

This is the pre-print of the article that is currently “in press” at the *British Journal of Social Psychology*. While the results in the accepted version (i.e., after peer-review) remained the same, we re-wrote large parts of the Introduction. Please contact us, if you want to read the accepted version, either on ResearchGate or via email, p.hanel@bath.ac.uk

Leavers and Remainers After Brexit: More United Than Divided After All?

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Abstract

Since the British “Brexit referendum” in June 2016, tensions between ‘leave’ and ‘remain’ voters have been growing. Using a novel analytical approach which considers the full distribution of responses rather than their arithmetic means, Study 1 ($N=1,809$) showed that the amount of similarity between Leavers and Remainers was approximately 90% on average across a range of important variables. Even on variables that are often used as showcasing critical differences between Leavers and Remainers (e.g., prejudice towards immigrants, national identity), the amount of similarity was larger than 50%. In Study 2, we demonstrate why focusing on similarities between groups matters: Reporting intergroup similarities rather than mean differences led to more accurate perceptions of the research findings and higher perceived intergroup harmony. We conclude that previous research has largely overestimated the actual differences between Leavers and Remainers, whereas our proposed approach may eventually help to de-escalate tensions between these two groups.

Keywords: Brexit, Euroscepticism, similarities, human values, prejudice, national identity

Leavers and Remainers After Brexit: More United Than Divided After All?

In the “Brexit referendum” of June 2016, 52% of the British electorate voted that the United Kingdom (UK) should leave the European Union (EU). Since then, the tensions between those who voted leave (‘Leavers’) and those who voted remain (‘Remainers’) have been growing, and one year after the referendum, Brexit was still by far the single most important topic to British voters (Fieldhouse & Prosser, 2017). These tensions are exemplified within political parties and British society. The two largest parties in the UK, the Conservative Party and the Labour Party, are quarrelling since years both between and within their parties about whether the UK should leave the EU and, if so, how (Adonis, 2019; Smith, 2017; Withers, 2019). Further, there is a flurry of anecdotal evidence of how Leavers and Remainers descend “into hyperbole and emotional invective against those they disagree with” (The Guardian, 2017), and Leavers often see the need to defend themselves of not being racists (Hannan, 2016; Hill, 2016). Ironically, social scientists, who are predominantly Remainers (Cressey, 2016), may unintentionally contribute to this divide by focusing on differences rather than similarities between Leavers and Remainers. In this paper we question the predominant focus on mean differences and demonstrate that Leavers and Remainers are more similar than different across many important psychological variables – even in the presence of so-called “highly” statistically significant mean differences.

The present research had three aims. First, we used a novel approach to describe the similarities between Leavers and Remainers on a range of important psychological variables, testing whether the groups are more similar to each other than different. Second, to provide a balanced portrayal of research findings, we also examined mean differences between Leavers and Remainers across the same set of variables, using the default way of investigating mean differences between two

groups. Finally, in an experimental study, we tested the practical implications of highlighting similarities rather than differences between Leavers and Remainers on outcomes such as individuals' perception of the research findings and intergroup harmony.

Previous Comparisons of Leavers and Remainers

Despite the relatively short time frame since the Brexit referendum was announced, researchers have already devoted considerable research attention to comparing Leavers and Remainers. This research has mainly focused on the predictors of people's voting intention, showing that the decision to vote 'leave' is associated with concerns about immigration and multi-culturalism, political conservatism, lower scores in agreeableness and openness (personality traits), British identity, British collective narcissism, Islamophobia, distrust in the government, intolerance towards ambiguity, authoritarianism, conspiracy beliefs, negative contact with EU immigrants, lower cognitive flexibility, lower education, lower income, and increased age (Garretsen, Stoker, Soudis, Martin, & Rentfrow, 2018; Golec de Zavala, Guerra, & Simão, 2017; Hobolt, 2016; Lee, Morris, & Kemeny, 2018; Matti & Zhou, 2017; Meleady, Seger, & Vermue, 2017; Swami, Barron, Weis, & Furnham, 2018; Zmigrod, Rentfrow, & Robbins, 2018). These findings suggest that the decision to vote 'leave' was largely driven by anti-immigration sentiments and a conservative perspective; psychological mechanisms that are consistent with a larger body of literature on Euroscepticism across the EU (de Vreese & Boomgaarden, 2005; Schuck & Vreese, 2008; Serricchio, Tsakatika, & Quaglia, 2013; Vasilopoulou & Wagner, 2017).

Similarities Between Groups are Large

The research described above is important because it allows us to better understand the underlying motivations of the average person to vote 'leave' or

‘remain’. However, most of the time researchers generalise from statistically significant *mean differences* to *group differences*. For example, if the mean differences between two groups (e.g., Leavers vs Remainders) as established with a t-test reaches conventional levels of statistical significance, researchers usually conclude that the two groups differ from each other. However, this is often a gross oversimplification: If we examine the distribution of responses of all participants (e.g., in a histogram) rather than comparing the groups’ means, even large statistical mean differences reveal substantial and significant levels of overlap and similarity.

Indeed, commonly used effect sizes such as Cohen’s d can be transformed into an “overlapping coefficient”, which is a measure of the overlap of two normal distributions (Inman & Bradley, 1989). More recently, Hanel, Maio, and Manstead (2018; see also Hanel, 2016) argued that the overlapping coefficient can be understood as a measure of similarity and they relabelled it *Percentages of Common Responses* (PCR). For example, a medium effect size of Cohen’s $d = 0.50$ translates into a PCR = 80, reflecting an 80% overlap of participants responses, whereas a low effect size of $d = 0.20$ translates into a PCR of 92, reflecting a 92% overlap. Even a so-called large effect size (Cohen, 1992) of $d = 0.80$ still results in a substantial amount of between-group similarity (PCR = 69).

To illustrate two ways of presenting a statistically significant mean difference, Figure 1 shows a significant meta-analytical mean difference between women and men on anxiety with an effect size of $d = 0.29$ ($N > 100,000$), with women being on average more anxious than men (Feingold, 1994). The top graph shows superimposed normal distributions, whereas the lower graph shows a typical barplot with standard errors. While the normal distributions show all responses by participants, reflecting the similarities between the two groups, the barplots show

only the means and the mean distributions (i.e., standard errors), thus emphasising the differences between the groups.

---FIGURE 1 AROUND HERE---

Statistical tests that are commonly used to estimate whether two groups are different (e.g., a between-subject t-test) only warrant the conclusion that is unlikely that the means are from the same population. Thus, such tests do not justify the conclusion that *groups* are different. A significant t-test, for example, only warrants the conclusion that the overlap between two groups is not identical (Hanel et al., 2018).

