

Identity uncertainty and UK–Scottish relations: Different dynamics depending on relative identity centrality

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Abstract

Drawing on uncertainty-identity theory, we investigated how people respond differently to identity uncertainty at a superordinate (i.e., UK) or subgroup (i.e., Scottish) level depending on the subjective self-conceptual centrality of subgroup relative to superordinate group; altering superordinate and subgroup identification and attitude toward subgroup relations to the superordinate group in the context of Scotland's bid for independence from the UK ($N = 115$). Hierarchical regression analyses confirmed our prediction. Where the subgroup was self-conceptually more central than the superordinate group, subgroup identity uncertainty strengthened superordinate identification (H1) and weakened subgroup identification. Strengthened superordinate identification weakened support for subgroup separation. However, where the superordinate group was self-conceptually more central than the subgroup, superordinate identity uncertainty was not associated with superordinate and subgroup identification (H2).

Keywords

nested identity, self-uncertainty, social identity, subgroup relations

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Social groups, once cognitively internalized in our self-concept, define who we are as members of a collective (Tajfel & Turner, 1979; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). When a group experiences changes or confronts challenges to its defining attributes, its members can become uncertain about the group's attributes and thus their own attributes and identity as members of the group—self and identity uncertainty can arise.

According to uncertainty-identity theory people are motivated to reduce self-uncertainty, and

can effectively accomplish this through group identification, particularly with highly entitative groups (Hogg, 2007, 2012). However, research exploring how people respond to identity uncertainty has

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largely focused on a single social identity, divorced from the wider context of other social identities that can overlap, subsume, or be nested within the focal identity. These other identities can also vary in relative centrality to people's self-conception and identity.

This more complex group context is a more realistic description of the uncertainty-identity context that people confront in everyday life. For example, the UK's June 2016 vote to leave the European Union created an enormous amount of identity-related uncertainty in the UK—not only about the UK itself, but also the future of Scotland and possibly Northern Ireland. The way in which these uncertainties impact behavior is influenced by one's own primary identity (British, Scottish, English), and the perceived relationship among these different identities in terms of subjective self-definitional centrality. This more complex dynamic has not been fully explored by uncertainty-identity theory. The present study is the first attempt to examine how contextual factors (e.g., hierarchical group structure and subjective importance) interplay with uncertainty to influence group identification. This has not been theorized nor empirically investigated previously in the literature.

A preliminary study of this wider identity-uncertainty context focused on subgroup South Korean *national identity* nested within the superordinate *ethnic identity* of people living on the Korean peninsula (Jung, Hogg, & Choi, 2016). There was an unexpected asymmetry: subgroup national identity uncertainty was, as expected, compensated for by enhanced superordinate ethnic group identification, but superordinate identity uncertainty did not strengthen subgroup identification. This uncertainty-identification asymmetry in nested groups remains to be fully understood.

The aim of the present research is to better understand identity-uncertainty dynamics where multiple identities are nested within one another, and thus provide additional texture to uncertainty-identity theory. We argue that identity-uncertainty dynamics in nested-identity contexts are impacted by (a) the relative subjective self-conceptual centrality of an identity and (b) the

general property of hierarchical category structures where superordinate phenomena affect the subgroup more than subgroup phenomena affect the superordinate entity. Issues causing superordinate identity uncertainty are more likely to cause subgroup identity uncertainty than vice versa; thus, subgroup identification may not effectively reduce uncertainty about the superordinate identity.

Scotland provides an excellent comparative, natural laboratory for studying this analysis. Scotland is part of the wider national entity of Great Britain, and thus for Scots, Scottish identity is a subgroup identity nested within the superordinate British identity.

Uncertainty-Identity Theory

Uncertainty-identity theory (Hogg, 2007, 2012) focuses on the relationship between self-uncertainty and group identification. It argues that people are motivated to reduce feelings of uncertainty, particularly related to or focusing directly on their self and identity. Group identification is one very powerful way to reduce self-uncertainty. People categorize the complex social world into a more limited set of social groups that are cognitively represented as prototypes—fuzzy sets of attributes that define who they are and prescribe how they should perceive, feel, and behave as group members (Turner et al., 1987; see also Abrams & Hogg, 2010). When people identify with a group, the group's prototype is internalized to define the context-specific self-concept and thus define one's collective self. Uncertainty-identity theory argues and shows that highly entitative groups with clearly defined prototypical attributes are best suited to identification-related uncertainty reduction (e.g., Hogg, Sherman, Dierselhuis, Maitner, & Moffitt, 2007), and that this dynamic can even make extremist groups attractive (Hogg, 2014).

