) |  | 0.165\*\*\* (0.018) | 0.166\*\*\* (0.018) |
| Trust in EU (0-10) | -0.0804\*\*\* (0.019) | -0.0255 (0.017) |  |
| Support for EU integration (0-10) | -0.0739\*\*\* (0.014) | 0.00600 (0.013) |  |
| Satisfaction with democracy in EU (0-10) | -0.0394\*\* (0.015) | 0.0286\* (0.014) |  |
| PTV: Conservative (0-10) | 0.0428\*\*\* (0.010) | 0.000403 (0.009) | 0.00198 (0.009) |
| PTV: Labour party (0-10) | 0.00808 (0.009) | 0.000240 (0.008) | -0.00263 (0.008) |
| PTV: Liberal Democrat party (0-10) | -0.00836 (0.011) | -0.0123 (0.010) | -0.0112 (0.010) |
| PTV: UKIP party (0-10) | -0.0119 (0.010) | 0.110\*\*\* (0.009) | 0.107\*\*\* (0.009) |
| PTV: Green party (0-10) | -0.000702 (0.012) | 0.0115 (0.011) | 0.0102 (0.011) |
| PTV: Other party (0-10) | 0.0135 (0.010) | 0.0263\*\* (0.009) | 0.0238\*\* (0.009) |
| Personal economic situation (1-5) | 0.0323 (0.033) | -0.0815\*\* (0.031) | -0.0749\* (0.030) |
| General economic situation (1-5) | -0.0994\*\* (0.036) | 0.0597 (0.033) | 0.0552 (0.033) |
| EU: responsibility for economic situation (0-10) | 0.0434\*\*\* (0.012) | 0.0387\*\*\* (0.011) | 0.0410\*\*\* (0.011) |
| European identity (0-7) | -0.0344 (0.019) | -0.00403 (0.017) | -0.0134 (0.017) |
| Economic ideology: For state intervention (1-7) | -0.0797\*\* (0.028) | 0.427\*\*\* (0.024) | -0.0481\* (0.021) |
| Economic ideology: For redistribution (1-7) | 0.0394 (0.023) | -0.0421\* (0.021) | 0.0948\*\*\* (0.018) |
| Immigration: Restrictive policy (1-7) | -0.00449 (0.020) | 0.0970\*\*\* (0.018) | 0.0892\*\*\* (0.020) |
| Immigration: Against diversity (1-7) | 0.132\*\*\* (0.022) | 0.0885\*\*\* (0.020) | 0.0625\*\*\* (0.017) |
| Environment: Combat climate change (1-7) | -0.0362 (0.018) | 0.0653\*\*\* (0.017) | 0.00946 (0.017) |
| Trust in UK government (0-10) | 0.0606\*\*\* (0.015) | 0.0562\*\*\* (0.014) | 0.0453\*\*\* (0.013) |
| Male | 0.124\* (0.056) | -0.151\*\* (0.051) | -0.159\*\* (0.051) |
| Age | 0.00376 (0.002) | -0.00930\*\*\* (0.002) | -0.00964\*\*\* (0.002) |
| Education (1-4) | 0.0624 (0.034) | -0.0907\*\* (0.031) | -0.0997\*\* (0.031) |
| TV viewing (1-6) | -0.0693\*\* (0.022) | 0.103\*\*\* (0.021) | 0.103\*\*\* (0.020) |
| Internet use (1-6) | -0.00890 (0.018) | 0.0467\*\* (0.017) | 0.0508\*\* (0.017) |
| Newspaper use (1-6) | 0.0285 (0.016) | -0.0575\*\*\* (0.015) | -0.0566\*\*\* (0.015) |
| Income (1-14) | 0.0159 (0.011) | -0.0180 (0.010) | -0.0189 (0.010) |
| Left-Right (0-10) | -0.0159 (0.048) | -0.0669 (0.044) | -0.0386 (0.044) |
| Left-Right2 | 0.00258 (0.004) | 0.00892\* (0.004) | 0.00621 (0.004) |
| Constant | 3.824\*\*\* (0.355) | 0.275 (0.334) | -0.00604 (0.368) |
| Observations | 2608 | 2608 | 2608 |
| *R*2 | 0.309 | 0.624 | 0.633 |

Note: Standard errors in parentheses, \* *p* < 0.05, \*\* *p* < 0.01, \*\*\* *p* < 0.001