Striking a Balance Between Group Similarities and Differences

While we aim to establish that it is important to highlight the similarities between groups – particularly when highly polarised groups are considered – we also believe that exploring mean differences is useful as they allow to shed more light on the underlying mechanism of why people decided to vote ‘leave’ or ‘remain’. Specifically, mean differences allow us to understand what predicts people’s voting decision. Hence, in the present research we wish to advocate a simultaneous focus on similarities and mean differences between Leavers and Remainers, thus allowing for a more balanced portrayal of the findings. For example, the statement “Leavers value security more than Remainers” is likely to be a strong oversimplification, as it is based on group mean comparisons and thus masks the similarities between groups. Instead, we suggest that presenting effect sizes that reflect similarities in addition to effect sizes that reflect differences improves comprehension (Hanel et al., 2018) and prevents that research findings are oversold. To the best of our knowledge, the present research is the first attempt to balance this simultaneous interpretation of the group distribution and the mean distribution.

The Present Research

The present research had three aims. First, Study 1 tested the extent of *similarities* between Leavers and Remainers on a range of psychological variables. Based on the rationale provided above, we expected the amount of overlap on all variables to be larger than the amount of differences. We selected a range of widely-used variables based on their perceived relevance to political decisions, national identity, and social cohesion. We included variables that have commonly revealed large mean differences between Leavers and Remainers (e.g., prejudice against immigrants, British identity) to provide a stringent test for our hypothesis that the two groups are more similar to each other than different. In addition, we considered a range of variables that to our knowledge have not been examined yet, including human values, civic engagement, coping strategies, and needs. We included these novel variables because of their relevance to social cohesion and well-being, and to avoid a specific form of publication bias: Fiedler (2011) argued that only including variables in (quasi-) experimental designs for which mean differences are expected, is a form of publication bias towards differences that is not often acknowledged.

Second, in the interest of providing a balanced portrayal of our findings, we simultaneously tested the groups' mean differences. In doing so, we additionally aimed to contribute to the existing literature by shedding further light on the underlying motivations of the British public to vote either 'remain' or 'leave'. Study 1 included human values for the first time because of their importance in predicting political decisions, prejudice, and behaviour (e.g., Bardi & Schwartz, 2003; Caprara, Schwartz, Capanna, Vecchione, & Barbaranelli, 2006; Souchon, Maio, Hanel, & Bardin, 2017; Vecchione et al., 2017). In addition, we provided new evidence for a range of other societally relevant psychological variables, including civic engagement, psychological needs, and coping strategies.

Finally, Study 2 tested the practical implications of reporting similarities between Leavers and Remainers rather than emphasising the differences. To do so, we presented key findings from Study 1 in an experimental design by either highlighting the similarities or differences between groups (superimposed normal distributions vs. barplots), and subsequently assessed participants' perception of the groups. The datasets for samples 2 and 3 of Study 1 (the authors do not own the data of sample 1 but are allowed to publish summary statistics), and Study 2 can be found on <https://osf.io/q97mv>.

Study 1

In Study 1, we compared Leavers and Remainers on a wide range of psychological variables across three samples. We selected a large number of variables in order to provide a realistic estimate of the amount of overlap between Leavers and Remainers.

All three samples included a measure of human values. Human values can be defined as guiding principles in people's life (Rokeach, 1968; Schwartz, 1992). Schwartz (1992) differentiates between ten value types with different underlying motivations: security, tradition, conformity, benevolence, universalism, self-direction, stimulation, hedonism, achievement, and power. To the best of our knowledge, values have not yet been studied in the context of Brexit and Euroscepticism. Based on the research cited above (e.g., Hobolt, 2016; Matti & Zhou, 2017; Meleady et al., 2017; Swami, Barron, Weis, & Furnham, 2017), we hypothesise that, *on average*, Leavers value security, conformity, and tradition more than Remainers, because voting to leave the EU may reflect motivations to preserve British traditions and national security (e.g., from immigrants). Conversely, we expect that Remainers value benevolence and universalism more than Leavers, because voting to remain in the EU may reflect motivations to promote harmony and

acceptance of others (Schwartz, 1994). This view is indirectly supported by evidence that euroscepticism and security, tradition, and conformity values are linked with higher anti-immigrant prejudice, whereas benevolence and universalism values are linked with lower anti-immigrant prejudice (Davidov, Meuleman, Billiet, & Schmidt, 2008; Meleady et al., 2017).

Moreover, we expected to find significant *mean differences* between Leavers and Remainers in terms of British identity, and prejudice (Hobolt, 2016; Matti & Zhou, 2017; Meleady et al., 2017; Swami et al., 2017) such that Leavers would report *on average* higher levels of British identification and prejudice against immigrants.

Finally, we also explored whether any significant mean differences would emerge for variables that to the best of our knowledge have not been examined before in a Brexit context, such as perceived values of other people, civic engagement, psychological needs, interest in politics, satisfaction with life, support for devolution, and coping strategies. Importantly, however, we predicted that the two groups would reveal more similarities than differences on all variables.

Method

Participants. We recruited three samples. We aimed to recruit at least 150 participants per sample to obtain fairly accurate estimates. Sample 1 consisted of 1,184 online participants (640 women, 540 men, two indicated 'Other', two preferred not to say) from the Greater Manchester area and who were selected to be representative. One hundred and thirty-three participants were aged 18-24, 211 were aged 25-34, 209 were aged 35-44, 234 were aged 45-54, 206 were aged 55-64, 165 were aged 65-74, 24 were aged 75+, and two preferred not to say. Four-hundred sixty-one participants identified as Leavers, 479 as Remainers. Data was collected in May 2017.

Sample 2 consisted of 482 online (255 women, 224 men, three preferred not to say; $M_{age} = 38.85$, $SD = 12.44$). Participants were all British citizens. One-hundred eighty-three participants identified as Leavers, 257 as Remainers, while eight participants were not eligible to vote, 25 decided not to vote, one preferred not to say, two didn't remember, and there were six missing values. Sample 2 completed two parts of the survey. The first part was completed within three days before the UK general election (8 June 2017) and the second part was completed within three days after the election. The second part was completed by 434 participants.

Sample 3 consisted of 143 British participants (76 women, 67 men; $M_{age} = 38.44$, $SD = 14.42$). In the Brexit referendum, 76 participants voted 'remain', 50 participants voted 'leave', 14 decided not to vote, and three were not eligible to vote. Sample 3 completed two parts of the survey. The study was completed online approximately 2 weeks before the UK general election in June 2017.

Sample 1 materials.

Values. Participants completed the 21-item Portrait Values Questionnaire (PVQ; Schwartz et al., 2001). This questionnaire presents participants with 21 brief descriptions, each portraying a person as giving importance to one of Schwartz's ten values (Schwartz, 1992). For instance, the description "It is important to him to be rich. He wants to have a lot of money and expensive things" reflects the value power. Participants answered on a scale from 1 (not like me at all) to 6 (very much like me) how similar the person described is to themselves.

Subsequently, participants completed a similar 21-item PVQ, with the difference that they now indicated to what extent each described person is like a typical person living in Greater Manchester. For instance, the description "It is important to him to be rich. He wants to have a lot of money and expensive things"

was answered on a scale from 1 (*not at all like a typical person living in Greater Manchester*) to 6 (*very much like a typical person living in Greater Manchester*).

