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Moral sentiment predicts desire for Scottish independence

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Gary J. Lewis [a],*, Graeme Brown [b]

[a] Department of Psychology, University of York, Heslington, York YO10 5DD, UK
[b] Division of Psychology, School of Natural Sciences, University of Stirling, Stirling FK9 4LA, UK

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ABSTRACT

Scottish independence has been a topic of considerable political debate for some time, with the 2014 referendum concerning whether Scotland should remain a part of the United Kingdom testament to this fact. Numerous economic and political factors have been noted as determinants of the referendum vote. However, the role of psychological factors as a predictor of the desire for independence has not been well explored despite much work demonstrating the importance of specific traits and values on a range of socio-political attitudes. In the current study, using a sample of Scottish adults ($n = 271$), we sought to examine how two core constructs capturing moral sentiment – binding (reflecting concern for group cohesion and norms) and individualizing (reflecting concern over individual rights) – predicted the desire for independence during the build-up to the referendum. Results indicated that lower binding and higher individualizing predicted a desire for independence, with evidence for mediation via Scottish identification. These findings are consistent with the notion that the Scottish independence movement can be viewed as a broadly left-wing phenomenon. More generally, these results provide novel evidence in a charged political debate that moral sentiments concerning how individual and group life should be structured play a significant role in explaining individual differences in political sentiment.

1. Introduction

Nationalist movements tend to spark considerable debate. The Scottish nationalist movement has been no exception to this trend in recent times, perhaps best illustrated by the 2014 referendum concerning whether Scotland should remain a part of the United Kingdom.[1] The factors that underpin sentiment on this question are numerous, and include economic and political concerns, among others. Less well explored are the psychological factors that underpin attitudes towards independence. In the current study, we sought to test whether moral sentiment concerning individual rights and group cohesion (Haidt & Joseph, 2007) predicted desire for independence during the build-up to the 2014 referendum. These moral domains are of considerable relevance in this debate because they have been shown in recent work to predict important socio-political attitudes (Graham, Haidt, & Nosek, 2009; Lewis & Bates, 2011; van Leeuwen & Park, 2009). More broadly, while important work has examined how psychological traits predict election voting (e.g., Caprara, Schwartz, Capanna, Vecchione, & Barbaranelli, 2006), it is still relatively atypical for psychological variables – and particularly

moral sentiment – to be tested in the context of a major socio-political event, and thus such an approach provides a window onto the psychological factors underlying important real-world political issues. In addition, we sought to examine whether Scottish identification and essentialism served to mediate the path from moral sentiment to independence views.

1.1. Scottish independence: historical overview

The Acts of Union signed in 1707 served to forge an alliance between England and Scotland and saw the end of a significant period of conflict between the two states. While the Union has remained intact now for over three centuries, in recent decades there has been movement towards the reestablishment of a separate Scottish nation, distinct from the United Kingdom. The Scottish independence referendum of 2014 represents the culmination of a long journey undertaken by Scottish nationalists who, by and large, believe that Scotland suffers economically and politically under UK central government. Such matters are of course disputed as with any live political debate, and the variation in sentiment towards independence from the Scottish people no doubt reflects the different perspectives individuals hold on these issues. For example, one recent opinion poll on the economic future of an independent Scotland showed attitudes ranged from those who are confident

* Corresponding author.
    E-mail address: gary.lewis@york.ac.uk (G.J. Lewis).

[1] Note, the outcome of the referendum was unknown at the time of writing.

of prosperity (c. 20%) to those who are worried about economic decline (c. 40%) ("If Scotland Became Independent...", 2014).

1.2. Socio-political attitudes: the role of personality and values

While political and economic factors will likely explain a significant proportion of this variation in Scottish independence sentiment (e.g., the belief that greater national wealth or political muscle will follow from independence), it is less examined how psychological characteristics relate to desire for independence. This is unfortunate as a considerable body of research has found that stable aspects of personality and values predict important socio-political attitudes. For example, the personality trait Openness has been shown to predict more liberal attitudes across numerous studies (e.g., Carney, Jost, Gosling, & Potter, 2008; Lewis & Bates, 2011), with evidence (albeit it somewhat mixed) for further contributions by other Big Five personality traits (Lewis & Bates, 2011). At the level of values, right-wing individuals (at least on social issues) tend to show support for strict law and order, a need for rigid structure in society, and a high desire for discipline within society (Thorisdottir, Jost, Liviatan, & Shrout, 2007). Caprara et al. (2006) found that right-wing voters show a high desire for values such as security, power, conformity and tradition in societies. It is noteworthy, however, that recent work has suggested that personality traits do not exert a causal influence on political attitudes (Verhulst, Eaves, & Hatemi, 2012), although this work did not address causal relations between values and political attitudes.

