Collective self-continuity, group identification and in-group defense

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HIGHLIGHTS

- Collective self-continuity provides a unique basis for national identity.
- Existential threats to group identity elevate collective self-continuity.
- Feelings of collective self-continuity enhance in-group defense.

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ABSTRACT

The present research tested the proposition that the sense of self-continuity that people derive from their group membership provides a basis for group identification and drives in-group defensive reactions in the context of identity threat. This proposition was examined in three studies, using the context of national identity. Study 1 found that collective self-continuity uniquely and strongly predicted national identification, when controlling for other identity motives. Studies 2 and 3 demonstrated that existential threats to national identity particularly increase a sense of collective self-continuity, compared to other identity motives, and that this enhanced sense of collective selfcontinuity results in stronger in-group defense in the form of opposition towards out-groups (Study 2) and social developments (Study 3) that may undermine group identity, as well as in stronger ingroup protectionism (Study 3). Taken together, these findings indicate that collective selfcontinuity is an important motive for group identification and in-group defense in the context of identity threat.

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Introduction

One of the central features of human identity involves a subjective sense of continued existence over time and space. Without a feeling that there is a link between past, present and future it is impossible to have a sense of personal identity. Promoting self-continuity is a core function of autobiographical memory (Bluck & Alea, 2008) and a weakened sense of self-continuity is associated with impaired psychological well-being (Jetten, Haslam, Pugliese, Tonks, & Haslam, 2010; Lampinen, Odegard, & Leding, 2004). These effects are not limited to personal continuity, but have also been observed at the collective identity level. People tend to attribute temporal endurance to the social groups to which they belong (Condor, 1996; Sani, Bowe, & Herrera, 2008a,b; Sani et al., 2007), and the perception of group continuity provides existential security (e.g., Sani, Herrera, & Bowe, 2009) and plays a role in social well-being (e.g., Sani et al., 2008a).

While collective continuity has been a prominent topic of interest for historians, anthropologists and sociologists (Hobsbawm & Ranger, 1983; Lowenthal, 1985; Smith, 1998; Whitley, 1995), it started to receive attention in social psychology more recently (e.g., Jetten & Hutchison, 2011; Jetten & Wohl, 2012; Sani, 2008). For instance, studies have shown that the perception of in-groups as historically and culturally enduring is associated with higher levels of group identification (Sani et al., 2007, 2008b). Moreover, it has been demonstrated that people tend to oppose social developments and out-groups that undermine group continuity (Jetten & Hutchison, 2011; Jetten & Wohl, 2012; Smeekes & Verkuyten, in press). It has been argued that these relationships are driven by the psychological need for self-continuity (Greenberg, Solomon, & Arndt, 2008; Sani et al., 2008b; Vignoles, 2011); that is, people identify with groups and tend to defend its beliefs and values, because this bolsters their sense of self-continuity. To date these propositions have not been empirically tested.

The present research investigates whether the sense of self-continuity that people derive from their group membership (i.e., collective self-continuity) provides a basis for group identification and underlies the desire to defend the in-group in the context of identity threat. Social psychologists have long been interested in motivations underlying identification with social groups and how these affect group processes. For example, it has been argued that group processes are

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driven by motivations for self-esteem (Social identity theory; Tajfel & Turner, 1979), distinctiveness and belonging (Optimal distinctiveness theory; Brewer, 1991), and subjective meaning (Uncertainty reduction theory; Hogg, 2000). Although researchers have pointed at the importance of self-continuity (in comparison to other motives) for identity construction (Vignoles, 2011; Vignoles, Regalia, Manzi, Golledge, & Scabini, 2006), its significance for group dynamics has remained largely unexplored.

In order to show that a sense of collective self-continuity is important for group dynamics we first examined the uniqueness and relative importance of self-continuity for in-group identification, in comparison to other identity motives. A second way to demonstrate the importance of self-continuity for group identity is to test whether existential in-group threat instigates a sense of collective self-continuity. If self-continuity is an important source of group identity then people should recruit feelings of collective self-continuity when the existence of the in-group is endangered. Furthermore, if people indeed recruit collective self-continuity when the existence of the in-group is threatened, this, in turn, raises the question whether this heightened sense of collective self-continuity strengthens the desire to defend the in-group. People often respond defensively towards social developments and out-groups that threaten the maintenance of their group identity (e.g., Jetten & Hutchison, 2011; Jetten & Wohl, 2012), and this may be driven by their increased sense of collective self-continuity.

Although many groups can provide a sense of self-continuity this is particularly likely for ethnic and national groups (Reicher & Hopkins, 2001). These groups are mainly defined and understood as communities that live together through time and have a shared culture and identity that is passed on from generation to generation (e.g., Anderson, 1983; Bhabha, 1990). Furthermore, in contemporary Western Europe, social developments, such as immigration and European integration, are often portrayed as undermining the continuation of national identity. We therefore use the context of the nation to examine our predictions. We present three studies, conducted in the Netherlands, with the more general aim of demonstrating the importance of collective self-continuity for group dynamics.

Self-continuity and group identification

The functional approach to social identification proposes that group identification is guided by several general principles that have motivational or need-like properties (e.g., Breakwell, 1986; Brewer, 1991; Hogg, 2000; Riketta, 2008; Vignoles et al., 2006). This approach postulates that people identify with groups to the extent that these groups fulfill their identity needs. However, the literature on these needs is fragmented and different motivations have been proposed by theorists working from different perspectives (for an overview see Vignoles, 2011). A recent attempt to integrate these perspectives into a unified model of identity motives comes from Vignoles (2011) Motivated Identity Construction Theory. This theory argues that any form of social identity must satisfy certain motivational principles in order to be adaptive and useful. These identity motives guide identity construction and influence psychological well-being. Specifically, the theory proposes that people are motivated to adopt and construct social identities that allow them to think positively about themselves (*self-esteem motive*); give them the feeling that they belong to others (*belonging motive*); provide them with a sense of continuity over time (*continuity motive*); make them feel competent and capable of influencing their environment (*efficacy motive*); make them distinguishable from other people (*distinctiveness motive*); and give them a sense that their life is meaningful (*meaning motive*).

In a series of empirical studies, Vignoles et al. (2006) observed that particularly the motives of self-esteem, continuity, distinctiveness and meaning made a substantial and unique contribution to the subjective importance of collective identities. However, research suggests that the relative importance of these identity motives for group identification depends on the specific social category concerned (e.g., Capozza, Brown, Aharpour, & Falvo, 2006; Easterbrook & Vignoles, 2012). In the present research we focus on the relative importance of self-continuity, next to other identity motives, for identification with the nation. Nations play an important role in the lives of individuals, and because national identities are rooted in historical and cultural heritage it is likely that self-continuity forms an important reason for why people feel attached to their national group membership.

There is a large body of research within clinical psychology showing that disruptions of self-continuity are a source of psychological discomfort and distress (e.g., Jetten et al., 2010). People are therefore motivated to achieve and maintain a perception of the personal self as being temporally enduring. As part of people's sense of self is derived from membership in social groups, these groups can also provide them with a sense of self-continuity (Sani, 2008). That is, group membership can give people the feeling that the part of the self that is defined by this membership will continue after their personal self perishes (Sani et al., 2007, 2008a; Reicher, 2008). In line with this idea, terror management theorists (Pyszczynski, Greenberg, & Solomon, 2000) have proposed that people seek identification with groups in order to maintain a sense of symbolic immortality — a sense that one is part of entities larger and longer lasting than the self. In other words, an important reason why people are likely to invest in social groups is because this affords them a feeling of self-transcendence through time and space (i.e., collective self-continuity) and thus a sense of existential security (Castano, Yzerbyt, & Paladino, 2004).