Civic engagement. We measured civic engagement with a subset of the attitudinal Civic Engagement Scale (Doolittle & Faul, 2013). This scale assesses participants' beliefs and feelings about their own involvement in their community and their perceived ability to make a difference in that community. Participants indicated their agreement with five statements including "I feel responsible for my community" and "I believe that it is important to volunteer" on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The five items of the subset of the Attitude Civic Engagement Scale loaded on one factor with good internal consistency ($\alpha = .87$).

Social and environmental concerns. Next, we assessed participants' concerns with a range of social and environmental issues on poverty, climate change, and housing in Greater Manchester. Participants were presented with nine statements (e.g., "Everyone in Greater Manchester should be able to live in a home that they can afford.", "Local government in Greater Manchester should do more to help fight climate change.") and they indicated their agreement on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The data favoured a one-factor solution for these nine items with acceptable internal consistency ($\alpha = .72$).

Civic participation. Following the attitudinal civic engagement, we assessed participants' civic participation. To do this, we presented three items measuring voting engagement (i.e., "have you voted in a national/local election in the last three years?", "did you vote in the EU referendum in June 2016?"), and six items measuring other civic engagement (e.g., "have you attended a public meeting or demonstration in the last three years?", "have you signed a petition in the last three years?"). Participants responded to these items with either "yes", "no", or "don't

know". The answer "*don't know*" was coded as a missing value. The data favoured a one-factor solution for these nine items with acceptable internal consistency ($\alpha = .69$).

Voting. Subsequently, we asked participants how they voted in the Brexit referendum (i.e., "*remain*", "*leave*", "*prefer not to say*"). The 39 participants who responded with "*prefer not to say*" were excluded. Participants next indicated how likely they are to vote in the 2017 Greater Manchester mayoral election on a scale from 1 (*not at all likely*) to 4 (*very likely*). We also assessed participants' views on devolution to a local government in Greater Manchester by asking "Do you think that having a mayor of Greater Manchester will be a good thing or a bad thing for Greater Manchester?" and "Do you think that giving more decision-making powers on issues such as tax, education, and policing is a good thing or a bad thing for local areas more generally?" which they answered on a scale from 1 (*a very bad thing*) to 5 (*a very good thing*). These items on devolution correlated highly with each other, $r(1184) = .66$, and were hence combined to a composite score. Finally, we asked participants "overall, how satisfied are you with your life nowadays?" which they answered on a scale from 0 (*not at all*) to 10 (*completely*).

Sample 2 materials (pre-election).

Party knowledge. Party knowledge was measured by asking participants how well they know the manifesto of seven major parties in the UK (Conservatives, Labour, Liberal Democrats, Scottish National Party, Green Party, UK Independence Party, and Plaid Cymru). Responses were given on a scale ranging from 1 (*not at all*) to 5 (*very well*; $\alpha = .79$).

Voting. Next, we asked participants how they voted in the Brexit referendum (i.e., "*remain*", "*leave*", "*not eligible to vote*", "*decided not to vote*", "*don't remember*", "*prefer not to say*").

Need for affect. Subsequently, participants answered the 10-item Need for Affect Questionnaire (Appel, Gnambs, & Maio, 2012) which measures the tendency to approach ($\alpha = .79$) and avoid ($\alpha = .81$) emotions, with five items per subdimension. Example items include “I think that it is important to explore my feelings” and “I do not know how to handle my emotions, so I avoid them”. Responses were given on a scale from 1 (*totally disagree*) to 7 (*totally agree*).

Need for cognition. Need for cognition was measured with the 18-item need for cognition scale (Cacioppo, Petty, & Kao, 1984). Example items include “The notion of thinking abstractly is appealing to me” and “Thinking is not my idea of fun” (reversed coded). Responses were given on a response scale ranging from 1 (*extremely uncharacteristic of me*) to 5 (*extremely characteristic of me*; $\alpha = .91$).

British identity. British identity was measured with the 4-item satisfaction subscale of the in-group identification scale of Leach et al. (2008). Example items include “I am glad to be British” and “It is pleasant to be British”. Responses were given on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*; $\alpha = .95$).

Need to belong. Need to belong was measured with a 10-point scale (Leary, Kelly, Cottrell, & Schreindorfer, 2013). Example items include “I want other people to accept me” and “I have a strong ‘need to belong’”. Responses were given on a scale from 1 (*not at all*) to 5 (*extremely*; $\alpha = .84$).

Concern for appropriateness. Concern for appropriateness was measured with the 13-item subscale of the self-monitoring scale of Lennox and Wolfe (1984). Example items include “It's important to me to fit in to the group I'm with” and “My behaviour often depends on how I feel others wish me to behave”. Responses were given on a scale from 1 (*always false*) to 6 (*always true*; $\alpha = .87$).

Values. Own and perceived values were again measured with the PVQ-21, as in sample 1. We measured own and perceived human values again after the election,

but we will report the responses of time 1 because of the larger sample (using the values data from time 2 did not change the pattern of results, given the high correlation between both measure moments, $r > .62$, and previous evidence for the stability of values, see Schwartz et al., 2001).

Sample 2 materials (post-election).

Contemplation. The amount of contemplation of the election was measured by asking how much participants have been thinking about the outcomes and potential consequences of the election, how much they have been following news of the election, and how often they engaged in political debates of the results. Responses were given on a scale from 1 (*not at all/never*) to 5 (*a great deal/very often*; $\alpha = .81$).

Civic engagement. Civic engagement was measured with eight items. Example items include “I am committed to serve in my community” and “I believe that it is important to volunteer”. Responses were given on a scale ranging from 1 (*disagree*) to 7 (*agree*; $\alpha = .91$).

Brexit attitudes. Specific attitudes towards Brexit were measured by asking how much participants support each of the following scenarios: “Leave the EU, leave the single market and stop free movement of labour” (recoded), “Leave the EU, but stay in the single market and keep free movement of labour”, “Stay in the EU”. Responses were given on a scale from 1 (*don't support this option at all*) to 7 (*support this option very much*; $\alpha = .79$). We used this measure to confirm that the Brexit vote (i.e., leave vs remain) was still a meaningful distinction approximately one year after the referendum. That is, we wished to test whether Leavers are still clearly more in favour of Brexit than Remainers.

