



## In the aftermath of terrorism: Effects of self versus group affirmation on support for discriminatory policies

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### ABSTRACT

An experiment conducted with 240 French undergraduates examined the effectiveness of self-affirmation and group-affirmation procedures for diminishing perceived threat and support for discriminatory policy shortly after terrorist attacks in Paris. (Two pilot studies tested the affirmation procedures before the attacks). We hypothesized that affirmations that are congruent with dominant modes of self-definition should be more effective than incongruent affirmations. That is, we predicted that the self-affirmation manipulation should be most effective at reducing prejudice among people high in individualism, whereas the group-affirmation manipulation may be most effective among people high in collectivism. Results only supported the former hypothesis. The self-affirmation procedure effectively reduced perceptions of threat and support for discriminatory policies among those high in individualism, but the group affirmation had no consistent effects, either among those high in collectivism or otherwise. The findings suggest important practical and theoretical differences in the vulnerabilities of self and social identities in the aftermath of terrorism.

### 1. Introduction

Ideologically motivated terror attacks are an ongoing problem around the world. The goals of such attacks include affecting the psychology of the targeted populations—to stoke fear, anxiety, and possibly extreme retaliation in response that would further the ideological goals of the attackers (Atran, 2003; Bongar, Brown, Beutler, Breckenridge, & Zimbardo, 2006; Orehek & Vazeou-Nieuwenhuis, 2014). As such, it is imperative to gain a clearer understanding of how people react in the aftermath of terror attacks, particularly with regard to their xenophobia and relevant policy preferences. In the present research, we focus on the reactions of French nationals in aftermath of the November 2015 terror attacks in Paris, which were claimed by first and second generation immigrant followers of extreme religious and political ideologies. Important debates within the political institutions have focused on measures that can be taken against immigrants implicated in terrorist attacks and can be considered discriminatory (e.g., stripping French nationality; *Le Monde*, 2015). Several opinion polls following the attacks showed widespread support among French residents for antiterrorism policies that run counter to democratic and constitutional values (Ifop, 2016).

A variety of evidence from Europe suggests there are important links

between the threat of terrorism from immigrants and negative inter-group attitudes. Dutch adolescents' perception of symbolic threat of Muslims predicted increased prejudice against Muslim immigrants (González, Verkuyten, Weesie, & Poppe, 2008). Perceptions that immigrants approve of terrorist attacks significantly predicted support for anti-immigration policies, including measures that would violate religious freedom laws and would be nearly impossible to implement (e.g., "At airports, there should be special security checks for Muslims"), (Doosje, Zimmermann, Küpper, Zick, & Meertens, 2010). After the terrorist attacks committed at the headquarters of the newspaper *Charlie Hebdo* in France, perceptions of symbolic threat and prejudice against Muslims increased (Nugier et al., 2016). Studies have also directly linked terrorist attacks to heightened mortality salience (Das, Bushman, Bezemer, Kerkhof, & Vermeulen, 2009), such that reminding people of terrorist attacks increases the salience of their mortality, which in turn led to higher prejudice toward immigrants and North-Africans (Cohu, Maisonneuve, & Testé, 2016).

According to terror management theory (Greenberg, Solomon, & Pyszczynski, 1997), when mortality is made salient, it can cause existential anxiety, and defense against this existential anxiety can inform extreme policy preferences. Studies run by Pyszczynski and collaborators (Pyszczynski et al., 2006) demonstrated that mortality salience

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increased Americans' support for military interventions in the Middle East, including use of nuclear and chemical weapons (see also Hirschberger, Pyszczynski, & Ein-Dor, 2009). Participants who thought about terrorist attacks showed strong support for these interventions.

However, research also suggests that such responses are variable, subject to moderation by individual differences and situational factors. People can respond in a less extreme manner, even in circumstances that increase mortality salience. Research on the infectious disease of Ebola shows that xenophobic responses to high degrees of perceived risk are attenuated among people high in collectivism and low in individualism, suggesting the role of individual differences in cultural values at moderating response to mortality threats (Kim, Sherman, & Updegraff, 2016). Research on self affirmation has found that participants who affirmed important personal values before a reminder of death showed reduced accessibility of death-related thoughts and displayed less derogation of out-group members who threatened participants' worldviews (Schmeichel & Martens, 2005). This study hints at the flexible nature of psychological self-defense and to a potential role of self affirmation in managing defensive behaviors when mortality is salient, as it can be after terrorist attacks. Affirming important personal values may help people to view threats from a broadened perspective and thereby reduce the perceived urgency and significance of the threat (Sherman & Cohen, 2006).

In the present research, we argue that support for discriminatory policies in France is partially driven by the desire to protect self and group identities from threat. As such, we seek (1) to examine the utility of affirming self and group identity as a means to attenuate the perceived threat of immigrants and support for discriminatory policy measures; and (2) to investigate individual differences in individualism and collectivism as theoretically important moderators of the effect of self and group affirmation on responses to terrorism. We test whether affirmation procedures that are congruent (e.g., self affirmation among strong individualists) or incongruent (e.g., group affirmation among strong individualists) with dominant modes of self-definition are most effective. As such, we seek to understand not simply *if* affirmation can affect attitudes but also *why* and *for whom* they are likely to be most effective. In doing so, we hope to improve understanding about the psychological roots of responses to the threat of terrorism.