When the continued existence of the in-group is threatened

Functional approaches to group identification have proposed that situations that elicit threats to identity motives will lead to intensified strivings to satisfy them (Breakwell, 1986; Vignoles, 2011). The sense of self-continuity that people derive from their group membership is not only based on a feeling of collective roots and ancestry, but also on a faith that "we" (and hence "I") will continue to be in the future (Condor, 1996). Therefore, threats to the continued existence of the in-group are likely to result in an increased motivation to maintain a sense of collective self-continuity (Jetten & Hutchison, 2011). Moreover, it has been proposed that in the context of social identity threat the need for self-continuity is a driving force for enhanced in-group protectionism and out-group rejection (Breakwell, 1986; Vignoles, 2011). Experimental evidence shows that when threats to personal continuity are made salient people report more intergroup bias (McGregor, Zanna, Holmes, & Spencer, 2001), and tend to more strongly affirm their national culture (Shepherd, Kay, Landau, & Keefer, 2011, Study 1). These findings suggest that an elevated sense of collective self-continuity may be one mechanism through which social identity threat increases in-group protectionism and out-group rejection.

The concept of identity threat is central in intergroup theorizing and research. Different forms of threat have been identified and different responses in coping with identity threats have been examined (see Breakwell, 1986; Branscombe, Ellemers, Spears, & Doosje, 1999; Stephan & Stephan, 2000). However, this body of research has neglected existential threats that emanate from the potential loss or disappearance of group continuity (but see Wohl, Branscombe, & Reysen, 2010). The consequences of existential threats at the individual level have been researched in existential psychology, mainly from a terror management perspective. Terror management theory (TMT; Solomon, Greenberg, & Pyszczynski, 1991) proposes that identification with social groups and hostility towards dissenting others are mechanisms to cope with the existential anxiety that comes from the awareness of the inevitability of personal death (i.e., mortality salience). These effects, often referred to as worldview defenses in the terror management literature, have been observed in various studies. Much of the work in this domain

proceeds from the hypothesis that if psychological structures buffer the consequences of awareness of personal death, then experimentally heightening mortality salience will result in elevated levels of investment in these buffering structures.

It has been postulated that collective self-continuity also serves such a buffering function (Sani et al., 2009). That is, it is proposed that mortality salience strengthens the sense of permanence and transcendence that is afforded by group membership (i.e., symbolic immortality), which subsequently enhances the desire to engage in worldview defenses. Although groups are not mortal in the same way as individuals they can also cease to exist in the future. Therefore, the processes outlined by TMT may work in a similar way for existential threats at the group level. That is, people can be expected to report stronger feelings of collective self-continuity when facing threats to the continued existence of the in-group, and this is subsequently likely to strengthen their need to defend group identity. Previous studies have not examined whether existential group threats instigate feelings of collective self-continuity, nor have they empirically tested whether such strengthened feelings of collective self-continuity increase the need to defend the in-group. We propose that a threat to the continued existence of national identity will elevate a sense of national self-continuity (controlling for other national identity motives), which subsequently strengthens one's desire to defend national identity.

The present research

We examined the proposition that the feeling of self-continuity that people derive from their group membership provides an important basis of group identification and drives in-group defenses in the context of existential group threats. We tested this proposition in relation to national identity and by examining different convergent hypotheses. In Study 1 (survey), we examined in three different samples whether self-continuity can be empirically distinguished from other identity motives that have been shown to predict group identification (Vignoles et al., 2006), and whether feelings of self-continuity uniquely predict national identification when taking these other identity motives into account.

Subsequently, in Studies 2 and 3, we reasoned that if self-continuity is an important source of national identity, threats to the future existence of the nation will elevate a sense of national self-continuity (controlling for other national identity motives). This increased sense of national self-continuity is subsequently expected to strengthen the need to defend the national in-group. Previous studies have shown that there are different ways in which group members may attempt to defend their in-group identity. One way is to minimize the influence and presence of out-groups (e.g., Jetten & Wohl, 2012) and social developments (e.g., Jetten & Hutchison, 2011) that potentially undermine in-group identity. Another way is to maximize the protection of in-group culture and identity (Wohl et al., 2010). Thus, the present research examined group defenses in the form of opposition towards out-groups (Muslim immigrants; Study 2) and social developments (European integration; Study 3) that may undermine the national in-group, and in the form of protectionism of national culture and identity (Study 3). Studies 2 and 3 used an experimental design.

Study 1

Our first study was designed to evaluate the uniqueness and relevance of collective self-continuity, compared to other identity motives, for national identification. Next to self-continuity, we focused on belonging, self-esteem, distinctiveness and efficacy (Vignoles et al., 2006). Participants completed a questionnaire with separate items for each identity motive and a separate scale for national identification. We tested our predictions among three different samples, in order to demonstrate the validity and robustness of the findings.

Method

Participants and procedure

A paper and pencil survey was carried out among three different samples. Study 1A was conducted among 172 native Dutch adolescents and young adults (53.8% female). They participated on a voluntary basis and the anonymous questionnaires were administered within a classroom setting. In Study 1B a convenience sample of 166 adults living in Utrecht was recruited by distributing questionnaires among adult family members of pupils from a high-school. In this sample we only selected native Dutch people (i.e., those who have a Dutch passport and have Dutch parents). This resulted in a sample of 102 participants (54.9% female). In Study 1C the sample consisted of 113 Utrecht University students who were invited to participate in a study on Dutch society. We again only selected the ones who were native Dutch, which resulted in a total of 89 participants (64% female). The ages ranged between 13 and 27 in Study 1A ($M = 17.41$, $SD = 3.31$), between 19 and 69 in Study 1B ($M = 43.53$, $SD = 12.09$), and between 18 and 33 in Study 1C ($M = 23.39$, $SD = 2.93$).

Measures

All measures were rated on a 1 (*strongly disagree*) to 7 (*strongly agree*) scale.

Identity motives. In Studies 1A and 1B each identity motive was assessed by a combination of two items, which were based on previous research (see Easterbrook & Vignoles, 2012; Vignoles et al., 2006). For the continuity motive the items were: "Being Dutch gives me a sense of continuity — between past, present, and future", and "Being Dutch gives me the feeling that I am part of a long shared history" (Study 1A, $r = .64$, $p < .001$; Study 1B, $r = .74$, $p < .001$). For the belonging motive the items were: "Being Dutch gives me the feeling that I am close to other people", and "Being Dutch gives me the feeling that I am at home with other people" (Study 1A, $r = .75$, $p < .001$; Study 1B, $r = .70$, $p < .001$). For the self-esteem motive the items were: "Being Dutch gives me a positive feeling about myself", and "The fact that I am Dutch gives me a proud feeling" (Study 1A, $r = .72$, $p < .001$; Study 1B, $r = .65$, $p < .001$). For the efficacy motive the items were: "My Dutch identity provides me with confidence to achieve my goals", and "Being Dutch gives me a feeling of certainty that I am capable of doing the things I want to do" (Study 1A, $r = .78$, $p < .001$; Study 1B, $r = .75$, $p < .001$). Finally, the items for the distinctiveness motive were: "Being Dutch gives me the feeling that I am different from other people in the world", and "Being Dutch gives me the feeling that I am special" (Study 1A, $r = .60$, $p < .001$; Study 1B, $r = .66$, $p < .001$). For each motive, the two items were combined into a scale.