Coping. We measured four ways of how people coped with the election outcome using adapted versions of the planning and social support subscales of the

Coping Orientations to Problems Experienced Scale (Carver, Scheier, & Weintraub, 1989). We adapted the instructions to the election context: “We are interested in how you responded when you heard about the results of the recent national election from June 8. The following items refer to your actions on the day after the election (i.e., Friday, June 9).” Example items of the COPE measure are “I thought hard about what steps to take“ (planning, $\alpha = .84$) and „ I asked people who have similar political views how they view the results“ (social support, $\alpha = .78$). Additionally, we measured active coping through intentions for political engagement with four items. Specifically, participants were asked to indicate whether they are motivated to become more politically engaged, follow political developments more, contribute more to society, and improve things in this country after the general election. Responses were given on a scale ranging from 1 (*not at all*) to 7 (*very much*; $\alpha = .89$). Finally, we measured suppression with an adapted version of the suppression scale (Gross & John, 2003). Participants were instructed to “indicate how much you agree or disagree with the following statements, which are still referring to your reactions on the day after the general election from June 8.” Example items include “I controlled my emotions by not expressing them” and “I kept my emotions to myself.” Responses were given on a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*; $\alpha = .86$).

Sample 3 materials.

Human values. Subsequently, we assessed participants’ values using the 10-item TiVi measure (Sandy, Gosling, Schwartz, & Koelkebeck, 2017). This measure presents ten personal statements about the importance of each of Schwartz’s ten value types (Schwartz, 1992), and we asked participants to indicate how strongly they agree with each statement on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*).

Voting intentions. Participants were then given the following instruction “Imagine the UK General Election for a new prime minister and government is next week and that you are eligible. How likely is it that you will vote if ...”. This instruction was followed by six scenarios that varied in terms of obstacles that needed to be overcome to vote. For example, a description with few obstacles was “You need to move things around in your schedule to vote but the voting station is convenient and close by?” whereas the description with the most obstacles was “You are in a different country? You need to postpone deadlines, cancel exciting plans, and fly back to the UK to vote.”. Participants indicated their intention to vote on a scale from 1 (*very unlikely*) to 7 (*very likely*). Averaging across the six scenarios yielded a reliable score ($\alpha = .91$).

Identification with being British. Participants completed the In-group Identification scale (Leach, van Zomeren, Zebel, Vliek, et al., 2008). The scale contains 14 statements including “I feel a bond with British people” and “The fact that I am British is an important part of my identity” and participants indicated to what extent they agreed with these statements from 1 (*strongly disagree*) to 7 (*strongly agree*). The data favoured a single-factor solution and averaging across all 14 items yielded a reliable identification score ($\alpha = .91$).

Political orientation. Next, we asked how attached they consider themselves to the Labour party, the Conservative party, and the Liberal Democrats, and we asked how interested they are in British politics on scales from 1 (*not at all*) to 5 (*very much*). Finally, participants indicated how they would describe their political views on a scale from 1 (*liberal*) to 10 (*conservative*).

Prejudice. We measured participants’ prejudice towards immigrants with the blatant and subtle prejudice scale (Pettigrew & Meertens, 1995). Participants responded to 20 statements including “Immigrants have jobs that British people

should have” in a random order on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Although the items are usually combined to form the two factors blatant and subtle prejudice, the data favoured a one-factor structure which showed very good internal consistency ($\alpha = .94$). We therefore combined all items to a single prejudice score.

Zero-sum beliefs. In addition, we assessed perceived competition with each group using Esses et al.’s (1998) zero-sum beliefs measure. This measure presents 14 items (e.g., “when immigrants make economic gains, British people already living here lose out economically”) which were answered on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The items loaded on one common factor and showed high internal reliability ($\alpha = .98$).

Voting. We asked participants how they voted in the Brexit referendum (i.e., “remain”, “leave”, “not eligible to vote”, “prefer not to say”).

Emotions. We asked participants to what extent they feel several emotions as a result of the 2017 UK general election outcomes. We presented 12 emotions that vary in both pleasantness (e.g., enthusiastic and upset) and arousal (e.g., stressed and disappointed; Hyde, Conroy, Pincus, & Ram, 2011; Kuppens, Van Mechelen, Nezlek, Dossche, & Timmermans, 2007), which participants answered on a scale from 1 (*don’t feel this way at all*) to 7 (*feel this way strongly*). All emotions loaded on one common factor and showed good internal consistency ($\alpha = .92$).

Demographics. Finally, we asked participants what their gross household income was, ranging from 1 (*under £5,000 per year*) to 15 (*more than £150,000 per year*), and we asked participants for the highest level of completed education, ranging from 1 (*no schooling completed*) to 7 (*postgraduate education*). Both measures were normally distributed and were hence analysed in parametric tests.

Results

First, we tested whether the distinction between Leavers and Remainers was still politically meaningful approximately one year after the Brexit referendum. In fact, in sample 2, Leavers were still more favourable towards Brexit than Remainers ($t[302.50] = 26.29, p < .001, PCR = 17, d = 2.77$, see Table 2), and in sample 3, Leavers on average indicated to be more conservative, more attached to the Conservative Party, and less attached to the Labour Party and the Liberal Democrats than Remainers (Table 3).

Next, we performed a series of analyses of covariance with the Brexit vote as between-subject factor, age and gender as covariates, and the constructs listed in Table 1-3 as dependent variables. As controlling for age did not change the pattern of results, we focused on pairwise comparisons and Welsh's t-tests without covariates because this allows us to compute the PCR. The results are listed in Tables 1-3 for each of the three samples. To reduce the likelihood of false-positive findings because of the number of dependent variables, we only interpret findings with $p < .001$.

As predicted, there were several mean differences between Leavers and Remainers. In samples 1 and 2, Leavers valued security and tradition more and universalism less than Remainers. In sample 3, the mean differences for values were in the same direction, but they only reached statistical significance for universalism. Remainers reported higher civic engagement than Leavers in samples 1 and 2. In addition, in sample 1, Remainers reported a higher voting intention in the Greater Manchester election, higher social and environmental concerns, and, interestingly, more support for devolution (see Table 1). In sample 2, Remainers scored higher on need for cognition, active coping (i.e., political engagement), and lower on British identity than Leavers (see Table 2). In sample 3, Remainers reported on average a

higher level of education, lower prejudice, and lower zero-sum beliefs concerning immigrants compared to Leavers (see Table 3).

However, as predicted, the amount of similarities was substantial. The average PCR was 94.54 (*range* = 86-100) in sample 1, 89.41 (*range* = 17-100) in sample 2, and 83.36 (*range* = 51-100) in sample 3. Attitudes towards Brexit (PCR = 17) in sample 2, and prejudice (PCR = 51) and zero-sum beliefs (PCR = 52) in sample 3 showed the lowest amounts of similarity between Leavers and Remainers.

---TABLEs 1-3 AROUND HERE---

Study 2

Study 1 has consistently shown that while there are significant mean differences between Leavers and Remainers on a range of psychological outcomes including human values, civic engagement, and levels of prejudice against immigrants, Leavers and Remainers are more similar to each other than they are different. In Study 2, we aimed to test the practical importance of focusing on similarities rather than differences. To do so, we presented key findings from Study 1 by either highlighting the similarities or the mean differences between groups (superimposed normal distributions vs. barplots). Consistent with our advocated balanced approach, we presented effect sizes that reflect differences between conditions (i.e., Cohen's *d*) and effect sizes that reflect similarities (i.e., PCR). We focused on four variables that revealed reliable mean differences and which we consider as highly relevant to the public discussions surrounding the Brexit vote: security values, universalism values, British identity, and prejudice against immigrants. Subsequently, we assessed perception of intergroup harmony and motivations and attitudes towards the other respective group.