### 1.1. Terrorism and support for discriminatory policies

Perpetrators of terrorism, to the extent they are not in the majority and have a different cultural worldview from those they are attacking, can be viewed by majority group members as threatening to a national group identity (Pyszczynski, Solomon, & Greenberg, 2003). In-group threat can be symbolic (Tajfel & Turner, 1986) and realistic (Sherif, Harvey, White, Hood, & Sherif, 1961). Symbolic threats involve perceived group differences in morals, values, standards, beliefs, and attitudes. Realistic threats involve in-group economic and political power, and in-group security and welfare in general (Stephan, Ybarra, Martnez, Schwarzwald, & Tur-Kaspa, 1998). Both of these threats are important because they may be relevant to individuals' sense of self-integrity (Sherman & Hartson, 2011). To the extent that threats posed by immigrants can target both individual and collective aspects of the self (Asbrock & Fritsche, 2013; González et al., 2008), we argue that affirmation procedures that address each of these aspects have the potential to reduce the perception of threat and consequently negative intergroup attitudes.

Demonstrating such an effect would implicate the self-concept as a source of discriminatory reactions to terrorism, an insight that can help understand terrorism responses more generally. However, simply demonstrating that affirmation affects attitudes toward terrorism would leave significant questions unanswered. The self-concept is multifaceted, consisting of both individual and collective identities (e.g., Oyserman, Coon, & Kimmelmeier, 2002; Tajfel & Turner, 1986). As such, it is also important to consider not only whether affirmations of

different aspects of the self (individual- and collective-identity) are equally effective and but also whether effectiveness depends on how people define the self (i.e., in terms of individualism and collectivism). To bring these two ideas together, we consider the notions of congruent and incongruent affirmation procedures.

### 1.2. Congruent versus incongruent affirmation procedures

According to self-affirmation theory (Sherman & Cohen, 2006), people can tolerate threats to a specific aspect of their identity if they are able to maintain a global sense of self-integrity. A distinction is drawn in the literature between self affirmation and group affirmation. While *self affirmation* can be accomplished by reflecting on an important value or source of pride for the individual, irrelevant to the threat at hand (Sherman & Cohen, 2006), *group affirmation* can be accomplished by thinking about values and positive actions of one's in-group (Sherman, Kinias, Major, Kim, & Prenovost, 2007). These types of affirmation map onto the two primary modes of self-definition described in social identity and self-categorization theory: the individual and collective self (Ellemers, 2012). They also map onto the distinction between individualistic and collectivistic orientations identified in cultural psychology research. Individualism is a cultural orientation where individuals' needs take priority over those of the group, whereas collectivism is a cultural orientation in which the needs of individuals are subordinate to those of the group (Oyserman et al., 2002; Triandis, 1989). The individualism-collectivism distinction is a sociocultural variable, with Western cultures being considered as more individualistic and Eastern cultures as more collectivistic (Kashima et al., 1995). However, there are also individual differences within each culture (Realo, Koido, Ceulemans, & Allik, 2002; Triandis, Bontempo, Villareal, Asai, & Lucca, 1988), and it is this latter type of variation that the present research addresses.

It has been argued that effective affirmation procedures should be configured as a function of people's individualistic versus collectivistic orientations (Hoshino-Browne et al., 2005). That is, affirmations should be delivered in ways that align or are congruent with the individuals' preferred modes of self-definition. Notably, however, research to date suggests that not all modes of self-definition are equal with respect to their vulnerability to threat and prejudice. Theory and research suggest that people high in individualism (and low in collectivism) may be particularly reactive to threats in their environment. In one study featuring a representative sample of Americans, those who perceived a high risk of contracting Ebola during a 2015 outbreak, and were high in individualism (and low in collectivism), were more supportive of extreme measures, such as enacting a travel ban on West Africa (Kim et al., 2016). In another line of work, White Americans' endorsement of symbolic racism was predicted by an endorsement of individualism as it is applicable to African Americans ("black individualism" as represented by items such as, "If blacks work hard they almost always get what they want."), (Sears & Henry, 2003). In both lines of work, it was those who held highly individualistic values that were most willing to endorse extreme outgroup attitudes and preferences.

One way to explain these findings is that people with an individualistic orientation tend to differentiate themselves from their group by highlighting their uniqueness and separateness from others (Kim & Markus, 1999). This tendency leaves individualists lacking the psychological buffer that is known to come from being a member of a tight social network (Jetten, Haslam, & Alexander, 2012; Kim et al., 2016). As such, they may be more psychologically vulnerable to threat and, by extension, more responsive to affirmation (Sherman, Bunyan, Creswell, & Jaremka, 2009). In particular, we hypothesized that among people with a tendency to define themselves as independent and distinct (i.e., those high in individualism), a self-affirmation manipulation would be effective in reducing perceptions of threat and support for discriminatory policies relative to a no-affirmation control condition.

By contrast, it is less clear how group affirmations may affect

people's attitudes and policy preferences. Spontaneous affirmations of the national ingroup and displays of patriotism are common in the aftermath of terror attacks (e.g., Li & Brewer, 2004), as predicted by terror management theory (Pyszczynski et al., 2003). However, it is unclear what effect group-affirmation procedures may have on immediate attitudes and preferences about terrorism. Evidence from different lines of work paints a complex set of possibilities, suggesting group affirmations can attenuate, exacerbate, or have no impact on social and group attitudes.

First, by reminding people of positive aspects of an in-group, group affirmation might buffer against threat and attenuate prejudice and support for discriminatory antiterrorism policy, similar to self-affirmation. Support for this possibility comes from research examining social identity processes in sport: Members of intramural sports teams who most strongly identified with their team were most biased in their attributions, but subsequently, most buffered by a group affirmation (Sherman et al., 2007).