In Study 1C we only assessed the continuity ($\alpha = .74$), belonging ($\alpha = .88$), and self-esteem ($\alpha = .72$) motives. In this Study, each of these identity motives was measured with the same items as in Studies 1A and 1B plus one additional item. The additional item for the continuity motive was "Being Dutch gives me the feeling that I am part of a shared future". For the self-esteem motive this additional item was: "Being Dutch gives me a satisfactory feeling", and for belonging this item was: "Being Dutch gives me the feeling that I am connected with other people."

National identification. Three items were used to assess how central national identity was for participants (Study 1A, $\alpha = .84$; Study 1B, $\alpha = .86$; Study 1C, $\alpha = .72$). The items were: "I identify with the Netherlands", "My Dutch background is an important part of my identity", and "Being Dutch is a very important part of how I see myself".

Results

Confirmatory factor analyses

We performed confirmatory factor analyses (CFA) using AMOS 18.0 software to determine whether the items assessing the national identity motives composed different factors. In Study 1A and 1B, we compared the fit of a five-factor model with the fit of a three-, four-, and one-factor model. In the four-factor model the items of continuity and belonging loaded on one component, and in the three-factor model the motives of self-esteem and distinctiveness were also collapsed (next to continuity and belonging). The reason is that these motives showed the highest correlations in both samples (see Table 1 for means, standard deviations and intercorrelations for all measures in the different samples). In Study 1C, we compared the fit of a three-factor (continuity, self-esteem, and belonging) to a two-factor (continuity and belonging), and a one-factor model. Items were permitted to load only on the motive they were expected to indicate and no item errors were allowed to correlate. The results of the analyses are shown in Table 2.

In Studies 1A and 1B, the five-factor model fitted the data significantly better than any of the alternative models. Moreover, in Study 1C the three-factor model fitted the data significantly better than the two- and one-factor models.[1] The z-statistics obtained for all the factor loadings were statistically significant (p_s < .001) and the standardized factor loadings were between .70 and .89 in Study 1A, between .79 and .95 in Study 1B, and between .44 and .98 in Study 1C. Taken together, these results show that, although significantly correlated (see Table 1), the identity motives were empirically distinct in the different samples.[2]

Regression analyses

We subsequently regressed national identification on the identity motives. The results for the three different samples are shown in Table 3. The results of Studies 1A and 1B show that when all five identity motives were entered in the equation simultaneously, only continuity, belonging, and self-esteem were unique significant predictors of national identification, whereas distinctiveness and efficacy had no significant effects. In Study 1C collective self-continuity, belonging and self-esteem all had a unique and significant effect on national identification. In all samples the identity motives explained a significant and high proportion of the variance in national identification (see Table 3). These findings indicate that feelings of self-continuity, self-esteem and belonging are important motivational principles of national identity and that they are empirically distinct. In line with our expectation, it was found among three different samples that feelings of collective self-continuity uniquely predicted national identification when controlling for other identity motives.

Study 2

The results of Study 1 provide support for our prediction that self-continuity forms an important and unique basis for national identification. As a next step, we examined the relationship between collective self-continuity and attachment to the in-group from the perspective of identity threat. We reasoned that if self-continuity is an important source of national identity, feelings of collective self-continuity should be strengthened when the existence of the national in-group is threatened. Furthermore, we proposed that these heightened feelings of collective self-continuity would enhance the need to defend group identity, and that one way in which group members may attempt to do this is by minimizing the presence and influence of out-groups. Thus, in Study 2 we examined in-group defense in the form of opposition towards a relevant out-group.

We conducted Study 2 within the context of strong negative sentiments towards Muslim immigrants in the Netherlands (Sniderman & Hagendoorn, 2007). This context is relevant as Muslim immigrants

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[1] To compare models we used the following rule of thumb: an AIC difference of <2 indicates no meaningful discrepancy between models; a difference between 4 and 7 indicates considerable evidence that the model with the lower AIC is better, and a difference of >10 indicates substantial support for the model with the lower AIC (Burnham & Anderson, 2002).

[2] For Studies 1A and 1B, we also compared the five-factor model to all possible four-factor models. The results were in favor of the five-factor model (i.e., had a better model fit than any of the alternative models). Results are available on request. For Study 1C, we also compared the three factor model to two-factor models in which continuity was combined with self-esteem, and belonging with self-esteem. This revealed that the proposed three-factor model also fit the data better than a two-factor model in which continuity and self-esteem were combined, $\chi^2(19) = 73.32$, $p < .001$, $\Delta\chi^2(2) = 56.50$, $p < .001$, and better than a two-factor model in which belonging and self-esteem were combined, $\chi^2(19) = 66.34$, $p < .001$, $\Delta\chi^2(2) = 49.52$, $p < .001$.

Table 1
Means, standard deviations and bivariate intercorrelations for all measures, Study 1.

	M	SD	1	2	3	4	5	6
Study 1A								
1. Continuity motive	3.68	1.41	–	.57***	.57***	.46***	.52***	.58***
2. Belonging motive	4.24	1.43			.55***	.39***	.46***	.64***
3. Self-esteem motive	4.19	1.50			–	.71***	.61***	.58***
4. Distinctiveness motive	3.40	1.60				–	.47***	.39***
5. Efficacy motive	4.91	1.29					–	.38***
6. In-group identification	5.05	1.09						–
Study 1B								
1. Continuity motive	4.15	1.44	–	.24*	.63***	.21*	.22*	.55***
2. Belonging motive	4.20	1.38		–	.51***	.51***	.54***	.66***
3. Self-esteem motive	3.89	1.47			–	.66***	.61***	.42***
4. Distinctiveness motive	3.24	1.53				–	.67***	.24*
5. Efficacy motive	3.62	1.62					–	.31**
6. In-group identification	5.22	1.31						–
Study 1C								
1. Continuity motive	3.93	1.31	–	.58***	.39***	.56***		
2. Belonging motive	4.36	1.23		–	.47***	.59***		
3. Self-esteem motive	4.87	.90			–	.70***		
4. In-group identification	5.05	1.01				–		

Note.
*** p < .001.
** p < .01.
* p < .05.

Table 2
Fit indices of competing measurement models of national identity motives, Study 1.

	χ^2	df	p	$\Delta\chi^2$	CFI	RMSEA	AIC
Study 1A							
Identity motives							
5-factors	50.55	25	.002		.98	.08	99.46
4-factors	101.25	29	<.001	50.7***	.93	.12	153.25
3-factors	110.13	32	<.001	54.58***	.92	.12	156.13
1-factor	429.24	36	<.001	378.69***	.60	.25	467.24
Study 1B							
Identity motives							
5-factors	39.46	25	.033		.99	.04	106.34
4-factors	86.42	29	<.001	46.96***	.90	.14	138.42
3-factors	95.43	32	<.001	55.97***	.89	.14	141.43
1-factor	214.54	35	<.001	175.08***	.69	.23	254.54
Study 1C							
Identity motives							
3-factors	40.91	24	.017		.95	.09	82.91
2-factors	72.47	26	<.001	31.56***	.87	.14	110.47
1-factor	119.52	27	<.001	78.61***	.74	.20	155.52

Note. CFI: comparative fit index; RMSEA: root-mean-square error of approximation; AIC: Akaike information criterion.
*** p < .001

Table 3
Standardized regression coefficients (with standard errors in brackets) from multiple regression analyses with national identification as the dependent variable and identity motives as predictors, split by sample, Study 1.