Tests of uncertainty-identity theory have provided robust support for its key predictions (see Hogg, 2012) and have also explored its implications for leadership processes in groups (e.g., Hogg, van Knippenberg, & Rast, 2012; Rast, Gaffney, Hogg, & Crisp, 2012). However, these

studies have almost always focused on uncertainty in the context of a single group that participants can identify with (but see Grant & Hogg, 2012; Jung et al., 2016). Little research has investigated the more common situation where people have multiple identities that can differ in subjective importance/centrality and be nested within one another. To explicate the hydraulic dynamics of uncertainty identification that uncertainty-identity theory describes (Hogg, 2012, p. 68), it is necessary to examine and test hypotheses in multiple and nested identity contexts.

Nested Identities and Hierarchical Inclusiveness

Uncertainty-identity theory predicts that uncertainty regarding a specific social identity can be resolved by dis-identifying with that group (e.g., Hogg, Meehan, & Farquharson, 2010; Hogg et al., 2007), working to make the group more entitative (e.g., Sherman, Hogg, & Maitner, 2009), or identifying with another group (Jung et al., 2016). Jung and colleagues proposed that in nested identity contexts, identity uncertainty at one level can be compensated for by weakened identification at that level and strengthened identification at the other level. In the context of South Korean identity where South Korean national identity is nested within ethnic Korean identity, they found that subgroup identity uncertainty was associated with strengthened superordinate identification and weakened subgroup identification, and superordinate identity uncertainty was associated with weakened superordinate identification. However, superordinate ethnic Korean identity uncertainty did not significantly strengthen subgroup national identification.

One possible explanation, they suggested, lies in the hierarchical inclusiveness of nested identities (Crisp & Hewstone, 2007, pp. 170–171). Because a superordinate category encompasses nested subgroups, any issues causing superordinate identity uncertainty may also cause subgroup identity uncertainty; therefore, subgroup identification may not be effective at reducing superordinate identity uncertainty. However, superordinate

identification can effectively reduce subgroup identity uncertainty.

Thus, we argue that the hierarchical inclusiveness of social categories and identities may moderate the hydraulic compensation process triggered by identity uncertainty—subgroup identity uncertainty can be compensated for by strengthened superordinate identification but superordinate identity uncertainty may not be compensated for by strengthened subgroup identification. We have called this the *hierarchical asymmetry proposition*.

Identity Centrality

People do not strive equally for certainty about all identities but only those that are central and important to self-conception. Some social identities are more central and important than others in defining who we are. Uncertainty about a central identity creates a stronger motivation to reduce uncertainty than uncertainty about a peripheral identity (Mullin & Hogg, 1998). Thus, when people feel uncertain about a group that is not so central to their self-concept, they may not be motivated to restore certainty by strengthened identification with an alternative group. They may simply dis-identify from the group they are uncertain about. Whereas, when people feel uncertain about a group that is central to their self-definition, they would be strongly motivated to restore certainty by strengthened identification with an alternative group. Identification with an alternative group can quickly and directly restore a sense of identity certainty because people now view themselves as members of the alternative group and assign the alternative group prototype to themselves. They may not dis-identify from the original group unless there is an alternative group that is effective in reducing uncertainty. We have called this the *centrality proposition*.

Identity centrality is related to but not the same as strength of identification. People belong to many groups and have a repertoire of more or less distinct social identities, some of which are more central to self-definition. More central identities are subjectively more chronically accessible

and cognitively prominent in the person's self-concept (e.g., Gurin & Markus, 1989; Oakes, 1987). Contextual factors make these identities psychologically salient and bring them into play as the basis of self-conception and behavior more often and completely than less central identities—however, people can feel just as strong a sense of identification with more or less central identities if they are psychologically salient in a particular context (Abrams & Hogg, 2010; Hogg, 2006; Turner et al., 1987). Identity centrality relates to the structure of the self-concept, whereas identification refers to the context-dependent feeling of belonging, attachment, and identification with a group.

This distinction between identity centrality and strength of identification has been conceptually and empirically supported. For example, Cameron (2004) proposed, and supported across four studies, a three-factor model of social identity that distinguishes between identity centrality, ingroup affect, and ingroup ties. Major and colleagues also distinguish between identity centrality and identification and show that people who are discriminated against on the basis of a stigmatized identity still regard that identity as central to their self-concept but now identify less strongly with it (Major & O'Brien, 2005)—women experiencing sexism reported their gender identity to be more central to their self-concept but felt less proud to be a woman (Major & Eccleston, 2004), and African American students experiencing racism reported their race to be more central to their self-concept but felt lower self-esteem as African Americans (Major, Spencer, Schmader, Wolfe, & Crocker, 1998).