Highlighting similarities between groups may have a range of positive outcomes on intergroup harmony. While a focus on only the mean differences between groups may inadvertently increase tensions, emphasising similarities could promote social cohesion, because it may be more difficult to discriminate against an out-group when the similarities between the groups are apparent. Indeed, there is an extensive body of literature showing that similarity fosters more positive attitudes and behavioural intentions (Byrne, 1961; Montoya, Horton, & Kirchner, 2008; Pilkington & Lydon, 1997). For example, Brown and Abrams (1986) found that pupils liked and intended to cooperate with children from another school more when they were described as more similar. However, to the best of our knowledge, previously employed manipulations of similarity (vs differences) involved providing different information to participants. For instance, Brown and Abrams manipulated the favourite school subjects of the outgroup to be either congruent or incongruent with the favourite subjects of the pupils. In contrast, our approach uses the same variables and the same information, either highlighting similarities or differences to test whether there are costs of the currently predominant way of presenting research findings which highlights differences.

Method

Participants. Based on similar research (Hanel et al., 2018), we assumed a medium-to-large effect size of $d = 0.65$ for the effect of highlighting either similarities or differences. A power analysis revealed that a sample size of 52 participants for both cells would be required for a power of .95 (directed hypothesis). In total, 206 people completed the survey ($M_{\text{age}} = 37.53$, $SD = 12.17$, 146 women). Sixty-six participants voted 'leave' in the 2016 Brexit referendum, 113 'remain', and 26 decided not to vote (one missing value). Participants were recruited via a paid

online platform. This study was approved by the Psychology Research Ethics Committee of a British university. Data were collected in September 2017.

Materials and Procedure. Participants were randomly allocated to a similarity or difference condition. In the similarity condition, participants were presented with four superimposed normal distributions, whereas in the difference condition, participants saw four barplots which included standard errors and a restricted y-axis range (Figure 2). We chose superimposed normal distributions to display similarities because they highlighted the overlap clearly and they were rated as more comprehensible compared to superimposed histograms (Hanel et al., 2018). To display differences, we used barplots because we consider them among the most common ways psychological researchers display their findings. In both conditions, all four graphs were presented together. We selected four variables that revealed reliable mean differences in Study 1: security values, universalism values, British identity, and prejudice (which was rephrased and recoded as feelings towards immigrants to avoid the more socially sensitive term “prejudice”). To create the graphs, we used Study 1 data from sample 1 for security and universalism and from sample 3 for British identity and prejudice.

---FIGURE 2 AROUND HERE---

Prior to giving consent, participants in both conditions were informed that they will “be asked to rate the extent to which graphical information reflects differences and similarities between groups of people. All the figures we present are based on actual data from previous scientific studies - that is, *the data you will see is [sic!] real*” (emphasis was in bold). Specifically, participants were informed that they “will see the responses of people who voted leave (“Leavers”) and remain (“Remainers”) in the Brexit referendum in June 2016. Please take a close look at the figure(s) before responding to questions.” Next, we shortly described the graphs and

variables (e.g., “All respondents were asked to rate the importance of security (e.g., family security, social order) and universalism (e.g., broad-mindedness, equality) on a scale from 1 (unimportant) to 6 (very important).” Importantly, no words such as similarities or differences were used.

After the four graphs were presented, all participants responded to the same five items on a slider measure ranging from 0 (not at all) to 100 (very much). The five items were (1) “How similar are Leavers and Remainers overall?”; (2) “How easily do you think Leavers and Remainers can get along with each other?”; (3) “How motivated are you to engage in a discussion with someone who voted in the Brexit referendum for the opposite outcome than you did?”; (4) “How favourable do you evaluate the people in general who voted for the opposite outcome than you did in the Brexit referendum?”; and (5) “How similar are Leavers and Remainers in terms of human values, British identity, and feelings towards immigrants?” This study was collected together with other data unrelated to the present project (participants completed around 150 items concerning their attitudes towards babies, toddlers, children, and teenagers).

Results

Moderators. First, we tested whether the Brexit vote (leave vs remain) would interact with the presentation mode (similarities vs differences) on the five dependent variables. None of the interactions of the two-way ANOVAs was significant (all F s < 1.41; p s > .24). Also, including age and gender as covariates did not affect the pattern of results. We therefore collapsed across Brexit vote, age, and gender, and focused on the pairwise comparisons between presentation modes in the next step.

Mode of presentation. The mean differences between highlighting similarities or differences were all in the expected direction, with three of the mean comparisons reaching significance (Table 4). Participants in the similarity condition

perceived Leavers and Remainers to be more similar compared to participants in the difference condition. Additionally, participants in the similarity condition were more likely than participants in the difference condition to believe that both groups could get more easily along. However, the motivation to engage in direct contact with members of the other group and favourability towards the other group did not differ significantly between conditions.

---TABLE 4 AROUND HERE---

General Discussion

It has often been claimed that the Brexit referendum of June 2016 has revealed a divided, rather than a United Kingdom (e.g., Hobolt, 2016; Vasilopoulou & Talving, 2019), with tensions between those who voted ‘leave’ (‘Leavers’) and those who voted ‘remain’ (‘Remainers’) growing (Fieldhouse & Prosser, 2017). The present research supports this claim by showing that one year after the referendum, Leavers and Remainers are still split over the Brexit vote and their general political orientation. Consistent with the literature (Hobolt, 2016; Matti & Zhou, 2017; Meleady et al., 2017; Swami et al., 2017), we found that Leavers on average have a stronger in-group identification and are more sceptical towards immigrants. In addition, providing first evidence for differences between these groups in terms of their human values, Leavers valued security and tradition more and universalism less than Remainers. Finally, we also present novel evidence that Remainers are on average more concerned about various social and environmental issues, find it more important to contribute to their community, and are more motivated to engage in and enjoy thinking than Leavers. Together, these differences may help explain why people voted the way they did, with Leavers attaching on average greater importance to conservative principles such as security and tradition, and Remainers attaching on average greater importance to the welfare of all people, to social and environmental

issues, and to their community. The finding that Remainers are more likely to engage in and enjoy effortful thinking was not explained by differences between Remainers and Leavers in terms of values or education. Although it may be suggested that Remainers have given their vote more thought, previous research has shown that Leavers and Remainers do not differ in their political knowledge of the EU (Swami et al., 2017). This is a provocative finding and it would be fruitful for future research to examine this mechanism in greater detail.