	Study 1A	Study 1B	Study 1C
Identity motives			
Continuity	.26*** (.07)	.21* (.09)	.24** (.08)
Belonging	.38*** (.06)	.51*** (.11)	.21* (.07)
Self-esteem	.35*** (.08)	.28** (.09)	.50*** (.09)
Distinctiveness	−.08 (.06)	−.21 (.10)	
Efficacy	−.11 (06)	−.04 (.09)	
R^2	.52***	.54***	.61***

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

are often portrayed and perceived as a threat to the continuation of national identity (Gijsberts & Lubbers, 2009; Smeekes, Verkuyten, & Poppe, 2011; Verkuyten, 2013). Therefore, the increasing presence and visibility of Islam in public life often evokes opposition among the native Dutch population (Smeekes & Verkuyten, in press). Hence, in Study 2 we assessed whether the heightened feelings of collective self-continuity that result from the salience of existential threats to national identity cause native Dutch participants to express more opposition to rights of Muslims to publicly confirm and express their identity (e.g., wearing a headscarf, building Mosques).

We manipulated existential national threat by asking participants to write and think about how they would feel when their country would no longer exist and hence no longer have a shared history and future. We compared this to a control condition in which no writing and imagination tasks were given. We hypothesized that existential threat would result in elevated feelings of collective self-continuity (controlling for belonging and self-esteem), and that this would subsequently induce opposition towards Muslim expressive rights.

Method

Participants, design and procedure

Participants were 103 Dutch adolescents from a high school in Utrecht who participated for course credit. We only selected the ones who were native Dutch, which resulted in a total of 89 participants (60.2% female). They participated on a voluntary basis and all questionnaires were completed within a classroom setting. The ages ranged between 15 and 17 ($M = 15.75$, $SD = .68$). All participants followed a pre-university track. Participants were randomly assigned to one of two conditions (existential threat vs. control).

Existential threat manipulation

Participants in the existential threat condition first read the following:

> For most people family is really important. Family provides people with a sense of rootedness and lineage. Therefore, many people want to know who they descend from and what their family history is. Just like a family the county one originates from also provides people with a sense of descent and origin. One is born and raised in a country, just like in a family. This is the reason why we use the words *father*land and *mother*land. Because you are part of the Netherlands you have a shared history and future with other Dutch people. This is why your country, just like your family, can give you a feeling that you continue to exist through time.

They were then asked to underline the two most important sentences in the text. Subsequently, participants received two assignments. The first assignment was a writing task, in which they were asked to respond to the following: 'Think about your family, your family history,

and the feeling of roots and heritage they give you. Imagine now that you would not know where you come from, who your parents and grandparents are, and hence have no family memory. Please briefly describe how you would feel.' Participants then proceeded to the second task in which they were asked the following: 'Think about the Netherlands as one big family with a shared heritage and future. Imagine that the Netherlands would no longer exist, and hence that there would no longer be a shared national past and future. Try to imagine how you would feel.' Participants then proceeded to the questions about national identity motives and attitudes towards Muslims. In the control (baseline) condition participants did not receive a text or writing task and only completed the measures of interest.

Measures

The measures of collective self-continuity ($\alpha = .77$), belonging ($\alpha = .89$), and self-esteem ($\alpha = .85$) were identical to Study 1C. We used six items from previous research that assess the extent to which participants are opposed to Muslim expressive rights (e.g., Smeekes et al., 2011; Smeekes & Verkuyten, in press; Verkuyten & Yildiz, 2010). Two sample items are: "Muslims should have the right to not only celebrate their Islamic holidays at home, but also in public life", "Muslims should have the right to publicly express and show their religion". All items ($\alpha = .84$) were reverse scored and therefore a higher score indicates stronger opposition to Muslim expressive rights.

Results

Confirmatory factor analyses

Again, CFA was conducted to determine whether the items assessing the identity motives of continuity, belonging and self-esteem form different factors. The results of these analyses are presented in Table 4. The proposed three factor structure had a good fit to the data. The z-statistics obtained for all the factor loadings were statistically significant ($p_s < .001$) and the standardized factor loadings were between .61 and .88 for self-continuity, between .83 and .89 for belonging, and between .69 and .97 for self-esteem. Similar to Study 1C, chi-square difference tests indicated that this three-factor model fit the data better than a two-factor model in which continuity and belonging were combined (Model 1b), and better than a one-factor model (Model 1c).[3]

In addition, we performed a CFA to test whether the identity motives are empirically distinct from the dependent measure: opposition to Muslim expressive rights (see Table 4). A four-factor model including the three scales measuring the three identity motives and opposition to Muslim expressive rights,[4] fit the data significantly better than any alternative model in which the latter is combined into one factor with the continuity motive (Model 2a), belonging motive (Model 2b), or self-esteem motive (Model 2c). Thus, the findings show that the dependent variable is empirically distinct from the identity motives and that the three motives are also distinct.

Structural equation modeling

We conducted structural equation modeling (using AMOS 18.0) using latent variables, which provides more reliable results than path analyses using only manifest variables (Kline, 2005). To test our predictions regarding the effects of existential group threat on the continuity motive (controlling for belonging and self-esteem), and on opposition

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[3] We also compared this three-factor model to two-factor models in which continuity was combined with self-esteem, and belonging with self-esteem. This revealed that the proposed three-factor model also fit the data better than a two-factor model in which continuity and self-esteem were combined, $\chi^2(26) = 75.51$, $p < .001$, $\Delta\chi^2(2) = 36.63$, $p < .001$, and better than a two-factor model in which belonging and self-esteem were combined, $\chi^2(26) = 101.92$, $p < .001$, $\Delta\chi^2(2) = 63.04$, $p < .001$.

[4] The model has 79 degrees of freedom because we allowed five error terms between the six items assessing opposition to Muslim expressive rights to correlate. This was necessary in order to reach acceptable model fit.

Table 4
Fit indices of models tested in confirmatory factor analyses, Study 2 and Study 3.