Of special interest to the current study, Haidt and Graham (2007) have suggested that moral sentiment is a critical precursor to the political positions individuals adopt. Their most well-studied model of moral sentiment includes five core foundations: harm/care (minimizing harm to others), fairness (maximizing fairness to all), in-group loyalty (the importance of the in-group), authority deference (respect for status and hierarchy), and purity/sanctity (avoiding impure or disgusting acts/entities, in part with regard to religious notions concerning such issues). These five facets of morality, in turn, correlate to form two higher order moral factors of 'individualizing' (the aggregate score on harm and fairness) and 'binding' – the aggregate score on authority, in-group loyalty, and purity (Graham et al., 2009). Both individualizing and binding have been shown to account for significant variance in broad-based political orientation in both the United States and United Kingdom (Graham et al., 2009; Lewis & Bates, 2011) and in The Netherlands (van Leeuwen & Park, 2009), with lower individualizing and higher binding tending to reflect greater levels of political conservatism in each of these countries.

1.3. The current study

While moral values have been shown to predict socio-political attitudes in fairly general terms in a number of recent studies (e.g. Graham et al., 2009; Lewis & Bates, 2011; van Leeuwen & Park, 2009), the Scottish independence debate facilitates a fascinating test of the role of moral sentiment as a predictor of political attitudes in an important real-world issue. If individual differences in broad-based moral sentiment are indeed a core factor underlying socio-political conflict, as suggested by Haidt and colleagues (e.g., Graham et al., 2009; Haidt & Graham, 2007), it will be important to establish the impact of such moral sentiment across a range of socio-political contexts.

The lens of moral values also has considerable value as a means to characterize the psychological aspects of the Scottish nationalism movement in more nuanced ways than previously detailed. Whereas nationalism is often noted to reflect right-wing characteristics (e.g., Altemeyer, 1998), Scottish nationalism has typically been regarded, at least broadly speaking, as a left-wing movement

(e.g., McCrone & Patterson, 2002)[2]. This gives rise to interesting possible relationships between desire for independence and moral sentiment. On the one hand, if one considers desire for independence within the typical psychological analysis of nationalism – i.e., right-wing – one would predict that high binding and low individualizing would significantly associate with desire for Scotland to leave the Union. Conversely, if the desire for independence reflects the motivation to generate a more left-wing political state, one would make the reverse predictions; namely, low binding and high individualizing predicting desire for independence. Finally, one might expect that desire for independence might be more nuanced still, reflecting aspects of right-wing sentiment – i.e., concern for group cohesion and authority – coupled with heightened concerns over social justice. In such a case, the prediction that emerges is that desire for independence reflects high binding and high individualizing.

Our goal, then, in the current study was to test whether these central aspects of moral sentiment predicted attitudes towards independence, and the nature (if any) of these associations. We were also keen to assess how aspects of Scottish identification and essentialist thinking (i.e., perceiving that Scottish people have an essence that is immutable and fundamental to the character of Scots) related to desire for independence as well as whether these variables mediated associations between moral values and desire for independence. To address these questions we recruited a sample of Scottish individuals who were asked to complete an online survey addressing desire for independence, general sentiment towards Scotland, moral sentiment, and key demographics.