On the other hand, by highlighting group boundaries and divisions, group affirmation may exacerbate defensiveness and biases. When people affirmed a value important to their political party, the more identified participants were with that in-group, the more negatively they evaluated the outgroup (Ehrlich & Gramzow, 2015). Additional evidence suggested the group affirmation effect was driven by an increase in identity salience. Group affirmation increased accessibility of thoughts related to political party belonging (i.e., identity salience), and that was why the evaluation of the opposite party was even more negative after a group-affirmation task (Ehrlich & Gramzow, 2015).

Finally, it is possible that group affirmation might not have any effect at all (see Čehajić-Clancy, Effron, Halperin, Liberman, & Ross, 2011). For example, group affirmation may simply not be robust, or perhaps both of the aforementioned processes could occur and cancel each other to produce what looks like a null effect of group affirmation.

As such, previous work suggests the effects of group affirmation on group attitudes is not straightforward. Seeking new insight into possible effects of group affirmation, in the present work we consider individualism and collectivism as potential moderators of self- and group-affirmation procedures. There are several interesting theoretical possibilities. First, it may be that congruency with one's own values matters is what is most central, and that group affirmation would most strongly impact high collectivists. In this view, collectivism itself may be associated with feelings of threat and negative views toward outgroups (e.g., Vandello & Cohen, 1999). A recent study by the National Consortium for the Study of Terrorism and Responses to Terrorism (START) found that among a sample of Internet users in 12 Arab countries, Pakistan, and Indonesia, collectivistic goals were associated with greater support for terrorism against the West (Fishman, Orehek, Dechesne, Chen, & Kruglanski, 2007). Although this tendency may not necessarily extend into the relatively individualistic French context, affirmations of a collective identity may reduce threat among collectivists and dampen the association between collectivism and negative outgroup attitudes. This congruent affirmation hypothesis is also consistent with the cultural psychology research that affirmations of values shared with one's family are more effective at reducing dissonance among collectivistic East Asians (Hoshino-Browne et al., 2005).

It is also possible, however, that those high in collectivism may be most buffered in the absence of affirmation, whereas those who are high in individualism, may be most reactive to threat (Kim et al., 2016). Because collectivism offers a behavioral mechanism to cope with cultural, economic, as well as health related risks (Murray, Trudeau, & Schaller, 2011), people higher in collectivism may be buffered from threat, which may weaken the extent to which they manifest prejudice toward out-groups under the threat of terrorism.

Based on this previous research, we had one directional, one exploratory, and one contingent hypothesis. First, we hypothesized that among people high in individualism, self affirmation will reduce perceived threat of immigrants and support for discriminatory anti-

terrorist measures compared to the other two conditions (group affirmation and control), (Hypothesis 1). We also explore whether group affirmation produces the analogous result among people high in collectivism, the congruent affirmation hypothesis. That is, we explore if, among collectivistic persons, group affirmation will affect perceived threat of immigrants and support for anti-terrorist policy compared to control; Hypothesis 2). Furthermore, if either of the first two hypotheses are supported, we planned to examine if the effects of affirmation on support for antiterrorism policy are mediated by perceptions of threat (both symbolic and realistic threat) coming from immigrants via moderated-mediation analyses (Hypothesis 3).

## 2. Pilot studies

We conducted two initial studies with French undergraduates enrolled in a psychology course (each study with  $N_s = 119$ ) in 2013 and 2014, which is prior to the major terror attacks that occurred in France in January and November of 2015. The experimental procedure was similar to that of the main study that we present in detail below. However, these studies did not measure individualism or collectivism as potential moderators and, as such, they did not examine the focal hypotheses regarding the effects of congruent vs. incongruent modes of affirmation. Nevertheless, the studies (with method and results available in supplemental materials) are notable for three primary reasons.

First, both studies found evidence that self affirmation reduced threat and prejudice against immigrants. That is, when the two studies were combined to increase statistical power, participants in the self-affirmation condition reported significantly lower symbolic threat, realistic threat, and prejudice compared to control and group-affirmed participants. The present study seeks to replicate this effect and extend it by examining moderation by theoretically important variables. If the effect of self affirmation is strongest among those high in individualism, as we suggest, it would provide evidence that people who tend to define themselves independently may view terrorism as particularly self-relevant.

Second, the pilot studies were useful because they compared two different methods of manipulating group affirmation. This was done to examine if there was a more or less optimal way of affirming participants' collective self. The first pilot study manipulated group affirmation by having students affirm a particular collective identity unrelated to the domain of threat, "psychology students" (see, for example, Čehajić-Clancy et al., 2011, Study 2, for the use of a different group, other than the one targeted by the threat). The second pilot study implemented group affirmation by asking participants to affirm values important to them as "French citizens." It turned out, however, that neither manipulation resulted in lower prejudice or perceived threat compared to the control condition. One possibility for this null result is that perhaps the group-affirmation task was simply less affirming than self-affirmation task, for example, because people care more about their individual self than they do their collective self (e.g., Gaertner, Sedikides, & Graetz, 1999). The present study seeks to address this possibility by systematically coding the content of participants' group and self-affirmations to examine if they were indeed equally affirming. Another possibility is that the effect of group affirmation is contingent, meaning that it can affect group attitudes, but perhaps only among some people or under certain conditions. As noted we examine this possibility by testing individualism and collectivism as moderators of group affirmation.