	χ^2(df)	$\Delta\chi^2$	CFI	RMSEA	AIC
Study 2					
Identity motives					
1) 3-factors	38.88 (24)[*]		.97	.08	80.88
1a) 2-factors (continuity and belonging combined)	85.97 (26)[***]	47.09[***]	.87	.16	123.97
1b) 1-factor	133.04 (27)[***]	94.16[***]	.77	.21	196.04
Separate mediator					
2) 4-factors	110.27 (79)[*]		.96	.07	192.27
2a) 3-factor model 1 (continuity with opposition)	169.02 (82)[***]	58.75[***]	.88	.11	245.02
2b) 3-factor model 2 (belonging with opposition)	182.37 (82)[***]	72.10[***]	.86	.12	258.37
2c) 3-factor model 3 (self-esteem with opposition)	176.89 (82)[***]	66.62[***]	.87	.12	252.89
Study 3					
Identity motives					
1) 2-factors	100.89 (8)[***]		.96	.17	126.89
1a) 2-factors (excluding continuity item)	17.36 (4)[**]	83.53[***]	.99	.09	39.36
1b) 1-factor	180.31 (5)[***]	79.42[***]	.91	.29	200.31
Separate mediator					
2) 4-factors	90.94 (38)[***]		.99	.06	146.94
2a) 3-factor model 1 (continuity with opposition)	698.46 (41)[***]	607.52[***]	.81	.20	748.46
2b) 3-factor model 2 (belonging with opposition)	678.35 (41)[***]	587.41[***]	.82	.19	728.35
2c) 3-factor model 3 (continuity with protectionism)	563.50 (41)[***]	472.56[***]	.85	.18	613.50
2d) 3-factor model 4 (belonging with protectionism)	927.65 (41)[***]	836.71[***]	.75	.23	977.65

Note. CFI = Comparative Fit Index, RMSEA = Root Mean Square Error of Approximation, AIC = Akaike Information Criterion.
[***] $p < .001$.
[**] $p < .01$.
[*] $p < .05$.

to Muslim expressive rights we specified the model in Fig. 1. Means, standard deviations, and bivariate correlations between all continuous manifest variables are presented in Table 5. The standardized paths, explained variance (R^2) and model fit statistics are shown in Fig. 1.[5] All manifest items loaded significantly on their respective latent variable (ranging between .40 and .96). These analyses revealed that, as expected, the existential threat manipulation exerted a significant effect on the continuity motive. When existential in-group threat was salient, participants reported stronger feelings of collective self-continuity than in the control condition. Importantly, these feelings of collective self-continuity were subsequently related to stronger opposition to Muslim expressive rights. The existential threat manipulation positively predicted belonging but not self-esteem, and both these motives were unrelated to opposition to Muslim expressive rights when tested simultaneously in the specified model (see Fig. 1).

These findings demonstrate the relative importance of the continuity motive in the relation between existential group threat and opposition to a relevant out-group. Surprisingly, there was no significant main effect of the existential threat manipulation on opposition to Muslim expressive rights. However, we proceeded to test the indirect effect of the existential threat manipulation (via the continuity motive) on opposition to Muslim expressive rights, because exogenous variables can exert an effect on the endogenous variable(s) in the absence of a direct relation between them (see Hayes, 2009). That is, only the indirect effect of an exogenous variable on an endogenous variable needs to be significant in order to establish a causal connection between the two. It is worth pointing out that an indirect effect is different from what is generally understood as mediation, whereby exogenous (X) and endogenous (Y) variables must be associated in order for another variable to mediate that effect (Mathieu & Taylor, 2006). Therefore, some authors prefer to avoid the term 'mediator' and instead refer to the 'indirect effect' of X on Y through an intervening variable (for a discussion of the distinction between indirect effects and mediation, see Mathieu & Taylor, 2006). Importantly, establishing indirect effects provide strong

support for one's hypothesized causal relationships (Zhao, Lynch, & Chen, 2010).

Analysis of indirect effects. We tested the indirect effect of the existential threat manipulation on opposition to Muslim expressive rights, via collective self-continuity, using bootstrapping procedures in AMOS 18.0. In this model we included the latent variables of belonging and self-esteem as covariates (i.e., controlling for their correlation with all other latent variables). We generated 5000 random bootstrap samples with replacement from the dataset (N = 89) and tested the model with these samples. The analysis revealed a significant indirect effect of existential threat, with a point estimate of .146 and a 95% bias-corrected confidence interval of .042 to .328. These results are consistent with our predicted causal model. When existential threats to group identity are salient, individuals feel a stronger sense of collective self-continuity and are therefore more likely to oppose a relevant out-group.

Study 3

The results of Study 2 are consistent with the idea that when national group members are facing existential threat to their in-group, this increases their sense of collective self-continuity, which subsequently enhances opposition towards the presence and visibility of a relevant out-group (i.e., Muslim immigrants), as a means to defend in-group identity. More specifically, we observed that while existential threat did not directly lead to stronger out-group opposition, a significant indirect effect emerged via heightened feelings of collective self-continuity. This means that existential threat enhanced feelings of collective self-continuity, which in turn increased out-group opposition. Importantly, this indirect effect was significant when controlling for motives of collective self-esteem and belonging.

We wanted to build on these findings in several ways. First, as no manipulation check was assessed in Study 2 we cannot be certain that our manipulation actually elicited existential threat. We therefore included a manipulation check item in Study 3. Second, the manipulation in Study 2 consisted of two related parts that concerned existential threats to family and national identity. Therefore, strictly speaking, we cannot be sure that the salience of national rather than family existential

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[5] The model has 90 degrees of freedom because we allowed five error terms of the items assessing opposition to Muslim expressive rights to correlate. This was necessary in order to reach acceptable model fit.
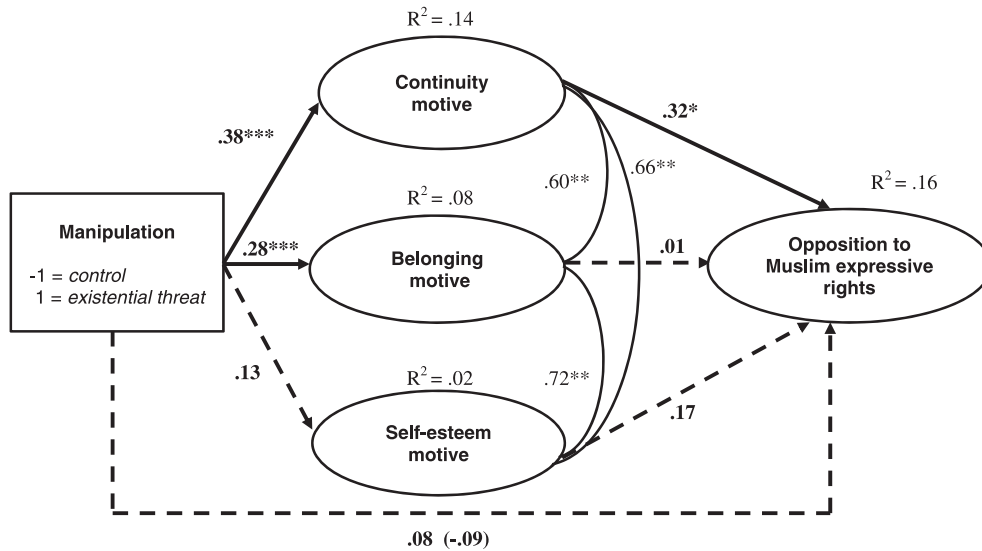
Fig. 1. Structural equation model (Study 2): Influence of existential threat manipulation on opposition to Muslim expressive rights, via national identity motives of continuity, belonging and self-esteem. Path-coefficients are standardized estimates (marked in boldface), and the path coefficient in parenthesis reflects the mediators in the equation. Correlations between latent variables are standardized. ***$p < .001$, **$p < .01$, *$p < .05$. Non-significant paths are shown as broken arrows. To simplify, indicators of latent variables are not shown. Model fit: $\chi^2(90) = 122.06$, $p = .014$; CFI $= .96$, RMSEA $= .06$.

threat caused enhanced feelings of national self-continuity. In addition, this two-part manipulation may be a reason why we only observed a significant indirect effect, and no total effect, on out-group opposition. That is, a significant indirect effect in the absence of a total effect could indicate that, next to collective self-continuity, there is another indirect path (not taken into account in our predicted model) that carries the effect from existential threat to out-group opposition in the opposite direction (MacKinnon, Krull, & Lockwood, 2000; Hayes, 2009). More specifically, whereas thinking about the loss of national identity may have enhanced opposition to immigrant out-groups via increased national self-continuity, thinking about losing one's family may have reduced opposition to immigrant out-groups via, for example, stronger feelings of warmth for other people. In Study 3, we therefore examined the effects of an existential threat manipulation that only referred to national identity. A third methodological improvement concerns the samples we used in the previous studies. In social psychology, various concerns have been raised about the use of student samples for the generality of findings and theoretical conclusions (Henry, 2008; Mitchell, 2012). We therefore conducted Study 3 among a nationally representative sample of the native Dutch adult population.