2. Methods

2.1. Participants

352 Participants (271 participants included in the final data analysis: see details of exclusion criteria below) were recruited with an average age of 35.95 (SD = 16.66) and an age range of 16–82 years. Participants were recruited from undergraduate students at a mid-size Scottish University (who gained course credit for their time) and from relevant, targeted sites on social media (e.g., Facebook) where Scottish independence was a topic of discussion. Non-student individuals who participated in the study did so voluntarily. Although we did not formally record the breakdown of our sample with regards to student vs. non-student, more than 65% of the individuals in our sample were over 22 years of age indicating we sampled from a largely non-student population. Only participants who self-identified as Scottish (n = 304), as opposed to English, Welsh, Northern Irish, or Other, were included in our analyses so as to focus our analyses on those individuals most central to the referendum. (Non-Scottish residents in Scotland are permitted to vote in the referendum; however, because their length of stay in Scotland was not measured here we reasoned it was better to omit these individuals). We also excluded participants who were undecided in their independence vote (n = 38: see details below), which left us with a sample of n = 271.[3]

2.2. Measures

All measures were taken in one session in an online questionnaire between November 2012 and February 2013, which was

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[2] The Scottish independence movement is not alone among nationalist movements in being regarded as left-wing: Several other such movements – including the Quebec and Basque independence movements – share similar features, although both contain complexities that mean parallels cannot be easily drawn.

[3] Note, some of the participants met exclusion criteria in both conditions and so the final sample size is marginally larger than the simple omission of sum of the number of individuals in each of the excluded groups.

shortly after the announcement that a referendum on independence would take place. Age, sex (1: male; 2: female), and level of education (4 point scale: 1: Standard grade (typically achieved at age 16) to 4: University), country of birth, country of current residence, and stated nationality were recorded for all participants.

Moral values were assessed using the 32-item Moral Foundations Questionnaire (MFQ) measuring harm/care, fairness, in-group loyalty, authority deference, and purity/sanctity, along with a 2-item validity scale (Graham et al., 2011). Binding and individualizing were constructed as the aggregate sum of harm/care and fairness (sub-scales $r = .56$), and in-group loyalty, authority deference, and purity/sanctity (sub-scales $r = .42–.56$), respectively. Examples of MFQ scale items are as follows: "Compassion for those who are suffering is the most crucial virtue" (harm/care); "When the government makes laws, the number one principle should be ensuring that everyone is treated fairly" (fairness); "It is more important to be a team player than to express oneself" (ingroup loyalty); "Respect for authority is something all children need to learn" (authority deference); "People should not do things that are disgusting, even if no one is harmed" (purity/sanctity). The MFQ was administered using a six-point scale with no neutral option: 1 – Strongly disagree to 6 – Strongly agree.

Desire for independence was measured with a single item: "If there was a vote tomorrow on Scotland becoming independent from the UK, I would vote…". Possible answers were no, yes, and undecided. For analyses, we excluded undecided individuals ($n = 38$) focusing specifically on those individuals who had a clear opinion on the topic in order to avoid forcing individuals with limited knowledge or interest in this topic to select yes or no.

To address broader attitudes towards Scotland that may serve to mediate effects of moral values on independence we also measured Scottish identification and Scottish essentialism. Scottish identification was modeled on the Identification with Psychological Group (IDPG) scale (Mael & Tetrick, 1992) and measured participant's identification with Scotland and Scottish people with six items (sample items: "I identify with other Scottish people"; "When someone criticizes Scotland, it feels like a personal insult": 1 – Strongly disagree to 5 – Strongly agree). Essentialism was measured using five items drawn from Pehrson, Brown, and Zagefka (2009) study of English essentialism with modification for the Scottish sample (sample items: "From our ancestry, something deep in the heart clearly distinguishes the Scottish from other nations"; "Something in our blood has defined the Scottish character throughout history": 1 – Strongly disagree to 5 – Strongly agree).

3. Results

Descriptive statistics for key study variables are detailed in Table 1. All measures showed a good to high Cronbach's alpha: range from .76 to .91.

Correlational analyses are presented in Table 2. Age, individualizing, and Scottish identification were positively correlated with desire for independence. Sex, education, and binding were negatively correlated with independence.

Table 1
Descriptive statistics for individualizing, binding, essentialism, Scottish identification, and Scottish independence.

Measure	Mean	SD
Individualizing	29.06	3.80
Binding	21.92	4.24
Essentialism	2.68	1.04
Scottish identification	3.93	.76
Independence	65% no; 35% yes	

Next, three regression analyses were conducted with independence, essentialism, and Scottish identification as outcome variables, respectively. Binding and individualizing were included as our predictors of central interest. Additionally, age, sex (male = 1; female = 2), and level of education were included as covariates in each model.