Third, analyses of the combined data yielded initial support for a mediational model in which two dimensions of threat (symbolic and realistic) were found as unique mediators of the effect of self affirmation on prejudice. Detailed analyses of these effects are reported in supplementary online materials. However, given that each study produced results that were not statistically significant on their own, and given the possible changes in the social context wrought by the ensuing terror attacks, in the main study below we sought to obtain a larger

sample of participants and examine their reactions as functions of theoretically relevant individual-difference factors. In particular, we followed evidence that both affirmation (Schmeichel & Martens, 2005) and collectivism/individualism may moderate group attitudes following existential threats (Kim et al., 2016). In addition to the three dependent variables of the pilot studies (symbolic threat, realistic threat, and prejudice), the terror attacks also prompted our focus on the discriminatory policies that were being discussed (Le Monde, 2015) in the aftermath of the Paris attacks of 2015.

### 3. Main study

#### 3.1. Method

##### 3.1.1. Participants and design

The sample consisted of 274 French psychology undergraduates who voluntarily participated in the study. Because we only wanted to include native French (i.e., non-immigrants), we asked for participants' mother tongue and they reported "French" or "Other".<sup>1</sup> We only included those who put "French" as that suggests that their parents spoke to them primarily in French. Participants' ages ranged from 18 to 55 years ( $M = 19.88$ ,  $SD = 4.32$ ), and there were 215 females and 52 males, 7 did not specify. Thirty-four participants indicated that their native language was other than French. Analyses below were limited to the 240 participants who were native French speakers.

##### 3.1.2. Procedure

Before the affirmation manipulation, participants responded to a scale assessing individualism (e.g., "It is important to me to develop my own personal style.";  $\alpha = 0.86$ ) and collectivism (e.g., "It is important to me to think of myself as a member of my religious, national, or ethnic group.";  $\alpha = 0.81$ ), (Kim et al., 2016; adapted from Oyserman et al., 2002). Responses were given on a seven-point scale (1 = "total disagreement" 7 = "total agreement"). The individualism ( $M = 5.63$ ,  $SD = 0.84$ ) and collectivism ( $M = 3.86$ ,  $SD = 1.15$ ) scores were weakly correlated with one another,  $r = 0.17$ ,  $p = 0.008$ . We also measured perception of terrorist threat (e.g., "I worry about myself being attacked by terrorists"; "I feel that any member of my family is vulnerable to terrorism";  $\alpha = 0.91$ ) using a five-points scale. The mean of terrorist threat perceptions was significantly higher than the middle of the scale (3), ( $M = 4.00$ ;  $SD = 1.42$ ),  $t(239) = 5.51$ ,  $p = 0.001$ ,  $r^2 = 0.11$ , indicating that the threat of terrorism was salient in France at the time of the study.

The self-versus group-affirmation vs. control conditions were adapted from prior research (Badea, Tavani, Rubin, & Meyer, 2017; Sherman et al., 2007). Participants in all conditions first ranked the importance of nine values pretested as being held by students and used in the pilot studies (honesty, respect, listening, empathy, family, tolerance, love, loyalty, sharing). Participants in the self-affirmation condition ranked the importance of the values to them personally, and participants in the group-affirmation condition ranked the importance of the values to them as French citizens. In the control condition, participants ranked the importance of the values to someone else (a person of the same age and gender as the participant). Next, participants in all conditions wrote some reasons that their top-rated value was important for them/group/other person and gave one example of something that demonstrated the importance of this value in real life.

##### 3.1.3. Dependent measures

After the affirmation manipulation, participants completed a questionnaire that included measures of symbolic threat, realistic threat, support for discriminatory policy and prejudice. Responses were offered

on a seven-point scale (1 = "total disagreement" 7 = "total agreement"). All measures and manipulations in the study are disclosed. Data collection was not continued after analysis.

**3.1.3.1. Symbolic and realistic threat.** As in the pilot studies, a three-item scale developed by González et al. (2008) was used to assess perceptions of symbolic threat (e.g., "Immigrants are a threat to French culture," "French values and traditions are threatened by the presence of immigrants";  $\alpha = 0.93$ ), and perceptions of realistic threat (e.g., "Because of immigrants French people have difficulties finding a job," "Because of immigrants French people have difficulties finding lodging," "Because of the large number of immigrants, unemployment may rise in France",  $\alpha = 0.91$ ).

**3.1.3.2. Support for discriminatory policy.** We assess support for discriminatory antiterrorism policy using the following items (adapted from Kim et al., 2016). Participants indicated their agreement with five proposed policies on the same seven-point scale ( $\alpha = 0.88$ ): "An entry ban on French territory of individuals from high-risk countries"; "Monitoring of individuals entered on French soil and coming from high-risk countries"; "Surveillance of the persons who are in contact with people from high-risk countries"; "An entry ban on French territory of militarily trained individuals coming from high-risk countries"; "Monitoring of individuals out of prison and who had contact with individuals at high risk."

**3.1.3.3. Prejudice.** Participants indicated their feelings toward immigrants by responding to six items from a scale designed to assess prejudice on scales ranging from 1 ("I do not feel this emotion at all") to 7 ("I feel this emotion strongly. The measure included three positive feelings (acceptance, sympathy, warmth) and 3 negative (hostility, fear, disliking), as used in Stephan et al. (1998).

### 3.2. Results

#### 3.2.1. Content coding of affirmations

We performed content analysis in order to examine the content of the essays generated by the self-affirmation, group-affirmation, and control conditions. One primary question was whether the essays were different in how affirming they appeared to be based on what participants wrote. For coders, we defined self affirmation as an act that manifests one's adequacy and thus affirms one's sense of global self-integrity and the perception of oneself as morally and adaptively adequate (Cohen & Sherman, 2014). We defined group affirmation as an act that manifests the adequacy of one's group and thus affirms a group's sense that it is morally and adaptively adequate (Cohen & Sherman, 2014).