Table 5
Means, standard deviations and bivariate intercorrelations for all latent variables, Study 2 and Study 3.

	M	SD	1	2	3	4
Study 2						
1. Continuity motive	4.08	1.20	–	.54***	.61***	.25*
2. Belonging motive	4.33	1.31		–	.63***	.21*
3. Self-esteem motive	4.83	1.28			–	.25*
4. Opposition to Muslim expressive rights	3.76	1.02				–
Study 3						
1. Continuity motive	4.96	1.16	–	.71***	.28***	.50***
2. Belonging motive	4.73	1.23		–	.36***	.18*
3. Opposition to European integration	5.65	.99			–	.54***
4. In-group protectionism	4.86	1.37				–

Note.
*** $p < .001$.
* $p < .05$.

Furthermore, we also wanted to strengthen and extend our theoretical contribution. Applying terror management theory to the group level, previous research has shown that existential threats to group identity do not only result in in-group defense in the form of hostility towards out-groups (e.g., Jetten & Wohl, 2012), but also in increased attempts to protect the future vitality of the in-group (Wohl et al., 2010). Moreover, it has been observed that not only out-groups, but also social developments, such as mergers, can form an existential threat to in-group identity and consequently evoke resistance (Jetten & Hutchison, 2011). In Study 3, we therefore manipulated existential national threat in the context of European integration, and examined people's in-group defenses in the form of (a) opposition against European integration and (b) in-group protectionism.

This context is of particular relevance as one of the central controversies of European integration concerns the threat to national identity and sovereignty. Although research on the Common Ingroup Identity Model (Gaertner & Dovidio, 2000) proposes that intergroup bias can be reduced when superordinate category membership (such as European identity) is salient, attempts to replace a valued subgroup identity with a superordinate identity can produce identity threat, that subsequently enhances intergroup bias (Dovidio, Gaertner, & Saguy, 2007; Hornsey & Hogg, 2000) and resistance against this replacement (Jetten & Hutchison, 2011). Research has shown that resistance to further European integration is growing in various European countries, and that it is particularly strong in the Netherlands (Lubbers & Scheepers, 2010). In many European countries this issue has been increasingly framed and perceived as a threat to the continuation of national identity (Lubbers & Jaspers, 2011). Eurosceptic politicians and commentators have been warning for the creation of a European super state, in which different national identities would be lost.

In Study 3, we asked Dutch participants to read and write about how they would feel when their country would be merged, and hence disappear, in a larger European super state. We compared this to a control condition in which no writing and imagination tasks were given. We predicted that this existential threat to in-group identity would enhance in-group protectionism and opposition to European integration, via an increased sense of collective self-continuity. As this experiment was part of a larger data collection on national and European identity we were limited in the amount of items that could be included in the questionnaire. We chose to leave out national self-esteem as this variable

was not affected by the existential threat manipulation and did not independently predict out-group opposition in Study 2 (see Fig. 1).

Method

Participants, design and procedure

This experimental study (N = 412) was part of a larger data collection (in 2012) among a representative sample of the native Dutch population of 18 years and older. Respondents were drawn from an online panel of native Dutch respondents maintained by TNS NIPO Consult.[6] The sample consisted of 48.1% men and 51.9% women. The ages ranged between 18 and 87, and the mean age was 50.98 (*SD* = 16.94). Of the respondents, 4.6% completed primary education, 59.7% completed a lower level of secondary (26.4%) and tertiary education (33.3%), 33.4% completed a higher level of secondary (8.0%) and tertiary (higher applied and university) education (26.5%), and 1.2% did not report their educational level. A between-subjects design was used, in which participants were randomly assigned to one of two conditions (corresponding to the existential threat or the control condition). Participants were informed that the study was about Dutch and European identity and completed all materials in the online survey in the order that follows.

Existential threat manipulation

In the existential threat condition, participants read the following:

Please try to envisage that the Netherlands no longer exists in the future, because it is merged within a European super state. Imagine that in this United Europe the Dutch culture and identity have mostly been lost, because there is an emphasis on European (instead of national) values and traditions. In this United Europe you no longer have a Dutch passport, but only a European passport. Typical Dutch achievements, such as the right to abortion and euthanasia, do no longer exist in this United Europe. Please write down below how you would feel about this loss (2 sentences max.).

Participants in the control condition did not receive any text and immediately proceeded to the remaining measures.

Measures

Participants completed all measures on a 7-point scale ranging from (1 = *strongly disagree*, 7 = *strongly agree*).

Manipulation check. One item assessed the extent to which participants felt that the continuity of national identity was threatened by European integration: "The maintenance of traditional Dutch culture and identity is being threatened by increasing European integration".

Identity motives. The same three-items for assessing collective self-continuity (α = .89) and belonging (α = .95) as in Study 1C and Study 2 were used.

In-group protectionism. Three items assessed the extent to which participants felt that national culture should be protected (α = .87): "It is important to protect traditional Dutch norms and values", "It is important to maintain Dutch culture and traditions", and "We should protect the Dutch way of life against groups and developments that threaten this identity".

Opposition to European integration. Participants' opposition towards European integration was assessed with three items (α = .84):

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[6] For more information on TNS NIPO Consult, which is a consultancy company that conducts surveys and other studies among the Dutch population, see http://www.tns-nipo.com.

"In general, European integration has more disadvantages than advantages for the Netherlands", "European integration causes the Dutch government to lose too much power", and "The Netherlands should first solve its own problems before we start talking about European integration".

Results

Confirmatory factor analysis

CFA was performed to determine whether the items assessing collective self-continuity and belonging composed distinct factors. All items loaded on the component they were expected to indicate and no error terms were allowed to correlate. The proposed two-factor structure had a bad fit to the data (see Table 4). Yet, the modification indices indicated that the model fit could be particularly improved by adding correlations between one continuity item (i.e., "Being Dutch gives me the feeling that I am part of a shared future") and the items of the belonging scale. Although this continuity item had a significant and substantial factor loading on the latent variable for continuity (z = .88, *p* < .001), these results demonstrate the multidimensional nature of this particular item in this sample. Excluding this item from the measurement model significantly improved the model fit of the two-factor model (see Table 4, Study 3, Model 1a). We therefore excluded this continuity item from further analyses. In this new two-factor model the z-statistics obtained for all the factor loadings were statistically significant (*p*ₛ < .001) and the standardized factor loadings were between .86 and .86 for self-continuity, and between .92 and .96 for belonging. Chi-square difference tests indicated that this two-factor model fit the data better than a one factor model, $\chi^2(5) = 180.31$, *p* < .001, $\Delta\chi^2(1) = 162.95$, *p* < .001. This shows that although self-continuity and belonging were significantly correlated (see Table 5), they are empirically different constructs.