For independence, we used logistic regression in line with the binary (no = 1; yes = 2) nature of this outcome variable. Prediction success overall was 82.3% (87% for 'yes' and 73.4% for 'no': Nagelkerke $R^2 = .46$). Age ($p < .001$; $Exp(\beta) = 1.08$), sex ($p = .001$; $Exp(\beta) = .33$), binding ($p < .001$; $Exp(\beta) = .82$), and individualizing ($p = .008$; $Exp(\beta) = 1.13$) were significant predictors of independence.

Linear regression was used for essentialism and Scottish identification. For essentialism the overall model was significant ($R^2 = .22$, $F(5, 265) = 15.34$, $p < .001$). Here only education ($\beta = -.21$; $p < .001$) and binding ($\beta = .38$; $p < .001$) were significant predictors. For Scottish identification the overall model was significant ($R^2 = .16$, $F(5, 265) = 9.71$, $p < .001$). Sex ($\beta = -.13$; $p = .036$), education ($\beta = -.13$; $p = .027$), binding ($\beta = .12$; $p = .037$), and individualizing ($\beta = .25$; $p < .001$) were significant predictors.

To examine whether Scottish identification and essentialism mediated the effects of binding and individualizing on independence we used the Process SPSS macro developed by Hayes (2013). We first tested whether these variables mediated the effect of binding on independence. This analysis controlled for age, sex, level of education, and individualizing. Unstandardized coefficients are reported below. 10,000 bootstrapped samples were used to estimate the indirect effects. Results indicated significant effects of binding on Scottish identification ($\beta = .02$, $t = 2.10$, $p = .04$) and essentialism ($\beta = .09$, $t = 6.87$, $p < .001$). The effect of Scottish identification ($\beta = .98$, $z = 3.47$, $p < .001$) on independence was significant, but this was not the case for essentialism ($\beta = .01$, $z = 0.05$, $p = .96$). Scottish identification significantly mediated the effect of binding on independence (indirect effect: $\beta = .02$, 95% CI: .002–.059). No evidence for mediation was observed for essentialism. The direct effect of binding on independence, accounting for the mediators, was significant ($\beta = -.23$, $z = -4.49$, $p < .001$). Of note, the direct effect was larger than the total effect reflecting the observation of counter-veiling direct and indirect effects: binding served to increase Scottish identification, which in turn increased desire for independence, whereas binding had an inverse direct effect on desire for independence (see below for further examination of this result).

We next tested whether these variables mediated the effect of individualizing on independence. As above, this analysis controlled for age, sex, and level of education, as well as binding. 10,000 bootstrapped samples were used to estimate the indirect effects. Results indicated that significant effects of individualizing on Scottish identification ($\beta = .05$, $t = 4.14$, $p < .001$) but not on essentialism ($\beta = .01$, $t = 0.43$, $p = .66$). The effect of Scottish identification ($\beta = .98$, $z = 3.47$, $p < .001$) on independence was significant, but this was not the case for essentialism ($\beta = .01$, $z = 0.05$, $p = .96$). Scottish identification significantly mediated the effect of individualizing on independence (indirect effect: $\beta = .05$, 95% CI: .02–.10). No evidence for mediation was observed for essentialism. The direct effect of individualizing on independence, accounting for the mediators, was not significant ($\beta = .08$, $z = 1.56$, $p = .11$).

3.1. Supplementary analyses

At least two possible explanations could account for the somewhat counter-intuitive finding that binding is related to greater Scottish identification but with reduced support for independence: (1) that individuals higher in binding show an allegiance to their group (i.e., Scotland) – perhaps reflecting the in-group loyalty

Table 2
Correlations between core study variables.

	Age	Sex	Education	Individualizing	Binding	Essentialism	Scot-ID
Sex	−.18**						
Education	−.30**	.06					
Individualizing	.26**	.20**	−.08				
Binding	.06	.08	−.17**	.03			
Essentialism	.12	−.07	−.29**	.04	.41**		
Scot-ID	.25**	−.10	−.22**	.27**	.15*	.49**	
Independence	.47**	−.24**	−.20**	.21**	−.23**	.10	.38**

For independence, 1 = No, 2 = Yes; Scot-ID = Scottish identification; For Sex, male = 1, female = 2.