Two coders rated each essay across the three conditions (with condition not indicated in the text) on a 5-point scale (1 not at all affirming; 5 very affirming). We further provided this coding scheme for the 5-point scale: (1) absence of values' ranking justification (e.g., "I do not know"); (2) general justification (e.g., "Tolerance is an important value"); (3) general justification with examples from real life (e.g., "The family is very important for everyone, because it brings affection and support to life difficulties, such as when you pass your exam and you get a bad result, they are there to comfort you"); (4) application of the first ranked value to one's self (e.g., "For me, it is useful to share resources with other people, I am a generous and kind person"); (5) application of the first ranked value to one's self with examples from real life (e.g., "Tolerance is an important value for us, the French people. This is part of our national devotion. This value allows us to live together and understand each other independently of our differences.")

Two coders rated all the essays (in the original French) with the degree of agreement 80%. All different values were discussed in order to get a consensual score. We performed a one-way ANOVA

<sup>1</sup> This is the most direct way we could get at immigration status given that French law forbids asking for the ethnic origin or immigration status of the participants.

(affirmation condition: self, group, control) on affirming scores. Results show a significant effect of the experimental condition,  $F(2, 237) = 11.53, p < 0.001, \eta_p^2 = 0.08$ . We then compared affirming scores. Results show no significant difference between self affirmation ( $M = 3.93; SD = 1.01$ ) and group affirmation ( $M = 3.68; SD = 1.27$ ),  $t(156) = 1.38, p = 0.168$ . Both affirming scores are significantly different from the mean value of the scale (3),  $p < 0.001$ . We also compared self affirmation and group affirmation with control, ( $M = 3.12; SD = 1.01$ ),  $t(156) = 5.12, p < 0.001, r^2 = 0.14$  and  $t(159) = 3.11, p = 0.002, r^2 = 0.05$  respectively. We infer from this that the essay tasks in self-affirmation and group-affirmation conditions were equally affirming and significantly different from the control condition.

In addition, following previous studies that coded affirmation essays (Shnabel, Purdie-Vaughns, Cook, Garcia, & Cohen, 2013; Tibbetts et al., 2016), we coded for two other theoretically interesting constructs, whether independent and interdependent themes were present in the essay writing. As Tibbetts et al. (2016) defined it, an interdependent theme includes any related thoughts on the subject of one's interdependence, valuing an activity because it is done with others, being in relation with others, or feeling part of a group. An independent theme is defined as any related thoughts showing that the participant values his or her own autonomy (i.e., the ability to make her or his own decisions and have his or her own ideas and opinions), values an activity because it is done alone, or explicitly expressing the value of independence for the self (Shnabel et al., 2013; Tibbetts et al., 2016). The code for each of the two themes was: 0 (absent) and 1 (present), as in the respective original codings.

Then, we ran an ANOVA 2 (affirmation: self vs. group)  $\times$  2 (thoughts: interdependent vs. independent) with the second factor within subjects. Results show a significant interaction between affirmation and type of thoughts,  $F(1156) = 13.51, p < 0.001, \eta_p^2 = 0.08$ . Interdependent themes were more present in the group-affirmation ( $M = 0.79; SD = 0.41$ ) than the self-affirmation condition, ( $M = 0.64, SD = 0.48$ ),  $t(156) = 2.14, p = 0.033, r^2 = 0.06$ , whereas independent themes were coded as more present in the self affirmation ( $M = 0.54; SD = 0.51$ ) than the group affirmation ( $M = 0.24, SD = 0.43$ ),  $t(156) = 4.08, p < 0.001, r^2 = 0.09$ . This pattern followed expectations: while the self and group conditions were equally affirming, self affirmation used more independent thoughts and group affirmation used more interdependent thoughts.

### 3.2.2. Primary analyses: the effect of self vs. group affirmation

We first subjected the four dependent measures (prejudice, symbolic threat, realistic threat, and anti-terror policy preferences) to a one-way MANCOVA, using participants' condition assignment as the independent variable. This analysis tested whether, as in the pilot studies, self affirmation reduced perceptions of outgroup threat. The analysis yielded a marginal omnibus main effect,  $F(8470) = 1.83, p = 0.070, \eta_p^2 = 0.03$ , with a visual pattern of means that was consistent with the patterns seen in the pilot studies. However, when the four measures were examined individually, only the measure of anti-terror policy support was statistically significant,  $F(2, 237) = 5.39, p = 0.005, \eta_p^2 = 0.04$ . Further probing of this main effect revealed that, consistent with the pattern in the pilot studies, participants in the self-affirmation condition reported lower support for the anti-terror policy ( $M = 3.49; SD = 1.98$ ) compared to participants in the control ( $M = 4.32; SD = 1.52$ ),  $t(159) = 2.95, p = 0.004, r^2 = 0.05$ , or group-affirmation condition ( $M = 4.20; SD = 1.58$ ),  $t(156) = 2.45, p = 0.015, r^2 = 0.03$ . The control and group affirmation means did not differ,  $t(159) = 0.49, p = 0.620$ . For each of the other three dependent variables, there were no significant pair-wise mean differences ( $ps > 0.135$ ). This analysis showed a pattern that was generally consistent with, but weaker than, the pilot study results. We next examined whether the condition effects varied as functions of individualism or collectivism.