However, despite these reliable mean differences, the average similarity between Leavers and Remainers was approximately 90% across all variables. Even for prejudice towards immigrants, the variable that showed by far the strongest mean difference, the amount of similarity between both groups was still substantial with 51%, while other variables that are often mentioned as showcasing important differences between Leavers and Remainers such as tradition values revealed similarities close to 90%. Hence, anecdotal evidence as reported in the Introduction that “Leavers are racists” or “Leavers are very traditional” is clearly exaggerated. Although Leavers had on average a higher level of prejudice towards immigrants, more than half of the Remainers had a comparable level of prejudice. Similarly, statements that Leavers are more traditional need to be handled with caution, because almost nine in ten Remainers valued tradition as much as Leavers. In contrast to our balanced approach, the common approach of focusing on mean differences between groups ignores these relatively larger similarities, which may indirectly contribute to social tensions and polarisations between groups (e.g., “even research shows that Leavers are more racist”). This is likely to be the case not only for Leavers and Remainers but may be true in various contexts that involve polarised groups, such as Republicans and Democrats in the US, unionists and separatists in Catalonia, and East Germans and West Germans. Given the important role of research findings to

provide an empirical basis for arguments in these social tensions, we recommend a more balanced approach of reporting differences and similarities between groups.

In fact, Study 2 found that presenting mean differences – the default way how scientific findings are reported – leads to an underestimation of the similarities between groups and to lower perceived harmony between Leavers and Remainers compared to presenting distributions of the responses for each group. This seems intuitive, given that highlighting similarities improves social cohesion whereas accentuating differences may spawn antipathy towards the outgroup (Brown & Abrams, 1986). Importantly, we have presented the same information in different ways, whereas previous research has provided different information to manipulate the similarity focus (Brown & Abrams, 1986).

However, contrary to our expectations, we did not find significant mean differences in Study 2 on attitudes and the motivation to engage with the other group. This might be because our manipulation was only presented once whereas attitudes and motivation towards another group may be too robust to be overridden by a one-shot manipulation. This may be particularly the case in the context of a hot topic such as Brexit, where people's stance towards the other group may be based on strong feelings, beliefs, and resistance, thus reducing the opportunity to change people's mind. Future research may benefit from using a more extensive manipulation, for instance by asking participants in the lab to debate either similarities or differences between Leavers and Remainers.

The relatively large amount of similarities might seem uncommon and surprising at a first glance, because most published research findings in psychology focus on differences (Fanelli, 2010; Open Science Collaboration, 2015). However, large similarities between groups of individuals are well-supported throughout the life and social sciences. For example, we share more than 99% of our DNA with

every other human despite having “undergone” thousands of years of evolutionary adaptation (Singer, 1981). Also, almost all countries have signed the universal declaration of human rights and are part of the international police organisation, which reflects a shared understanding of what is right and wrong (Bobbio, 1996). Further, data from more than 50 countries suggests that the hierarchy of human values is universal (Schwartz & Bardi, 2001): benevolence principles (e.g., helpfulness, honesty) are most important in nearly all countries, whereas power principles (e.g., wealth, materialistic possession) are generally least important.

Conclusion. Across three samples we found reliable mean differences between Leavers and Remainers, but also that for most variables the similarities were substantial and strongly outweighed the differences. By highlighting these similarities, the present research fostered a more accurate perception of the research findings and higher perceived intergroup harmony. We therefore recommend that researchers report effect sizes which express similarities to allow for a more balanced portrayal of research findings, especially if polarised groups are considered.

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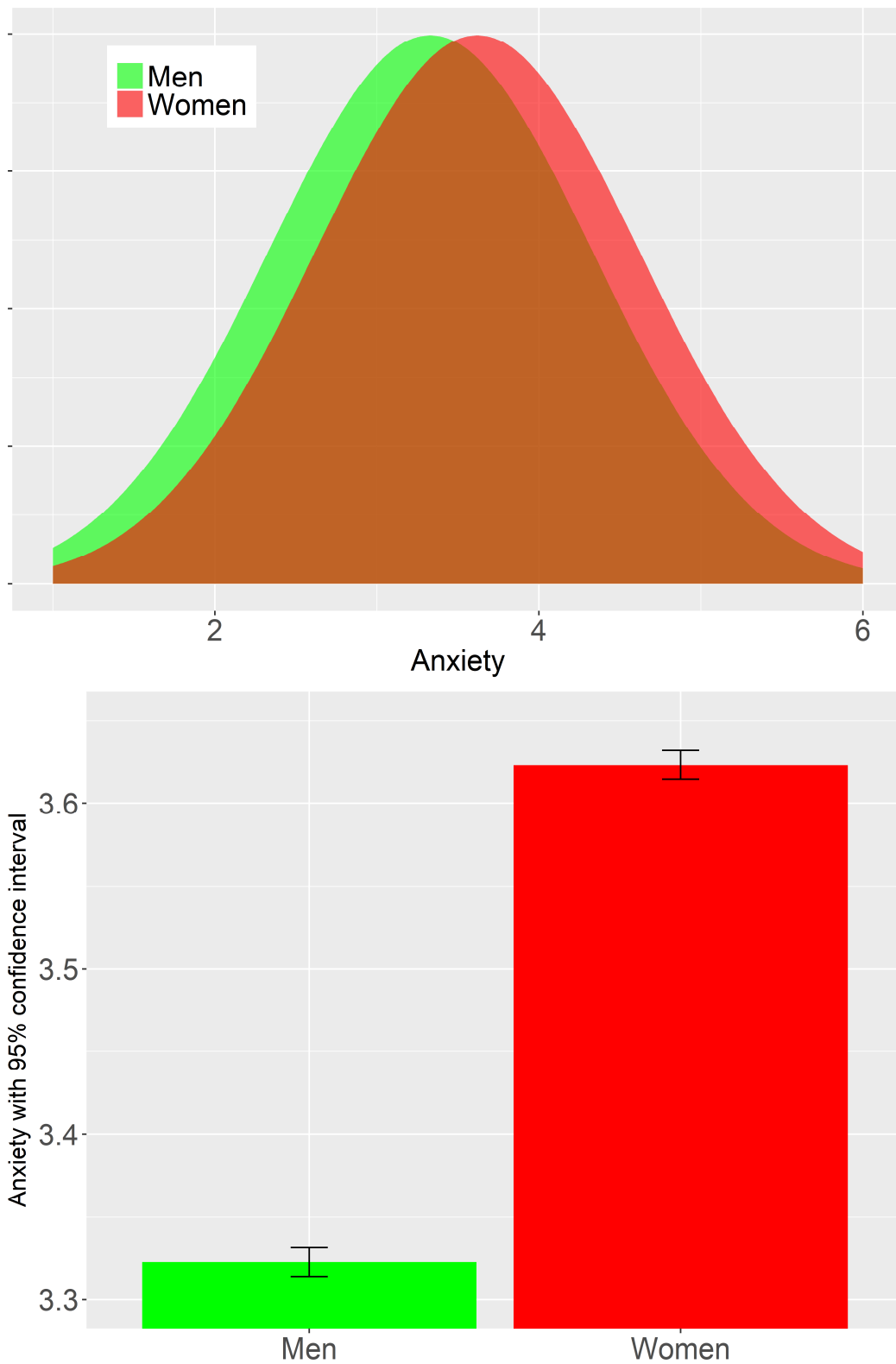


Figure 1. Anxiety levels of women and men. The top graph highlights the similarity between both distributions, the lower graph the differences.