  * $p < .05$.
 ** $p < .01$.

aspects of binding – while also valuing tradition and norms, perhaps reflecting the authority aspects of binding. If this explanation is correct, it is conceivable that such individuals would identify strongly with Scotland (and perhaps also with the Union) but would be less inclined to support independence as it would represent a break from the status quo; (2) that binding captures a generalized notion of group loyalty such that identification with both Scotland and the Union is held simultaneously. If the former perspective is correct, we should find that the authority facet of binding relates to lower independence sentiment, but that the in-group loyalty facet of binding relates positively to Scottish identification. If the latter perspective is correct, we should see that in-group loyalty relates positively to both Scottish identification and independence sentiment. We examined the authority and in-group loyalty facets of binding in order to test these hypotheses. We found that authority (controlling for in-group and purity) was negatively related to independence sentiment ($r = −.26$, $p < .001$) and to Scottish identification ($r = −.16$, $p = .01$). In-group loyalty (controlling for authority and purity) was not related to independence sentiment ($r = .04$, $p = .53$), but was positively related to Scottish identification ($r = .22$, $p < .001$). These observations support the first of the suggested explanations and indicate that binding captures aspects of group-oriented values that in this political debate lead to a reduced desire for independence via the component of authority and increased Scottish identification via the component of in-group loyalty.

4. Discussion

In the current study we sought to examine the role of two key elements of moral sentiment – concerns over group cohesion and norms (binding) and concerns over individual rights (individualizing). These constructs are of some interest as they have been previously shown to reflect central aspects of socio-political attitudes (Graham et al., 2009; Lewis & Bates, 2011; van Leeuwen & Park, 2009). At the zero-order level we observed that individuals lower in binding and higher in individualizing tended to be more in favor of Scottish independence. These effects were both mediated through Scottish identification (essentialism was not a significant mediator in either case): individualizing showed a non-significant direct effect when these mediators were included in the model, although binding retained a significant direct influence over and above the effects of the mediators.

Of particular interest, the mediation analyses revealed evidence of counter-veiling effects of binding on desire for independence: Higher binding was noted to drive up Scottish nationalist sentiment (as indexed through identification and essentialism), but was also a positive predictor of the preference for Scotland to remain in the Union. Further analyses indicated that this observation stemmed from the in-group loyalty component of binding

leading to increased Scottish identification, whereas the authority component of binding led to reduced support for independence.

We also found significant effects for age, sex, and level of education. Older individuals were more likely to support independence, perhaps in line with stronger personal ties to controversial political episodes (e.g., Thatcherism and the Poll Tax) that characterize generalized distinctions between English and Scottish political sentiment. Males were more likely to support independence and to identify more strongly with Scotland. This observation may reflect well-noted sex differences in anxiety and fearfulness (McLean & Anderson, 2009), with men (in general) perhaps less concerned with the social, economic, and political uncertainties that might arise if independence is achieved. Education level did not predict desire for independence but was negatively associated with one's identification with Scotland, and with a belief in Scottish essentialism.

Specific caveats and limitations require discussion. First, these data were collected approximately 20 months prior to the 2014 referendum and so should not be taken as a strong reflection of the predictors reflecting independence attitudes at the time of voting. That said, psychological factors have been noted to predict vote patterns in a number of studies (e.g., Caprara et al., 2006). In addition, the time of data collection was shortly after the referendum was announced, and a considerable amount of media attention was paid to the issue at the time, suggesting these results may be closely representative of opinions in the referendum. Second, while our sample had a wide age range and reasonable breadth of educational achievement, it should not be considered a representative sample of Scottish people as the demographic was skewed toward younger and more educated individuals. Future work may wish to address these questions in a sample of lower socio-economic individuals as it is conceivable that a different combination of moral predictors may explain attitudes towards independence in such populations. Thirdly, while economic and psychological factors were presented as independent predictors of independence sentiment, it is possible that attitudes to economic factors are 'colored' by moral sentiment, perhaps to bolster views of independence that are consistent with one's moral sensibilities. Future work may wish to address this issue, particularly in light of the significant direct effects of binding on independence even when accounting for Scottish identification and essentialism as mediators. Finally, while here we suggest that moral sentiment is causal to desire for independence, alternative patterns of cause and effect must also be acknowledged (e.g., Verhulst, Eaves, & Hatemi, 2012). One might argue that identifying with one's national heritage and people might in turn lead one to adopt the prevailing moral attitudes. This is, at least in part, falsified by the observation that binding was positively related to Scottish identification whereas negatively related to a desire for independence. This counter-explanation may be valid in the case of individualizing, though, and future work should consider this alternative interpretation.