### 3.2.3. Moderation analyses: the role of individualism and collectivism

A central purpose of the present study was to test whether individualism or collectivism significantly moderated the effects of self and group affirmation. That is, in the aftermath of the attacks, we examined whether the effects observed in the pilot studies held only among participants at the high or low ends of individualism and collectivism. To test for moderation by each of these variables, we conducted analyses using multiple regression following procedures outlined by Aiken, West, and Reno (1991). There were three experimental conditions, and thus we followed a standard analytic approach in which two orthogonal contrasts were used to represent each of the two degrees of freedom associated with the experimental variable. By coding and including both contrasts in all analyses, we were able to fully specify the experimental design in the regression models. Contrast 1 coded self affirmation as 2, control as  $-1$ , and group affirmation as  $-1$ . This contrast therefore compared whether self affirmation differed from the mean of the other two conditions. Contrast 2 was orthogonal to Contrast 1, and it therefore coded self affirmation as 0, control as 1, and group affirmation as  $-1$ . This contrast compared whether the control condition differed from the group affirmation condition.

Next we grand-mean centered each of the continuous variables, individualism and collectivism, and calculated the two-way interaction term between each contrast and each individual difference measure and between individualism and collectivism. The final regression equation is as follows:

$$Y = \beta_0 + \beta_1(C1) + \beta_2(C2) + \beta_3(IND) + \beta_4(COL) + \beta_5(C1*IND) + \beta_6(C1*COL) + \beta_7(C2*IND) + \beta_8(C2*COL) + \beta_9(IND*COL)$$

where Y was the outcome of interest,  $\beta$ s were standardized regression coefficients for each term, C1 was Contrast 1, C2 was Contrast 2, IND was mean-centered individualism, COL was mean-centered collectivism, and where the remaining terms reflected the multiplicative two-way interactions to fully specify a test of whether experimental condition interacted with individualism or collectivism to shape the outcomes of interest. In addition, we examined both three-way interaction terms (C1\*IND\*COL and C2\*IND\*COL) on each outcome. However, neither three-way interaction term was significant across any outcome. They were therefore trimmed from the models and are not discussed further.

As depicted in Table 1, the analyses yielded a consistent pattern across all the dependent measures. In particular, the interaction term between Contrast 1 and individualism was significant for three out of the four outcomes, excepting prejudice. The plot of estimated means of antiterrorism support is depicted in Fig. 1, and this general pattern held for both symbolic and realistic threat. The general pattern was that, consistent with expectations, the self-affirmation manipulation had its largest impact among participants who were high in individualism ( $+1$  SD).

More specifically, simple slopes analyses of the significant interactions revealed that among participants who were high in individualism, self-affirmed participants reported significantly lower symbolic threat (Estimated  $M = 1.76$ ) than did participants in the other two conditions (Estimated  $M = 2.30$ ;  $\beta = -0.197, t = -2.02, p = 0.044$ ), significantly lower realistic threat (Estimated  $M_s = 1.83$  for self affirmation versus 2.91 for the other conditions;  $\beta = -0.329, t = -3.46, p < 0.001$ ), and significantly lower support for discriminatory policies (Estimated  $M_s = 2.98$  for self affirmation versus 4.75 for the other conditions;  $\beta = -0.472, t = -4.99, p < 0.001$ ). By contrast, among participants low in individualism, there were no significant effects of self affirmation (Contrast 1) across any of these dependent variables ( $\beta$ s = 0.176, 0.153, 0.093;  $ps = 0.092, 0.137, 0.360$ ; for symbolic threat, realistic threat, and anti-terror policy support, respectively).

For the prejudice measure, there was an unexpected significant interaction between Contrast 2 and collectivism ( $\beta = -0.17, t = -2.63, p = 0.009$ ). Simple slopes analyses at high and low levels of

**Table 1**

Standardized regression coefficients for the effects of affirmation status on symbolic threat, realistic threat, prejudice, and policy support as functions of individualism and collectivism.

	Symbolic threat	Realistic threat	Prejudice	Support for discriminatory policy
Contrast 1 = self (2), control (-1), group (-1)	-0.01	-0.088	-0.028	-0.189*
Contrast 2 = self (0), control (1), group (-1)	-0.037	0.015	0.005	0.025
Individualism (mean centered)	-0.03	-0.005	0.017	0.018
Collectivism (mean centered)	-0.001	-0.036	-0.089	0.107
Contrast 1 * individualism	-0.157*	-0.203**	-0.086	-0.238***
Contrast 1 * collectivism	0.025	-0.074	-0.024	0.001
Contrast 2 * individualism	0.067	0.013	0.038	0.092
Contrast 2 * collectivism	-0.112	-0.096	-0.170**	-0.088
Individualism * collectivism	-0.227**	-0.237**	-0.169*	-0.184**

\*  $p < 0.05$ .\*\*  $p < 0.01$ .\*\*\*  $p < 0.001$ .