The Present Study

We investigated the effects of identity uncertainty on group identification and attitudes towards subgroup relations in the context of nested identities framed by the two propositions described before—identity centrality and hierarchical asymmetry. The geopolitical context of the relationship between Scotland and the UK over potential Scottish independence from the UK provided a perfect natural laboratory.

Scotland was an independent state for 900 years prior to the Treaty of Union (1706), which united Scotland and England and led to the creation of Great Britain. Over the last 300 years of the union many Scots have developed a superordinate British identity whereas others have nourished their independent subgroup Scottish identity. This issue has over the past three decades spawned a high-profile movement, reflected in public opinion and the media, for Scottish independence from Britain. Following the signing of the Edinburgh Agreement (2012), a referendum on Scottish independence took place in 2014—independence was rejected by the majority of Scots.

We recruited Scottish participants online, and about one year prior to the 2014 referendum. We measured, as predictor variables, Scottish and British identity centrality and Scottish and British identity uncertainty, and as criterion variables we measured Scottish and British identification, and attitudes towards Scottish independence.

The conceptual path model (Figure 1) captures our two key hypotheses and other relations, all derived from the two propositions described before—hierarchical asymmetry and identity centrality. *Hierarchical asymmetry* proposes that because a superordinate category encompasses nested subgroups in a hierarchical category structure, anything causing superordinate identity uncertainty may also cause subgroup identity uncertainty. Therefore, subgroup identification may not be effective at reducing superordinate identity uncertainty. On the other hand, subgroup identity uncertainty can be compensated for by strengthened superordinate identification.

Identity centrality proposes that uncertainty about a central identity motivates identification with an alternative group. Unless there is an alternative group that can effectively restore identity certainty, people will not dis-identify with the central group. In contrast, uncertainty about a less central identity can be simply dealt with by dis-identification.

We explored these two core propositions in the Scotland–UK relationship to predict that Scots who report Scottish identity to be more central than British identity and who feel uncertain about

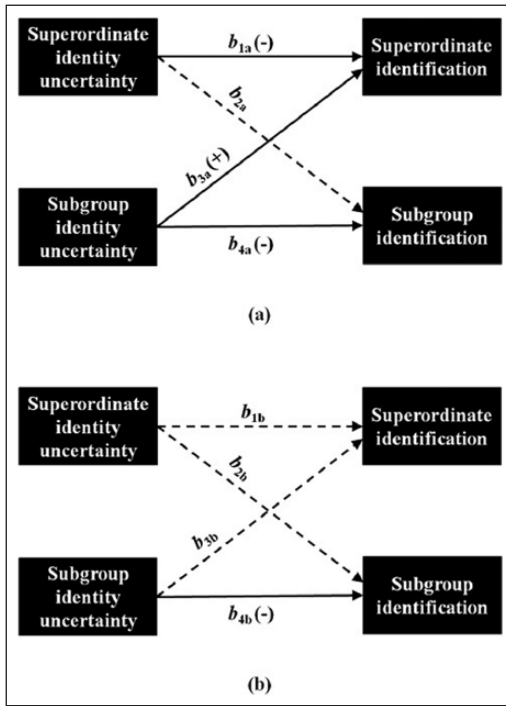


Figure 1. A hypothesized path model. (a) Relative centrality (subgroup identity > superordinate identity). (b) Relative centrality (superordinate identity > subgroup identity).
 Note. Dashed lines indicate path coefficients are not significant.

their central Scottish identity would strengthen British identification (H1: b_{3a} in Figure 1)—and thus weaken Scottish identification (b_{4a}). When they feel uncertain about their relatively less central British identity, they would simply weaken British identification (b_{1a}) and would not strengthen Scottish identification (b_{2a}).

In contrast, Scots who report British identity to be more central than Scottish identity and feel uncertain about their relatively more central British identity would not identify more strongly as Scottish (H2: b_{2b}) because the nested Scottish identity cannot effectively resolve uncertainty about the inclusive British identity. Thus, they would not be able to weaken their British identification (b_{1b}). When they feel uncertain about their relatively less central Scottish identity, they would simply weaken Scottish identification (b_{4b}) and would not be motivated to strengthen British identification (b_{3b}).