In addition, we performed a CFA on the items of in-group protectionism and opposition to European integration to assess whether they composed distinct factors. The proposed two-factor structure had an acceptable fit to the data, $\chi^2(8) = 38.00$, *p* < .000; CFI = .98, RMSEA = .09. Moreover, the z-statistics obtained for all the factor loadings were statistically significant (*p*ₛ < .001) and the standardized factor loadings were between .74 and .96 for in-group protectionism, and between .77 and .83 for opposition to European integration. Chi-square difference tests indicated that this two-factor model fit the data better than a one-factor model, $\chi^2(9) = 375.66$, *p* < .001, $\Delta\chi^2(1) = 337.66$, *p* < .001. Although in-group protectionism and opposition to European integration were significantly correlated (see Table 5), these analyses show that they are empirically different constructs.

Finally, a last set of CFAs was run to confirm that the hypothesized mediator, national self-continuity, as well as the belonging motive, were empirically distinct from the two dependent variables: opposition to European integration and in-group protectionism. The results are displayed at the bottom of Table 4. A four-factor model including the two identity motives, opposition to European integration and in-group protectionism as separate factors fit the data significantly better than any alternative model in which self-continuity or belonging were combined into one-factor with opposition to European integration or in-group protectionism. Results of these analyses thus supported the seperability of the measures.

Manipulation check

One-way ANOVA showed that there was a main effect of the existential threat manipulation on perceived national threat, $F(1, 419) = 4.87$, *p* = .014, $\eta_p^2 = .012$. Participants in the threat condition felt that their national identity was significantly more threatened by European integration (*M* = 4.92, *SD* = 1.71) than participants in the control condition (*M* = 4.56, *SD* = 1.53). This suggests that our manipulation of existential threat was successful.

Structural equation modeling

We again conducted structural equation modeling (using AMOS 18.0) using latent variables. To test our predictions regarding the effects of existential group threat on the continuity (and belonging) motive, as well as on opposition to European integration and in-group protectionism, we specified the model in Fig. 2. Means, standard deviations, and bivariate correlations between all continuous manifest variables are presented in Table 5. The standardized paths, explained variance (R^2) and model fit statistics are shown in Fig. 2. All manifest items loaded significantly on their respective latent variable (ranging between .74 and .96). As expected, these analyses revealed that when existential threat to group identity was salient, participants reported stronger feelings of collective self-continuity than in the control condition. Importantly, feelings of collective self-continuity were subsequently related to stronger opposition to European integration and to stronger in-group protectionism. In addition, there was a main effect of the existential threat manipulation on both in-group protectionism and opposition to European integration in the specified path model. The existential threat manipulation also positively predicted belonging, but belonging was unrelated to both outcome measures when tested simultaneously with the continuity motive in the specified model (see Fig. 2). Taken together, these results indicate the relative importance of the continuity motive in driving the relation between existential group threat and opposition to European integration and in-group protectionism.

Analysis of indirect effects. Similar to Study 2, we carried out bootstrapping procedures to test the hypothesized indirect effects of the existential threat manipulation on opposition to European integration and in-group protectionism, via collective self-continuity. In this model we included the latent variable of belonging as a covariate (i.e., controlling for its correlation with the other latent variables). We generated 5000 random bootstrap samples with replacement from the dataset (N = 412) and testing the model with these samples. The analysis revealed significant indirect effects of the existential threat manipulation on (a) opposition to European integration, with a point estimate of .063 and a 95% bias-corrected confidence interval of .024 to .119, and on (b) in-group protectionism, with a point estimate of .085 and a 95% bias-corrected confidence interval of .032 to .144.

Since there was a main effect of the existential threat manipulation on both outcome measures, these results provide evidence for mediation by collective self-continuity. More specifically, as this main effect remained significant for opposition to European integration when collective self-continuity was included in the model (see Fig. 2), this

means that part of this effect is explained by collective self-continuity (i.e., partial mediation). In addition, the main effect of the manipulation was no longer significant for in-group protectionism when collective self-continuity was included in the model (see Fig. 2), indicating that this effect was fully explained by collective self-continuity (i.e., full mediation). Taken together, these results support our expectation that when people face existential threats to their national identity, they feel a stronger sense of collective self-continuity, which subsequently results in increased attempts to defend their in-group in the form of opposing European integration and protecting in-group culture and identity.

General discussion

The present research provides evidence that the sense of self-continuity that people derive from their group membership provides a basis for group identification and drives the need to defend their in-group in the context of identity threat. Social psychologists have only recently started to examine the importance of perceiving continuity at the group level (e.g., Sani, 2008), and to date, the role of collective self-continuity in group dynamics has remained largely unexplored. We conducted our research in the context of national identity, because nations are important in the lives of individuals and are understood as communities that live together through time (Anderson, 1983).

As a first step, we demonstrated that self-continuity is a distinct national identity motive that predicts national identification when controlling for other motives The findings of Study 1 extend recent work on identity motivation (e.g., Vignoles et al., 2006; Vignoles, 2011) by showing (among three different samples) that, for national identity, only self-continuity, belonging and self-esteem were unique and significant predictors of group identification. In general, studies that have examined motivations for national identity are scarce (e.g., Sani et al., 2007), and no studies have systematically examined multiple motives of national identification.

In Studies 2 and 3 we used another vantage point to examine the connection between group identity and self-continuity, by examining whether existential threats to national identity instigate feelings of collective self-continuity. We reasoned that if self-continuity is an identity motive, then a sense of collective self-continuity should become more important and relevant when the continued existence of the in-group is undermined. Studies 2 and 3 both demonstrated that when existential threats to national identity were experimentally induced this strengthened the feeling of self-continuity (and belonging, but
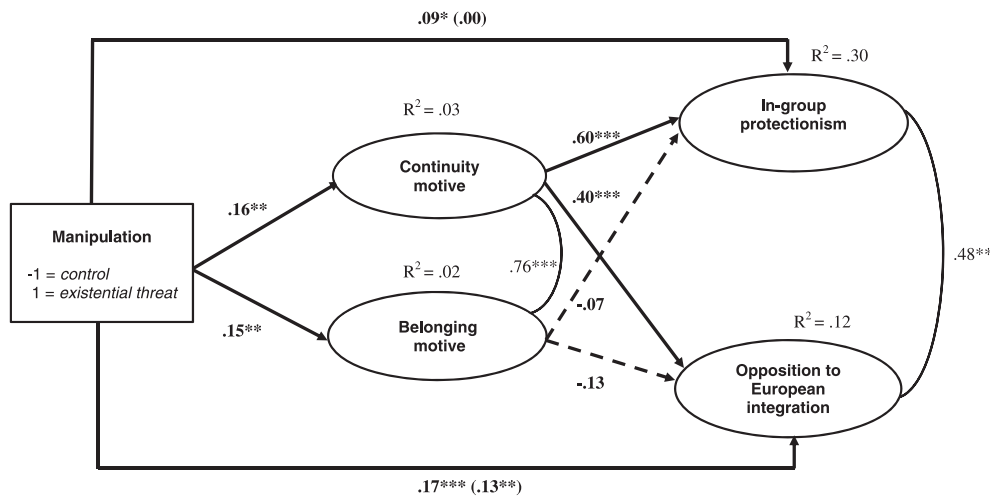

Fig. 2. Structural equation model (Study 3): Influence of existential threat manipulation on in-group protectionism and opposition to European integration, via identity motives of continuity and belonging. Path-coefficients are standardized estimates (marked in boldface), and the path coefficients in parentheses reflect the mediators in the equation. Correlations between latent variables are standardized. ***$p < .001$, **$p < .01$, *$p < .05$. Non-significant paths are shown as broken arrows. To simplify, indicators of latent variables are not shown. Model fit: $\chi^2(45) = 100.53$, $p < .001$; CFI = .98, RMSEA = .06.

not self-esteem, Study 2) that people derive from their national group membership. This finding complements Study 1 and reaffirms that self-continuity provides an important basis for group identity (Easterbrook & Vignoles, 2012).