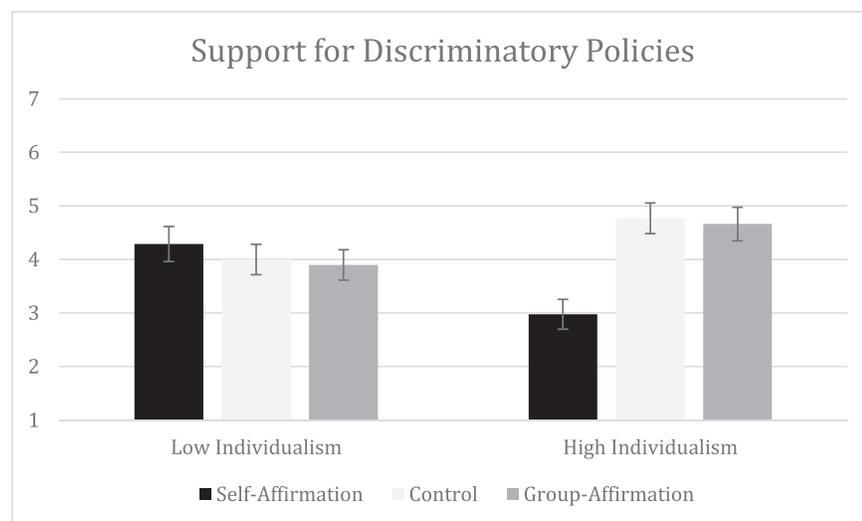
collectivism revealed that among participants high in collectivism, the group affirmation condition resulted in marginally higher prejudice (*Estimated M* = 3.06) than in the control condition, (*Estimated M* = 2.65;  $\beta = -0.147$ ,  $t = -1.73$ ,  $p = 0.086$ ). That is, in this congruent condition (high collectivists/group affirmation), group affirmation, if anything, slightly increased prejudice. Among participants low in collectivism the pattern reversed ( $\beta = 0.158$ ,  $t = 1.82$ ,  $p = 0.070$ ), such that participants in the group affirmation condition reported marginally lower prejudice (*Estimated M* = 2.86) compared to participants in the control condition (*Estimated M* = 3.31). This suggests that unlike for self-affirmation, there was not a congruency effect for group affirmation. Rather, group affirmation appeared to have no effect or, in the case of prejudice, it only reduced prejudice among those low in collectivism (i.e., when *incongruent* with how participants defined themselves).

In addition to the above effects involving the experimental manipulation, as shown in Table 1 there was also a consistent pattern of interaction between the two individual difference measures (individualism \* collectivism). A breakdown of these effects revealed an unexpected pattern whereby threat, prejudice, and support for anti-terrorism policies were all higher among participants at the extremes - that is, among participants who were both high in individualism and low in collectivism, or vice versa. Namely, among participants high in individualism, collectivism was negatively associated with symbolic threat ( $\beta = -0.246$ ,  $t = -2.85$ ,  $p = 0.005$ ), realistic threat ( $\beta = -0.292$ ,  $t = -3.46$ ,  $p = 0.001$ ), prejudice ( $\beta = -0.272$ ,  $t = -3.17$ ,  $p = 0.002$ ), and non-significantly with support for anti-terrorism ( $\beta = -0.092$ ,  $t = -1.09$ ,  $p = 0.275$ ). Among participants low in individualism, by contrast, collectivism was positively associated

with symbolic threat ( $\beta = 0.244$ ,  $t = 2.10$ ,  $p = 0.037$ ), marginally higher realistic threat ( $\beta = 0.220$ ,  $t = 1.93$ ,  $p = 0.055$ ), non-significantly higher prejudice ( $\beta = 0.094$ ,  $t = 0.82$ ,  $p = 0.416$ ), and significantly higher support for anti-terrorism policies ( $\beta = 0.306$ ,  $t = 2.70$ ,  $p = 0.007$ ). The resulting pattern was one in which participants at both extremes - both participants who were highly individualistic but not collectivistic *and* participants who were highly collectivistic and but not individualistic - reported heightened threat and anti-terrorism support. The results suggest similarities to optimal distinctiveness theory (Brewer, 1991), in that threat perceptions may have been tempered among participants experiencing neither too much nor too little social connection or isolation. This effect, however, was independent of the effects involving affirmation reported above and, given space limitations, is not discussed further in the present report.

### 3.2.4. Moderated-mediation analyses: the role of symbolic and realistic threat of immigrants

Finally, we sought to understand the inter-relationships among self-affirmation, perceptions of symbolic and realistic threat, and support for discriminatory policies. Specifically, we tested the hypothesis that the effect of Contrast 1 (i.e., the impact of self affirmation vs. the other two conditions) on anti-terrorism policies was mediated by the two threat dimensions (using the Hayes & Preacher, 2014 PROCESS macro for SPSS). Moreover, given the moderation above by individualism, we further tested whether these mediational paths were strongest among those high in individualism (i.e., a test of moderated-mediation). We included as control variables all of the coefficients used in the above regression models, including Contrast 2, collectivism, and their respective interaction terms. The analysis with 1000 bootstraps yielded



**Fig. 1.** Estimated means and standard errors for discriminatory policies as a function of affirmation status and individualism ( $\pm 1$  SD).

support for presence of moderated-mediation with each of the threat dimensions, as the confidence interval around the index of moderated mediation for each threat dimension was significantly larger than zero (effect estimate for symbolic threat =  $-0.05$ , 95% CI [ $-0.14$ ,  $-0.01$ ]; effect estimate for realistic threat =  $-0.08$ , 95% CI [ $-0.18$ ,  $-0.02$ ]). The results supported the idea that self affirmation significantly reduced symbolic and realistic threat of immigrants among people high in individualism, and this reduction in threat partially explained why these individuals had lower support for discriminatory antiterrorism policies.