Given our core hypotheses, we expected that uncertainty regarding Scottish identity would weaken support for separation of Scotland from the UK via (a) strengthened British identification among those for whom Scottish identity is more central than British identity, or (b) weakened Scottish identification among those for whom Scottish identity is less central than British identity. We also predicted that uncertainty regarding British identity would strengthen separation via weakened British identification among those for whom Scottish identity is more central than British identity.

Method

Participants and Procedure

Participants were recruited online (e.g., Facebook groups related to Scottish independence), and were informed that the research concerned how Scottish identity influences their thoughts, feelings, and attitudes toward sociopolitical issues. One hundred fifteen self-identified (Sindic & Reicher, 2009) Scots (30 female, 85 male; 18 to 73 years of age around a mean of 42.25 years) completed an online questionnaire that included procedural instructions and measures of Scottish and British identity centrality, Scottish and British identity uncertainty, strength of Scottish and British identification, and measures of support for Scottish independence. A post hoc power analysis (GPower; Erdfelder, Faul, & Buchner, 1996) indicated that this sample size of $N = 115$ would yield 90% power to detect a medium size effect of $f^2 = .15$ (see Cohen, 1977) with three predictors and two mediators at an alpha of .05. Data were collected from March through October 2013; about a year before the September 18, 2014 Scottish independence referendum.

Measures

Relative identity centrality. British identity centrality was measured by two items (Cameron, 2004): “I feel that being British is an important part of my self-image” and “I often acknowledge the fact

that I am British" (1 = *strongly disagree*, 9 = *strongly agree*; $\alpha = .96$). Scottish identity centrality was measured in the same way, with two items, $\alpha = .87$. Relative centrality was computed by subtracting British identity centrality from Scottish identity centrality—scores ranged from -8.00 to 8.00 around a mean of 0.55 .

British and Scottish identity uncertainty. How uncertain participants felt about a collective definition of British was measured by asking them how much they agreed or disagreed with five statements adapted from established self-uncertainty measures (Sherman et al., 2009), the Self-Concept Clarity Scale (Campbell et al., 1996) and the Conviction and Correctness subscales of the Attitude Certainty scale (Fazio & Zanna, 1978; Petrocelli, Tormala, & Rucker, 2007): "I am uncertain about who we the British people are," "When I think about who we the British people are, I am unsure that the British identity that I know is correct," "When I think about who British people were in the past, I don't know what British people were really like," "When I think about who British people are, the image of British people in my mind is unclear," and "If I were asked to describe who British people are, my description might end up being ambiguous" (1 = *strongly disagree*, 9 = *strongly agree*; $\alpha = .92$).

How uncertain participants felt about a collective definition of Scottish was measured in the same way as British identity uncertainty, $\alpha = .90$. The presenting order of British and Scottish identity uncertainty items was counterbalanced.

British and Scottish identification. Strength of identification as British was measured with four items adapted from previous social identity research (e.g., Hogg & Hains, 1996; Hogg et al., 2007) that asked participants how much they agree or disagree with four statements: "I feel a sense of belonging to the UK," "I identify strongly with the UK," "I would stand up for the UK if it were criticized," and "I feel strong ties with other British people" (1 = *strongly disagree*, 9 = *strongly agree*; $\alpha = .96$).

Strength of identification as Scottish was measured in the same manner as British identification with four items, $\alpha = .94$. The presenting

order of British and Scottish identification items was randomized.

Separation. The extent to which participants supported Scottish separation was measured with four items adapted from Sindic and Reicher (2009): "Scotland should become an independent country, separate from the rest of the UK," "The goal of having a parliament in Scotland should be ultimately to achieve total independence in the long-term," "Scotland should remain part of the UK but without a separate parliament," and "I support the Union in Britain but not devolution or independence" (the union items were reverse coded; 1 = *strongly disagree*, 9 = *strongly agree*; $\alpha = .92$). We created a separation composite score by averaging two interdependence scores and two reverse-coded union scores.

Results

Descriptive and Demographic Analyses

Means, standard deviations, and intercorrelations of the six scales are presented in Table 1. The presenting order of identity uncertainty was not significantly correlated with separation ($r = .02$, $p = .809$). Examination of demographics revealed that age was not significantly correlated with separation ($r = .009$, $p = .920$), however, separation attitude differed significantly by gender, $F(1, 113) = 5.80$, $p = .049$, $\eta^2_p = .049$). Females ($M = 6.03$, $SD = 2.90$) were more supportive of Scottish separation from the UK than males ($M = 4.47$, $SD = 3.11$). When gender was included in the regression analyses, however, gender did not significantly predict separation and the result did not differ regardless of including or excluding gender. Therefore, we did not include gender in our final regression model.