Note: To create the graphs, we used a scale ranging from 1 to 6 and a SD of 1 for both groups.

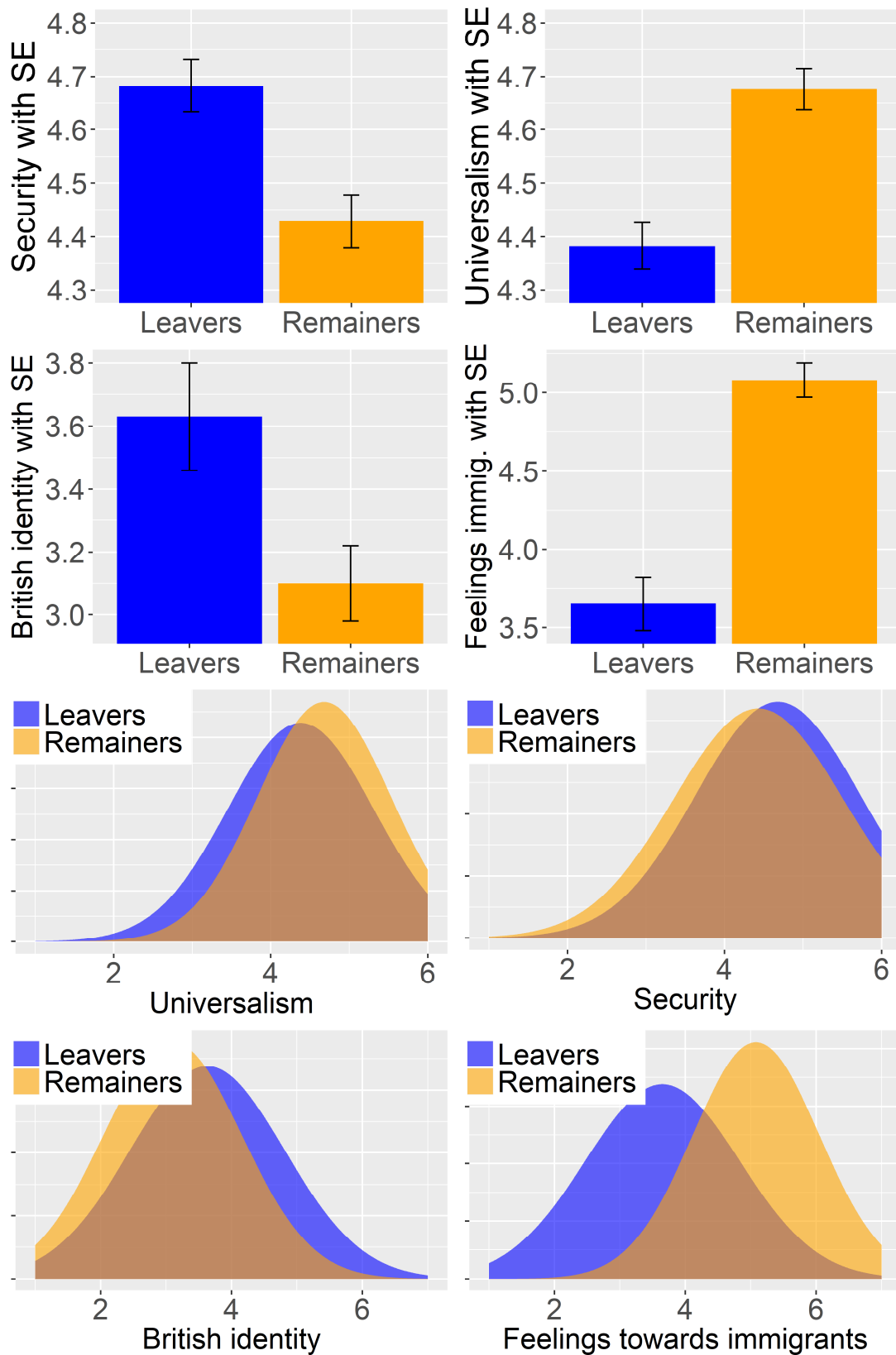


Figure 2. Stimuli used in Study 2.

Note. SE: Standard Error, Feelings immig.: Feelings towards immigrants. Both was spelled out in the graphs displayed to the participants.

Table 1

*Descriptive and inferential statistics along with effect sizes for Leavers vs**Remainers comparisons in sample 1*

	Leave		Remain		<i>t</i>	<i>p</i>	<i>d</i>	PCR
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Security	4.68	1.05	4.43	1.08	3.66	<.001	0.24	91
Tradition	4.17	1.03	3.91	1.13	3.65	<.001	0.24	91
Conformity	4.02	1.15	3.80	1.19	2.85	.005	0.19	93
Benevolence	4.67	0.97	4.75	0.94	-1.30	.195	-0.08	97
Universalism	4.38	0.93	4.68	0.85	-5.06	<.001	-0.33	87
Self-direction	4.30	1.00	4.24	1.02	0.79	.430	0.05	98
Stimulation	3.31	1.22	3.51	1.24	-2.50	.013	-0.16	94
Hedonism	3.54	1.12	3.71	1.15	-2.25	.025	-0.15	94
Achievement	3.37	1.20	3.50	1.23	-1.65	.099	-0.11	96
Power	2.74	1.11	2.78	1.10	-0.58	.561	-0.04	98
Security_o	4.23	1.07	4.19	1.01	0.62	.534	0.04	98
Tradition_o	3.43	1.09	3.37	1.03	0.76	.450	0.05	98
Conformity_o	3.25	1.15	3.17	1.07	1.16	.245	0.08	97
Benevolence_o	4.02	1.11	4.11	1.03	-1.36	.175	-0.09	96
Universalism_o	3.55	1.06	3.61	1.07	-0.81	.418	-0.05	98
Self_direction_o	3.96	1.02	3.98	1.01	-0.33	.743	-0.02	99
Stimulation_o	3.76	1.03	3.82	1.06	-0.96	.337	-0.06	98
Hedonism_o	4.23	1.06	4.35	0.98	-1.73	.084	-0.11	96
Achievement_o	3.80	1.01	3.89	0.99	-1.36	.173	-0.09	96
Power_o	3.49	1.12	3.58	1.02	-1.22	.224	-0.08	97
Voting intention	2.97	1.15	3.25	1.00	-3.93	<.001	-0.26	90
Life satisfaction	6.67	2.26	6.69	2.10	-0.18	.854	-0.01	100
Civic engagement	4.96	1.09	5.21	0.95	-3.77	<.001	-0.25	90
Social and environmental concerns	4.80	0.83	5.10	0.80	-5.69	<.001	-0.37	85
Civic participation	1.39	0.18	1.36	0.18	2.07	.039	0.13	95
Devolution	3.46	0.94	3.76	0.82	-5.24	<.001	-0.34	86

Note. *d*: Cohen's *d*, PCR: Percentage of Common Responses, _o: others (perceived values).