### 3.3. Discussion

The aims of this research were to examine the potential utility of self-affirmation and group-affirmation procedures as ways to diminish symbolic and realistic threat, prejudice and support for discriminatory policy, among French citizens, and to investigate individualistic and collectivistic orientations as moderators of the effect of self and group affirmation on this form of prejudice. Results indicate that self affirmation was effective in reducing threats and support for discriminatory antiterrorism policy, particularly among those high in individualism. Self affirmation helped buffer people high in individualism against threat of immigrants, which in turn caused them to be less supportive of discriminatory anti-terror policies. However, we found no evidence of parallel effects for group affirmation as a function of collectivism. That is, people who were prone to conceptualizing the self in interdependent, collectivistic terms were not affected by the manipulation that affirmed a salient, collective identity. The results therefore suggest that individual and collective identities are not equally implicated as plausible avenues through which to reduce prejudice and discriminatory policy preferences in the aftermath of terrorism.

#### 3.3.1. Asymmetries between the individual and collective self

A variety of research indicates that people do not experience threats to the individual and collective selves in the same way. In one set of studies (Gaertner et al., 1999), people who experienced a threat to their individual self perceived more threat and were more derogating of the source compared to those who experienced the equivalent threat directed at the collective self. Similarly, when people were asked to consider terrorism as a threat to either their individual self or to their collective self, only those in the individual self condition displayed increases in authoritarian reactions (Asbrock & Fritsche, 2013). And to the extent that people experience a personal terrorist threat, they are more likely to restrict freedoms of members from the whole threatening out-group (i.e., Muslims) (Skitka, Bauman, & Mullen, 2004). Taken together, these studies suggest that the individual self may be motivationally primary (Gaertner et al., 1999), such that people are more sensitive and responsive to individual level threats than they are to comparable threats directed at the collective self.

In terms of the group-affirmation null results, other research has also found null effects of group-affirmation procedures in intergroup contexts, for example, in studies conducted in Israel and Bosnia and Herzegovina (Čehajić-Clancy et al., 2011). Group affirmation failed to induce individuals to acknowledge their group's responsibility when serious moral transgressions were made salient, in particular, Israelis' responsibility for victimization of Palestinians and Bosnian Serbs' responsibility for the Srebrenica genocide (see also Badea et al., 2017; Ehrlich & Gramzow, 2015). Čehajić-Clancy et al. (2011) explained this result in terms of motivation to maintain a positive image of one's group (Tajfel & Turner, 1986). As such, acknowledging genocide committed by the in-group while simultaneously maintaining a positive view of this group may be a great challenge.

One potential impact of the group-affirmation manipulation might pertain to the nature of groups and how they are cognitively represented. Group affirmation requires participants to think in terms of their group, which can enhance the salience of group boundaries and

differences. In parallel, collectivistic persons might be more identified with the national group and group affirmation can accentuate the salience of this social identity (Ehrlich & Gramzow, 2015). In line with these results, it is possible that group affirmation may be making group boundaries salient, and the salience of group boundaries might increase prejudice. If so, the group affirmation could be simultaneously doing two opposing things: making people more prejudiced (via salient group boundaries) and less prejudiced (via affirmation), which could mitigate the effect of each other.

One potential limitation of the present study concerns the measure of individual differences in individualism and collectivism that we conceptualized as indicative of independent versus interdependent self-construal (see also Oyserman et al., 2002; Taras et al., 2014). Recent research and theorizing has proposed a new theoretical model deconstructing the concepts of "independence" and "interdependence" into their constituent, individual-level dimensions, and tested the prevalence of different cultural models of selfhood across a wide range of cultural samples (Vignoles et al., 2016). They identified a seven-factor structure underlying individual differences in independent and interdependent self-construals (e.g., self-reliance versus dependence on others, self-containment versus connection to others, difference versus similarity). Potentially, then, this new model could afford a more precise understanding of the nature of independence and interdependence that could relate to the threat of terrorism. For example, those high in self-reliance may respond differently to terrorism threat than those who emphasize difference from others, although both would characterize those high in independence.

#### 3.3.2. Terrorism and the self

Terrorism, particularly in the French context, may disproportionately impact the individual self because of its shadowy, often non-specific individual targets. Terrorists do not often target people in uniform but rather people who are simply going about their daily life. Thus, compared to other forms of intergroup conflict and threat, the threat from terrorism might be especially likely to be felt on the individual level, thereby leaving ample room for a brief self-affirmation manipulation to nudge beliefs and perceptions of the outgroup. Indeed, it was participants who were most likely to perceive their world in individualistic terms who were most impacted by the self-affirmation procedure. Future research should investigate when and why collectivistic people are sensitive to affirmation procedures. It is possible that group affirmation needs to be framed more specifically in terms of the importance of values to one's family (as in Hoshino-Browne et al., 2005). During and after the terrorist attacks, individuals are concerned not only for their own safety but also for their families (Arciszewski et al., 2009). It can be assumed that the terrorist threat is not necessarily aimed at the nation as such, but on individuals and their relatives. A group affirmation referring to an individual's family could be potentially effective in reducing hostile attitudes toward immigrants who may be thought to be the actors of terrorist acts.

Indeed, the terrorist attacks in Paris on January 7 and November 13, 2015, in Nice on July 14, 2016, and in other European countries—allegedly perpetrated by second-generation immigrants (Le Monde, 2015)—have reinvigorated the immigration debate in Europe, and around the world, and highlighted a number of pressing social psychological questions. The question we have raised in this article was how citizens within an affected country, France, react psychologically to the perceived threat posed by the terrorist attacks. Our research shows that they react, in part, by increasing support for discriminatory policies against immigrants. However, writing exercises based on self-affirmation theory could potentially reduce negative reactions. Results showed that people who define their self in individualistic terms are sensitive to the affirmation procedure mobilizing important self-values. For them, self affirmation successfully diminished the perception of the threat posed by immigrants and consequently, their support for discriminatory antiterrorism policies.

## Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jesp.2017.11.004>.

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