British Identification

We conducted a hierarchical regression on British identification, with relative identity centrality (RIC), British identity uncertainty, and Scottish identity uncertainty as continuous predictors that were centered on their mean. The three-way

Table 1. Reliabilities, means, *SD*s, and zero-order correlations among composites.

Variable (items)	α	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Scottish identity uncertainty (5 items)	.90	3.82	2.14	–				
2. British identity uncertainty (5 items)	.92	3.89	2.34	.10	–			
3. Scottish identification (4 items)	.94	6.93	2.18	-.37***	.17	–		
4. British identification (4 items)	.96	6.19	2.92	.28**	-.58***	-.32***	–	
5. Separation (4 items)	.92	4.88	3.12	-.24**	.60***	.42***	-.86***	–
6. Relative centrality (4 items)		0.55	4.46	-.34***	.51***	.64***	-.84***	.80***

Note. † $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

interaction was not significant, $\beta = -.10$, $t(107) = -1.55$, $p = .124$ (Table 2). As expected, there were three significant two-way interactions; of relative identity centrality and Scottish identity uncertainty, $\beta = .20$, $t(106) = 3.09$, $p = .003$, of relative identity centrality and British identity uncertainty, $\beta = -.19$, $t(106) = -3.15$, $p = .002$, and of Scottish and British identity uncertainty $\beta = -.15$, $t(106) = -2.09$, $p = .039$.

Following simple slope analysis procedures (Cohen, Cohen, West, & Aiken, 2003; Dawson & Richter, 2006), we decomposed the two-way interactions using Hayes Process macro Model 3 (Hayes, 2013). First, the two-way interaction of relative identity centrality and Scottish identity uncertainty was decomposed. As hypothesized under H1, for those for whom Scottish identity was more central than British identity (high RIC; +1*SD*), Scottish identity uncertainty was positively associated with British identification, $b = 0.34$, $SE_b = 0.11$, $t(107) = 2.96$, $p = .004$ (H1: b_{3a} in Figure 1). For those for whom Scottish identity was less central than British identity (low RIC; -1*SD*), Scottish identity uncertainty did not affect British identification, $b = -0.12$, $SE_b = 0.14$, $t(107) = -0.88$, $p = .383$ (b_{3b} in Figure 1).

Next, the two-way interaction of relative identity centrality and British identity uncertainty was decomposed. As predicted, for those for whom British identity was more central than Scottish identity (low RIC), British identity uncertainty was not significantly associated with British identification, $b = -0.02$, $SE_b = 0.14$, $t(107) = -0.12$, $p = .90$ (b_{1b} in Figure 1). For those for whom British identity was less central than Scottish identity (high RIC), British identity uncertainty

was negatively associated with British identification, $b = -0.48$, $SE_b = 0.10$, $t(107) = -4.82$, $p < .001$ (b_{1a} in Figure 1).

Last, the two-way interaction of Scottish and British identity uncertainty was decomposed. At high Scottish identity uncertainty (+1*SD*), British identity uncertainty was negatively associated with British identification, $b = -0.43$, $SE_b = 0.11$, $t(107) = -4.11$, $p < .001$. At low Scottish identity uncertainty (-1*SD*), there was no significant association between British identity uncertainty and British identification, $b = -0.06$, $SE_b = 0.15$, $t(107) = -0.44$, $p = .66$. Put it differently, at high British identity uncertainty (+1*SD*), there was no significant association between Scottish identity uncertainty and British identity uncertainty, $b = -0.09$, $SE_b = 0.15$, $t(107) = -0.62$, $p = .540$. At low British identity uncertainty (-1*SD*), Scottish identity uncertainty was positively associated with British identification, $b = 0.31$, $SE_b = 0.12$, $t(107) = 2.59$, $p = .011$.

Scottish Identification

We conducted a hierarchical regression on Scottish identification, with relative identity centrality, British identity uncertainty, and Scottish identity uncertainty as continuous predictors. The main effect of relative identity centrality was significant, $\beta = .67$, $t(111) = 7.32$, $p < .001$. None of high-order interactions and main effects was significant.

To test our a priori hypotheses, however, we conducted the same simple slope analyses we did for British identification (Hayes, 2013, Process Model 3). First, we decomposed a two-way interaction of

Table 2. Hierarchical regression analyses predicting British identification, Scottish identification and separation with relative identity centrality (RIC), Scottish identity uncertainty (SIU), and British identity uncertainty (BIU).