Table 2

*Descriptive and inferential statistics along with effect sizes for Leavers vs**Remainers comparisons in sample 2*

	Leave		Remain		<i>t</i>	<i>p</i>	<i>d</i>	PCR
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Security	4.55	1.01	4.14	1.10	3.99	<.001	0.38	85
Tradition	4.00	0.95	3.56	1.07	4.54	<.001	0.43	83
Conformity	3.73	1.11	3.47	1.27	2.32	.021	0.22	91

Benevolence	4.38	1.00	4.54	0.96	-1.68	.094	-0.16	93
Universalism	4.14	0.95	4.63	0.90	-5.48	<.001	-0.54	79
Self-direction	4.45	0.99	4.49	0.99	-0.42	.673	-0.04	98
Stimulation	3.32	1.28	3.53	1.23	-1.70	.091	-0.17	93
Hedonism	3.49	1.25	3.61	1.17	-0.97	.332	-0.10	96
Achievement	3.53	1.25	3.64	1.22	-0.88	.381	-0.09	97
Power	2.84	1.17	2.66	1.06	1.62	.107	0.16	94
Security_o	4.71	0.92	4.72	0.91	-0.09	.930	-0.01	100
Tradition_o	3.92	1.05	3.93	0.92	-0.06	.952	-0.01	100
Conformity_o	3.85	1.03	3.97	0.99	-1.18	.239	-0.12	95
Benevolence_o	4.24	0.99	4.21	0.81	0.33	.742	0.03	99
Universalism_o	3.77	0.89	3.48	0.94	3.25	.001	0.31	88
Self_direction_o	3.92	0.95	3.68	0.97	2.66	.008	0.26	90
Stimulation_o	3.59	1.06	3.26	0.98	3.34	.001	0.33	87
Hedonism_o	4.04	1.03	4.02	0.94	0.18	.859	0.02	99
Achievement_o	4.07	0.97	4.09	0.90	-0.23	.819	-0.02	99
Power_o	3.69	1.04	3.81	0.97	-1.21	.229	-0.12	95
Contemplation	3.73	0.86	3.89	0.80	-1.92	.056	-0.20	92
Civic engagement	4.32	1.29	4.94	1.11	-5.00	<.001	-0.52	80
NFA: Approach	4.52	1.12	4.74	0.99	-2.17	.030	-0.21	91
NFA: Avoidance	3.17	1.29	3.20	1.23	-0.25	.803	-0.02	99
NFC	3.29	0.71	3.53	0.65	-3.68	<.001	-0.36	86
British identity	5.58	1.27	4.97	1.36	4.81	<.001	0.46	82
Belonging	2.87	0.77	3.05	0.73	-2.44	.015	-0.24	91
Appropriateness	3.61	0.89	3.82	0.84	-2.52	.012	-0.25	90
Party Knowledge	2.34	0.69	2.39	0.63	-0.67	.510	-0.07	97
Brexit attitudes	2.30	1.39	5.69	1.09	-	<.001	-2.77	17
					26.29			
Active coping	3.71	1.49	4.40	1.50	-4.52	<.001	-0.46	82
Planning	1.45	0.59	1.62	0.70	-2.50	.013	-0.25	90
Social Support	1.77	0.66	1.95	0.71	-2.62	.009	-0.26	90
Suppression	3.56	1.34	3.28	1.33	2.09	.038	0.21	92

Note. *d*: Cohen's *d*, PCR: Percentage of Common Responses, _o: others (perceived values), NFA:

Need for Affect, NFC: Need for Cognition.

Table 3

Descriptive and inferential statistics along with effect sizes for Leavers vs

Remainers comparisons in sample 3

	Leave		Remain		<i>t</i>	<i>p</i>	<i>d</i>	<i>PCR</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Security	4.46	1.22	4.25	1.18	0.97	.34	0.18	93
Tradition	2.22	1.48	1.93	1.36	1.12	.27	0.20	92

Conformity	4.38	1.37	3.97	1.41	1.61	.11	0.29	88
Benevolence	4.36	1.19	4.82	0.98	-2.35	.020	-0.42	83
Universalism	4.56	1.43	5.28	0.89	-3.47	.001	-0.62	76
Self-direction	4.92	0.94	5.16	0.85	-1.47	.14	-0.27	89
Stimulation	3.38	1.47	3.32	1.30	0.26	.80	0.04	98
Hedonism	4.20	1.14	4.18	0.88	0.09	.93	0.02	99
Achievement	3.34	1.36	3.32	1.42	0.10	.92	0.01	100
Power	2.53	1.34	2.62	1.36	-0.36	.72	-0.07	97
Income	6.79	2.96	7.40	3.38	-0.97	.33	-0.19	92
Education	4.98	1.06	5.64	0.94	-3.66	<.001	-0.66	74
British Identity	3.63	1.18	3.10	1.06	2.62	.010	0.47	81
Prejudice	4.35	1.18	2.92	0.97	7.47	<.001	1.33	51
Zero-sum beliefs	3.20	1.28	1.74	0.95	7.34	<.001	1.31	51
Voting intention	4.05	1.45	4.16	1.31	-0.44	.66	-0.08	97
Party Attachment Conservatives	2.34	1.33	1.57	1.02	-3.68	<.001	0.66	74
Party Attachment Labour	1.80	1.16	2.61	1.28	-3.59	<.001	-0.66	74
Party Attachment Liberal Democrats	1.38	0.75	1.92	0.95	-3.39	<.001	-0.64	75
Political interest	3.26	1.26	3.22	1.28	0.16	.88	0.03	99
Political views	6.10	2.48	3.80	2.02	5.71	<.001	1.02	61
Emotions to election outcome	3.31	0.62	3.46	0.59	-1.36	.55	-0.25	90

Note. Higher scores on political views reflect more conservative than liberal views. Higher scores on emotions to election outcome reflect more positive emotions. *d*: Cohen's *d*, PCR: Percentage of common responses.

Table 4

Descriptive and inferential statistics along with effect sizes for similarity vs difference comparisons

	Similarity		Difference		<i>t</i>	<i>p</i>	<i>d</i>	PCR
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Overall similarity	57.56	20.27	28.98	24.90	8.99	.0000	1.26	52.74
Getting along	55.93	20.50	45.33	21.43	3.62	.0002	0.51	80.03
Motivation to engage	55.22	30.58	50.11	27.75	1.26	.1049	0.17	93.04
Evaluation of other	45.74	23.03	41.31	21.28	1.43	.0767	0.20	92.06
group								
Specific similarity	43.96	21.15	29.59	24.27	4.52	.0000	0.63	75.15

Note. d: Cohen's *d*, PCR: Percentage of common responses. *p*-values are based on directed hypotheses.