In summary, here we find evidence that key aspects of moral sentiment – concerns over group cohesion and norms and concerns over individual rights – help to explain individual differences in the desire for Scottish independence. While more pragmatic factors – such as economic considerations – may ultimately dominate the formal discussion, the psychological motivations underlying such attitudes should not be ignored.

References

Altemeyer, B. (1998). The other "authoritarian personality". *Advances in Experimental Social Psychology, 30*, 47–92.

Caprara, G. V., Schwartz, S., Capanna, C., Vecchione, M., & Barbaranelli, C. (2006). Personality and politics: Values, traits, and political choice. *Political Psychology, 27*, 1–28.

Carney, D. R., Jost, J. T., Gosling, S. D., & Potter, J. (2008). The secret lives of liberals and conservatives: Personality profiles, interaction styles, and the things they leave behind. *Political Psychology, 29*, 807–840.

Graham, J., Haidt, J., & Nosek, B. A. (2009). Liberals and conservatives rely on different sets of moral foundations. *Journal of Personality and Social Psychology, 96*, 1029–1046.

Graham, J., Nosek, B. A., Haidt, J., Iyer, R., Koleva, S., & Ditto, P. H. (2011). Mapping the moral domain. *Journal of Personality and Social Psychology, 101*, 366–385.

Haidt, J., & Graham, J. (2007). When morality opposes justice: Conservatives have moral intuitions that liberals may not recognize. *Social Justice Research, 20*, 98–116.

Haidt, J., & Joseph, C. (2007). The moral mind: How 5 sets of innate intuitions guide the development of many culture-specific virtues, and perhaps even modules. In P. Carruthers, S. Laurence, & S. Stich (Eds.). *The innate mind* (Vol. 3, pp. 367–391). New York: Oxford University Press.

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach.* Guilford Press.

"If Scotland Became Independent...". (2014). Retrieved on May 20th 2014 from <http://whatscotlandthinks.org/questions/if-scotland-became-independent-would-you-feel-confident-about-scotlands-future#table>, 20.05.2014.

Lewis, G. J., & Bates, T. C. (2011). From left to right: How the personality system allows basic traits to influence politics via characteristic moral adaptations. *British Journal of Psychology, 102*, 546–558.

Mael, F. A., & Tetrick, L. E. (1992). Identifying organizational identification. *Educational and Psychological Measurement, 52*, 813–824.

McLean, C. P., & Anderson, E. R. (2009). Brave men and timid women? A review of the gender differences in fear and anxiety. *Clinical Psychology Review, 29*, 496–505.

McCrone, D., & Patterson, L. (2002). The conundrum of Scottish independence. *Scottish Affairs, 40*, 54–75.

Pehrson, S., Brown, R., & Zagefka, H. (2009). When does national identification lead to the rejection of immigrants? Cross-sectional and longitudinal evidence for the role of essentialist in-group definitions. *British Journal of Social Psychology, 48*, 61–76.

Thorisdottir, H., Jost, J. T., Liviatan, I., & Shrout, P. E. (2007). Psychological needs and values underlying left-right political orientation: Cross-national evidence from Eastern and Western Europe. *Public Opinion Quarterly, 71*, 175–203.

van Leeuwen, F., & Park, J. H. (2009). Perceptions of social dangers, moral foundations, and political orientation. *Personality and Individual Differences, 47*, 169–173.

Verhulst, B., Eaves, L. J., & Hatemi, P. K. (2012). Correlation not causation: The relationship between personality traits and political ideologies. *American Journal of Political Science, 56*, 34–51.