	British identification		Scottish identification		Separation	
	β	t	β	t	β	t
Step 1						
Relative identity centrality	-.70***	-11.03	.67***	7.32	.65***	9.44
Scottish identity uncertainty	.06	1.09	-.12	-1.52	-.05	-0.89
British identity uncertainty	-.22**	-3.72	-.16†	-1.80	.28***	4.26
Step 2						
RIC x SIU	.20**	3.09	.07	0.73	-.04	-0.60
RIC x BIU	-.19**	-3.15	-.06	-0.61	.07	0.98
SIU x BIU	-.15*	-2.09	.04	0.36	.01	0.18
Step 3						
RIC x SIU x BIU	-.10	-1.55	-.13	-1.28	.20**	2.71
Cumulative R^2	.77***		.47***		.72***	
Adjusted R^2	.76***		.43***		.70***	

Note. $N = 115$. All three predictors (relative identity centrality, Scottish identity uncertainty, and British identity uncertainty) were centered.

† $p < .1$. * $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed).

relative identity centrality and British identity uncertainty. As predicted under H2, for those for whom British identity was more central than Scottish identity (low RIC), British identity uncertainty was not significantly associated with Scottish identification $b = -0.17$, $SE_b = 0.16$, $t(107) = -1.05$, $p = .298$ (H2: b_{2b} in Figure 1). For those for whom British identity was less central than Scottish identity (high RIC), British identity uncertainty was negatively associated with Scottish identification, $b = -0.25$, $SE_b = 0.11$, $t(107) = -2.16$, $p = .033$ (b_{2a} in Figure 1).

Next, we decomposed a two-way interaction of relative identity centrality and Scottish identity uncertainty. For both: those for whom Scottish identity is more and those for whom is less central than British identity (high and low RIC), Scottish identity uncertainty was not significantly associated with Scottish identification, $b = 0.02$, $SE_b = 0.13$, $t(107) = 0.15$, $p = .879$; $b = -0.08$, $SE_b = 0.16$, $t(107) = -0.51$, $p = .611$, respectively (b_{4a} and b_{4b} in Figure 1).

Separation

We performed the same hierarchical regression on separation. The three-way interaction, which

was significant, $\beta = .20$, $t(107) = 2.71$, $p = .008$ (Table 2), was decomposed at high and low British identity uncertainty (Cohen et al., 2003).

At the high level of British identity uncertainty, the two-way interaction effect was not significant, $b = 0.05$, $SE_b = 0.03$, $t(107) = 1.55$, $p = .123$. At the low level of British identity uncertainty, the two-way interaction effect was significant, $b = -0.06$, $SE_b = 0.03$, $t(107) = -2.16$, $p = .033$. Thus, under low British identity uncertainty, we further decomposed to two simple main effects of Scottish identity uncertainty at high and low relative identity centrality. For those for whom Scottish identity was more central than British identity (high RIC), Scottish identity uncertainty was negatively associated with separation, $b = -0.54$, $SE_b = 0.24$, $t(107) = -2.26$, $p = .026$. For those for whom Scottish identity was less central than British identity (low RIC), Scottish identity uncertainty was not significantly associated with separation, $b = -0.02$, $SE_b = 0.11$, $t(107) = -0.21$, $p = .837$.

Moderated Mediation

Given our finding of the significant association between Scottish identity uncertainty and British

identification at high relative identity centrality (H1: b_{3d}), we tested whether British identification is further associated with separation. In doing so, we used Hayes Process Model 12 (Hayes, 2013) with British and Scottish identification as mediators. The conditional indirect effect (Scottish identity uncertainty \rightarrow British identification \rightarrow Separation at high RIC) was significant, $b = -0.19$, $SE_b = 0.08$, 95% CI $[-0.36, -0.06]$. Such that, for those for whom Scottish identity was more central than British identity, when they felt uncertain about Scottish identity, they strengthened British identification which decreased their support for Scottish independence. At low relative identity centrality, the indirect effect of Scottish identity uncertainty on separation via British identification was not significant. Scottish identification did not mediate the association between Scottish identity uncertainty and separation.

Next, given the significant association between British identity uncertainty and British identification at high relative identity centrality (H1: b_{1d}), we estimated the conditional indirect effect (British identity uncertainty \rightarrow British identification \rightarrow Separation at high RIC). This conditional indirect effect was significant, $b = 0.28$, $SE_b = 0.08$, 95% CI $[0.15, 0.47]$. Such that, for those for whom British identity was less central than Scottish identity, when they felt uncertain about their not so central British identity, they weakened British identification and the decreased British identification increased their support for Scotland independence. At low relative identity centrality, the indirect effect of British identity uncertainty on separation via British identification was not significant.