Importantly, our findings furthermore demonstrate that collective self-continuity plays a critical role in in-group defenses in the context of identity threat. Studies 2 and 3 showed that the elevated sense of self-continuity that resulted from existential group threat increased in-group defense in the form of opposition to threatening out-groups (Study 2, Muslim immigrants) and social developments (Study 3, European integration), and in the form of in-group protectionism (Study 3). More specifically, it was found that existential group threats increased these in-group defensive reactions via enhanced feelings of collective self-continuity (controlling for self-esteem, Study 2, and belonging, Studies 2 and 3). Taken together, these findings offer convergent evidence for the importance of collective self-continuity for in-group defense mechanisms in the context of threat. We believe our findings to be robust and internally as well as externally valid, as we have demonstrated the effects of collective self-continuity by controlling for other identity motives, among a variety of samples (including a national one), and by using both survey and experimental designs.

Interestingly, Study 2 revealed that, next to national self-continuity, existential group threats elevated feelings of national belonging, but not national self-esteem. This indicates that when the very existence of the national in-group is at stake, collective self-continuity and belonging are more important considerations than self-esteem. This may be because existential threats primarily make group members aware of what binds them as a national community. Both collective self-continuity and belonging are concerned with common bonds. They relate to the feelings of (temporal) connectedness and relatedness that people derive from their group membership. Self-esteem, on the other hand, is concerned with feelings of positivity and status that group membership provides, and this may be less important and relevant when the very existence of the in-group is at stake.

Implications

The finding that the sense of collective self-continuity is important for understanding current group processes underlines the importance of taking temporal and historical aspects of social identities into account when examining intra- and intergroup dynamics. In general, questions related to temporal aspects of social identity have been largely neglected in social psychology (Condor, 1996, 2006). Yet, a sense of identity – as individuals or as collectives – is not possible if we did not have some sense of our continuous existence over time. The capability to reflect on the past and to project oneself and the social groups to which one belongs in the future is uniquely human and helps us to make sense of the world and the social contexts in which we live. The present research indicates that a sense of self-continuity provides a unique basis for national identity, and drives in-group defensive reactions in the context of existential threats to group identity. These findings not only complement research on identity motives suggesting that continuity is an important motivation for why people identify with groups (e.g., Easterbrook & Vignoles, 2012; Vignoles et al., 2006; Vignoles, 2011), but also improve our understanding of when and why a sense of collective self-continuity is triggered and what its consequences are for different forms of in-group defense.

Our research also offers a novel connection to broader theories on group processes and intergroup relations. The current research complements work on TMT (Solomon et al., 1991) by showing that existential group threats result in in-group defense mechanisms (i.e., in-group protectionism and opposition to out-groups and social developments), via an increased sense of collective self-continuity. Studies based on TMT have mainly focused on the consequences of personal mortality concerns and have hardly considered in-group (i.e. worldview) defense that results from the potential loss or disappearance of group continuity

(but see Wohl et al., 2010). Moreover, while terror management theorists (Pyszczynski et al., 2000) have proposed that people engage in group-level defenses in order to obtain a sense of symbolic immortality (i.e., self-continuity), research within this perspective has not empirically demonstrated that the sense of self-continuity that people derive from their group membership can provide these transcending properties.

Limitations and future directions

The present research has a number of limitations that provide directions for future work. A first limitation is that we only focused on national identity, which means that it is unclear to what extent our findings are generalizable to other social identities. Although not all groups necessarily provide a sense of self-continuity, many collectives do so, at least occasionally. For example, it has been shown that supporters of various British football teams often make references to the sense of self-continuity they gain from their allegiance to a particular club (Condor, 1996). Nevertheless, future work should investigate the connections between collective self-continuity and intra- and intergroup processes among different social groups.

Furthermore, our research focused on the relationship between collective self-continuity and the cognitive, rather than affective, dimension of group identification. It has been argued that affective aspects of identification are more intimately linked to need fulfillment (Riketta, 2008). However, Vignoles et al. (2006) have shown that the cognitive dimension (i.e., perceived identity centrality) was more influenced by the motives for continuity, distinctiveness and meaning, whereas the affective dimension (i.e., positive affect) was more strongly related to self-esteem, efficacy, and belonging. Yet, continuity was a significant predictor of both the cognitive and affective dimension. Prospective work could further explore the relevance of collective self-continuity for both affective and cognitive dimensions of group identification.

In addition, in order to test the relative importance of self-continuity for group dynamics, we included several other identity motives in our analyses (i.e., belonging, self-esteem, efficacy and distinctiveness) that have been put forward in the social identity and intergroup literature. Although this list is not comprehensive, we feel that it represents a sufficient variety of motives to allow for a test of the relative importance of collective self-continuity in driving group identification and in-group defenses. In order to further explore this relative contribution, future research could include additional identity motives that might be relevant at the group level. For example, it has been shown that people are likely to identify with groups that give them a sense of meaning in life (e.g., Easterbrook & Vignoles, 2012). Moreover, future studies could examine the role of individual dispositions that might be correlated with experiencing collective self-continuity, such as the desire for cognitive consistency and structure (Riketta, 2008), and subjective uncertainty (Van den Bos, 2009).

Another issue to address is that we measured people's identity motives by self-reported feelings of continuity, belonging, self-esteem, distinctiveness and efficacy. However, people are not necessarily aware of their identity motives and implicit and explicit measures of these motives may be unrelated (Vignoles, 2011). Nevertheless, these identity motives are likely to become explicit and salient once they are threatened or frustrated, and this activation is likely to result in responses that satisfy these motives. As such, the presence of identity motives can be inferred from their predictable effects on in-group defenses in the context of identity threat. For example, our findings (Studies 2 and 3) show that threats to the continuity of the in-group increase a sense of collective self-continuity that subsequently drives in-group protectionism and out-group rejection. Thus, our measure of collective self-continuity has predictive utility, but future studies should examine self-continuity and other social identity motives using implicit measures.

Conclusion

In three studies, we demonstrated that a sense of collective self-continuity is an important aspect of group identity and plays a central role in in-group defense mechanisms. These findings go beyond familiar social psychological explanations of group dynamics. Social psychologists tend to focus on the synchronic dimension of social life and are much less concerned with the diachronic dimension. By examining the role of the sense of self-continuity that people derive from their national group membership, the present research sheds light on the interplay between temporal aspects of the collective self and their social psychological consequences in group settings. In doing so, it integrates insights from functional approaches to social identification with propositions from existential psychology.

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