**Table 2:** The effect of emotional reactions on opinion uniformity across policy areas

|  |  |
| --- | --- |
|  | DV: Standard deviation in integration preferences |
| Fear (0/1) | 0.0944\*\*\* (0.027) |
| Anger (0/1) | -0.138\*\*\* (0.032) |
| Enthusiasm (0/1) | 0.145\*\*\* (0.030) |
| Indifference (0/1) | 0.0790\*\* (0.028) |
| Leave EU: extremism (0-3) | 0.0468\*\*\* (0.012) |
| Renegotiate EU membership: extremism (0-3) | 0.0506\*\*\* (0.012) |
| Male | 0.0498\* (0.022) |
| Age | 0.00306\*\*\* (0.001) |
| Education (1-4) | 0.0354\*\* (0.014) |
| TV viewing (1-6) | -0.0202\* (0.009) |
| Internet use (1-6) | -0.0113 (0.007) |
| Newspaper use (1-6) | 0.00385 (0.007) |
| Income (1-14) | 0.00127 (0.004) |
| Left-Right extremism (0-5) | -0.0156\* (0.008) |
| PTV extremism: Conservative (0-5) | -0.00153 (0.007) |
| PTV extremism: Labour party (0-5) | -0.0152\* (0.008) |
| PTV extremism: Liberal Democrat party (0-5) | -0.00462 (0.007) |
| PTV extremism: UKIP party (0-5) | 0.0166\* (0.007) |
| PTV extremism: Green party (0-5) | -0.0165\* (0.008) |
| PTV extremism: Other party (0-5) | 0.0208\* (0.008) |
| Personal economic situation: extremism (0-2) | 0.0244 (0.017) |
| General economic situation: extremism (0-2) | 0.0459\* (0.018) |
| EU: responsibility for economic situation: extremism (0-5) | -0.00391 (0.008) |
| Costs vs. benefits: extremism (0-3) | -0.0273\* (0.014) |
| Economic ideology: For state intervention: extremism (0-3) | 0.0686\*\*\* (0.013) |
| Economic ideology: For redistribution: extremism (0-3) | 0.00697 (0.012) |
| Immigration: Restrictive policy: extremism (0-3) | 0.0198 (0.012) |
| Immigration: Against diversity: extremism (0-3) | 0.0172 (0.011) |
| Environment: Combat climate change: extremism (0-3) | -0.00123 (0.012) |
| Satisfaction with democracy in EU: extremism (0-5) | -0.0256\*\* (0.008) |
| European identity: extremism (0-3) | -0.0113 (0.012) |
| Trust in EU: extremism (0-5) | -0.00600 (0.009) |
| Trust in UK government: extremism (0-5) | 0.0122 (0.008) |
| Constant | 0.260\*\* (0.085) |
| Observations | 2608 |
| *R*2 | 0.124 |

Note: Standard errors in parentheses, \* *p* < 0.05, \*\* *p* < 0.01, \*\*\* *p* < 0.001

1. In this paper, and in line with other studies (e.g. Valentino et al. 2008), we use the term fear and anxiety interchangeably. [↑](#endnote-ref-1)
2. For an argument on emotions and EU support based on a two-dimensional valence conception of emotions, see Erişen and Kentmen-Cin (2015). [↑](#endnote-ref-2)
3. The nineteen policy areas are: agriculture and food, asylum seekers, competition and business regulation, defence policy, digital security and data protection, education, employment and social affairs, energy, environment and climate change, foreign and security policy, health, justice, fundamental rights and equality, labour market, monetary policy, overseas aid / development policy, sustainable development, taxation, trade and transport. [↑](#endnote-ref-3)
4. We do not conduct measurement tests on our coding of emotions. Doing so is difficult because some respondents may check only ‘angry’ or ‘disgusted’ without being necessarily less angry than those who select both emotions. In addition, it is quite common for people to feel several emotions at the same time, so the co-occurrence of emotions does not mean that they are the same phenomenon (Tellegen et al. 1999). The validity of our measure should instead be assessed by their differential effects on attitudes and behavior. [↑](#endnote-ref-4)
5. Treating ‘disgust’ as an indicator for anger is a common approach (Conover and Feldman, 1986; MacKuen et al., 2010; Valentino et al., 2011), though some research argues that these two emotions are in fact distinct (Hutcherson and Gross, 2011). [↑](#endnote-ref-5)
6. Only one per cent of respondents reported feeling both enthusiasm and anger; 7 per cent reported feeling both fear and enthusiasm. [↑](#endnote-ref-6)
7. In our analysis below, we always includes all four sets of emotions, so we control for the effects of the other emotions when examining the impact of one emotion. In robustness checks (see Appendix 1, figures A.1-A.2), we also included interactions between fear and anger in order to check whether voters who are only angry differ from those who are angry and afraid. No substantively relevant differences were found. [↑](#endnote-ref-7)
8. This wording does not ask directly about the costs of membership. We assume that those who perceive high costs see low benefits and would give low scores on the seven-point variable. [↑](#endnote-ref-8)
9. Our models include a large set of control variables. Robustness checks (see Appendix 1, Figures A.3-A.4) indicate that models controlling just for gender, age, education and income produce substantively the same results, although effect estimates are naturally larger in the simpler models. We would therefore argue that our models are likely to be conservative estimates of the effects of emotional reactions to the EU. [↑](#endnote-ref-9)
10. We set other emotions to 0 if another emotion is treated as present (i.e., 1). All other variables are held at their observed values. [↑](#endnote-ref-10)
11. Our analysis has relied on a cross-sectional survey that allowed us to control for many important confounders. Future research should try to understand the role of emotions using other methodological tools such as panel studies and survey experiments that can provide even stronger frameworks for causal inference. Experimental designs may help shed light on the effect of emotional reactions on information seeking and processing. Our survey focused on emotions concerning Britain’s membership of the EU; future studies should ask about emotional reactions concerning a wide variety of relevant actors, institutions and policies, including at the national level. [↑](#endnote-ref-11)
12. <http://www.strongerin.co.uk/for_campaigners#6GwKMAtwTzcvGkER.97> accessed on 4 Oct. 16. [↑](#endnote-ref-12)