All conditional indirect effects of British identity uncertainty on separation via Scottish identification were not significant, and the conditional indirect effect of British identity uncertainty on separation via Scottish identification at low RIC was not significant.

SEM Analyses to Test for Reverse-Causality

Reverse-causality is a potential problem in cross-sectional, correlational studies. Although it could be dealt with by conducting an experiment, this

would have been inadvisable because in the face of the referendum, many Scots formed strong attitudes toward Scottish independence and their Scottish identity. If they were assigned to a condition that did not match their true identity and attitude, the condition might be viewed as an identity threat—this would elevate subject-attrition and thus violate random assignment, and those who did not drop out of the study might respond against their assigned condition by sabotaging the study. Our data would be unreliable.

An additional, a perhaps larger problem with conducting a subsequent experiment is that the sociohistorical context of our study has changed dramatically with the passage of time since our data were collected. The referendum has been-and-gone, and the UK (which still includes Scotland) is now faced with new issues to do with its EU membership. Some media predict that the English-led Brexit could trigger another referendum in Scotland. If that happened, the referendum agenda would be different—a vote not just on leaving the UK but also on joining the EU. European identity in addition to British and Scottish identity brings another layer of category hierarchy. This complicates the salience and nature of Scottish independence from the UK.

However, there is another way to address the reverse-causality issue—a SEM analysis. A SEM model can test for reverse-causation and test for effects in one direction versus the other (Keith, 2015, p. 420). This test is well established and widely used in many correlational studies (e.g., Sani & Todman, 2002, p. 1651). We compared our hypothesized model to an alternative model where identification precedes social identity uncertainty at both superordinate and subgroup levels (Keith, 2015).

One alternative explanation of the relationship between social identity uncertainty and identification is that if one does not identify with a social group, one's social identity uncertainty might be high because the group prototype was not internalized to begin with. The alternative model retains the same level of complexity as our model but only differs in causal directions (MacCallum & Austin, 2000).

By comparing these two theoretically meaningful models with opposite causal direction, this test can minimize researchers' confirmation bias (Jöreskog & Sörbom, 1996). Whereas the alternative model had a poor fit, $\chi^2(7) = 122.71$, $p < .001$, $\chi^2/df = 17.53$, IFI = .88, CFI = .88, RMSEA = .381, and AIC = 218.81, our hypothesized model had a good fit, $\chi^2(7) = 17.14$, $p = .016$, $\chi^2/df = 2.449$, IFI = .99, CFI = .99, RMSEA = .113, and AIC = 113.14. This result statistically validated the hypothesized causal relations.

Discussion

Uncertainty-identity theory describes how social identity related uncertainty motivates people to identify with groups, particularly highly entitative groups, and how this process can affect influence and leadership processes and sometimes underpin group extremism (e.g., Hogg, 2007, 2012, 2014). However, most of the research in this literature focuses on uncertainty-identification dynamics in a single-group context, when in reality people have many social identities that are related to one another in different ways.

The present study focuses on two contextual factors—hierarchical inclusiveness and subjective importance and how they interplay with uncertainty to affect group identification at a superordinate and subgroup level. We predicted that subgroup identity uncertainty, when it is self-conceptually important, can be resolved by strengthening superordinate identification whereas superordinate identity uncertainty, even when it is subjectively important, cannot be resolved by subgroup identification. We also predicted that uncertainty about a group that is not so important or central to self-definition can be resolved simply by dis-identifying from that group.

We tested these ideas in Scotland, where Scottish identity is nested within British identity and Scotland was preparing for the 2014 referendum on whether to become independent from the UK. Our predictions were confirmed. Among those for whom Scottish identity was more central to self-definition, Scottish identity uncertainty was associated with strengthened

British identification, as predicted under H1, and weakened Scottish identification. Then, strengthened British identification was further associated with decreased support for Scottish independence. Among those for whom British identity was more central to their self-definition, British identity uncertainty was not significantly associated with strengthened Scottish identification, as predicted under H2, and with weakened British identification.

Also, Scottish identity uncertainty among those for whom Scottish identity was not so central was associated with weakened Scottish identification. This was further associated with decreased support for Scottish independence. British identity uncertainty among those for whom British identity was not so central was associated with weakened British identification, which was further associated with increased support for Scottish independence from Britain.

This uncertainty-identification process among people for whom subgroup identity is more central replicates findings from a university student sample in South Korea, where South Korean is a national subgroup identity that is nested within superordinate Korean ethnic identity (Jung et al., 2016). Given that for most South Koreans South Korean identity is more central than ethnic Korean identity (Kang, 2011), we found robust evidence on relationship between identity uncertainty and group identification across two nested identity contexts. Also, the findings from the present study and Jung et al. (2016) converge to reveal that subgroup identity uncertainty strengthened superordinate identification, however, superordinate identity uncertainty did not significantly strengthen subgroup identification regardless of identity content (e.g., ethnicity, state). This converging evidence suggests that hierarchical inclusiveness is an important factor to understand uncertainty-identification dynamic.

The present study builds upon and goes beyond this earlier study. The key differences are: (a) we included hierarchical inclusiveness and relative identity centrality in our analysis to explain the uncertainty-identification asymmetry in nested groups found in Jung et al. (2016), and (b)

we used a more representative sample drawn from outside a university setting.

The present study provides additional insight to the identity threat literature (Major & O'Brien, 2005). According to Blascovich and colleagues a potentially identity-threatening situation is appraised in terms of demands posed by a stressor (e.g., self-relevance, uncertainty) and resources to cope with the demands. Identity *threat* exists when the demands exceed the resources, identity *challenge*, when resources exceed the demands (Blascovich & Tomaka, 1996). To interpret the current study from this threat–challenge framework, superordinate identity can be a resource to cope with subgroup identity uncertainty whereas subgroup identity is not an effective resource to cope with superordinate identity uncertainty, in both the contexts of the UK–Scotland relation and South Korea (Jung et al., 2016). This interpretation suggests a future direction for investigating mechanisms for coping with superordinate identity uncertainty.

Uncertainty identity theory suggests some possible coping mechanisms for superordinate identity uncertainty—people can (a) work to make the UK more entitative (e.g., Sherman et al., 2009), (b) strengthen identification with a third group in their identity repertoire (e.g., gender, religion), or (c) join a highly entitative new group and exit the current group. It is also possible that superordinate identity uncertainty can be compensated for by subgroup identity. If people cognitively, even if not actually, separate their subgroup from a superordinate group so the subgroup is perceived to no longer be nested within but separate from the superordinate group, then people may strengthen subgroup identification (e.g., Sani, 2005).

There are some possible limitations to the present study. First, there is the issue of causality; social identity related uncertainty was measured, not manipulated. Although our SEM test for reverse-causation reduced the possibility of an alternative causal explanation, to absolutely confirm the causal relationship between identity uncertainty and group identification, experiments would need to be conducted in which identity

uncertainty is manipulated. Second, the sample size is relatively modest. Although our hypotheses were upheld and our findings replicated prior research (Jung et al., 2016), conceptual replication with larger samples would increase confidence in the robustness of our findings.

Uncertainty identity theory conceptualizes self-uncertainty as a key motivation for group identification, in which identification reduces self-uncertainty (Hogg, 2012, p. 68). However, most uncertainty-identity research focuses on a single group and identity divorced from the wider context of relations among social identities. The research reported in the present article examines uncertainty-identity processes in this wider group context, where a subgroup is nested within a superordinate group, to demonstrate intragroup structural change processes (superordinate integration or subgroup separation) triggered by identity uncertainty.

This research also speaks to the possibility of an uncertainty–identification dynamics underlying the processes of intergroup merger and schism. Past research on intergroup merger showed that perceived identity continuity leads to higher level of postmerger identification (Giessner, Ullrich, & van Dick, 2012). Citing Hogg's uncertainty identity theory (e.g., Hogg, 2000, 2007), Giessner and colleagues suggest that reduced identity uncertainty may be a key mediator. Similarly, it has been shown that changes in superordinate identity lead to subgroup schism (Sani, 2005), and recently superordinate identity uncertainty has been proposed as a key mediator (Hogg & Wagoner, in press). The present study provides direct empirical evidence that superordinate identity uncertainty can sponsor subgroup separation by leading people whose subgroup identity is self-conceptual central, to weaken their identification with the superordinate group.

One translational implication of this is that collectives that are concerned about retaining or losing subgroups should pay close attention to the prevailing identity-uncertainty narrative. Depending on relative centrality, subgroup identity uncertainty can sway public opinion in opposite directions. Subgroup identity uncertainty is a

recipe for separation among those for whom subgroup identity is less central than superordinate identity; but, counterintuitively, a recipe for integration among those for whom subgroup identity is more central.

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