Contemplating the Ultimate Sacrifice: Identity Fusion Channels Pro-Group Affect, Cognition, and Moral Decision Making

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Although most people acknowledge the moral virtue in sacrificing oneself to save others, few actually endorse self-sacrifice. Seven experiments explored the cognitive and emotional mechanisms that underlie such endorsements. Participants responded to 1 of 2 moral dilemmas in which they could save 5 members of their country only by sacrificing themselves. Over 90% of participants acknowledged that the moral course of action was to sacrifice oneself to save others (Experiment 1), yet only those who were strongly fused with the group preferentially endorsed self-sacrifice (Experiments 2–7). The presence of a concern with saving group members rather than the absence of a concern with self-preservation motivated strongly fused participants to endorse sacrificing themselves for the group (Experiment 3). Analyses of think aloud protocols suggested that saving others was motivated by emotional engagement with the group among strongly fused participants but by utilitarian concerns among weakly fused participants (Experiment 4). Hurrying participants' responses increased self-sacrifice among strongly fused participants but decreased self-sacrifice among weakly fused participants (Experiment 5). Priming the personal self increased endorsement of self-sacrifice among strongly fused participants but further reduced endorsement of self-sacrifice among weakly fused participants (Experiment 6). Strongly fused participants ignored utilitarian considerations, but weakly fused persons endorsed self-sacrifice more when it would save more people (Experiment 7). Apparently, the emotional engagement with the group experienced by strongly fused persons overrides the desire for self-preservation and compels them to translate their moral beliefs into self-sacrificial behavior.

Keywords: identity fusion, morality, moral judgment, self-sacrifice, social identity

I'm only really concerned about myself.
—Fan Meizhong on why he callously abandoned his pupils after a catastrophic earthquake struck his school (Spencer, 2008)

Professor Librescu died as he lived, devoted to his students and to his profession.
—From a memorial to Dr. Liviu Librescu, who sacrificed his life to save his students during the April 16th, 2007, Virginia Tech campus shootings

When people encounter life and death moral dilemmas, they almost invariably know what they *should* do. Nevertheless, cases

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like Fan Meizhong's demonstrate that *knowing* does not guarantee *doing*. Fan acknowledged on his blog that he knew that he should have helped his students evacuate. Yet, when the earthquake struck, he shouted "Stay calm, it's an earthquake!" and ran for it—without even bothering to see if his pupils were following. Later, when one of his students asked for an explanation, he helpfully replied, "I have a very strong sense of self-preservation." In contrast, when Dr. Librescu heard gunshots, he swiftly barricaded himself against the classroom door, giving his students time to escape through an open window. This act of valor cost him his life. Which raises the following question: If merely recognizing that group members are in mortal danger is not enough to motivate many people to sacrifice themselves to save others, what does compel such actions?

In this article, we suggest that one important antecedent of self-sacrifice for one's group is identity fusion, which denotes a visceral sense of oneness with the group. We suggest further that the sense of connection experienced by strongly fused persons triggers emotional reactions to the plight of fellow group members, emotional reactions that motivate the decision to sacrifice their lives for these group members. Weakly fused persons do not have the same emotional reactions when they learn that their fellow group members are imperiled; instead, their first impulse is to preserve their own lives. To test these possibilities, in seven investigations we explored the mental processes that unfold as people contemplate sacrificing themselves for members of their group. Identity fusion theory (Swann, Jetten, Gómez, Whitehouse, & Bastian, 2012) provides the conceptual context for this work.

Identity Fusion

The identity fusion approach assumes that when people become fused with a group, they theoretically experience a visceral sense of "oneness" with that group. This sense of oneness involves the union of the personal self (viz., idiosyncratic features of the individual) and a social self (viz., features the individual shares with the group). In its embrace of the distinction between the personal and social self, identity fusion resembles "group identification," a key variable within social identity formulations (e.g., Ellemers, Spears, & Doosje, 1997; Postmes, Haslam, & Jans, 2013; Smith, Seger, & Mackie, 2007). A central difference between identification and fusion, however, involves the nature of the "glue" that bonds group members to the group. Social identity formulations hold that group members are bound to one another through *categorical* ties that are based on the degree to which members embody the prototypic qualities of the group; the unique relationships that group members establish with one another are not regarded as an important contributor to identification. In fact, in the widely used "minimal-group paradigm," participants become identified with the ingroup and biased against the outgroup despite never having encountered a single member of either group (e.g., Billig & Tajfel, 1973; Turner, Sachdev, & Hogg, 1983). Not surprisingly, then, the pro-group sentiments of highly identified persons are directed toward the abstract category rather than individual members of the category (e.g., Tajfel & Turner, 1979; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987).

In contrast, the relational ties principle of fusion theory (Swann et al., 2012) holds that strongly fused persons are not bound to the group category only, but also to their fellow group members (see also Aron, Aron, Tudor, & Nelson, 1991; Markus & Kitayama, 1991). The presence of such relational ties means that fused persons view other group members as unique individuals rather than interchangeable members of the category. These relational ties may contribute to feelings of family-like mutual obligation and shared strength. These feelings may help explain why measures of identity fusion consistently outperform measures of identification in predicting endorsement of fighting and dying for individual members of the group (Gómez, Brooks, et al., 2011). Mutual obligation and shared strength may also explain why, when presented with an opportunity to donate to fellow Spaniards in need of financial help, strongly fused persons donate more personal funds than weakly fused persons (Swann, Gómez, Huici, Morales, & Hixon, 2010). Moreover, when strongly fused persons are ostracized by fellow group members, they refuse to abandon the group and instead increase their endorsement of extreme sacrifices for the group (Gómez, Morales, Hart, Vázquez, & Swann, 2011). Further, in several versions of the trolley dilemma (Foot, 1967), fused persons endorsed plunging themselves in front of a speeding train to save several members of their group. In contrast, highly identified persons were generally unwilling to sacrifice themselves for ingroup members (Gómez, Brooks, et al., 2011; Swann, Gómez, Dovidio, Hart, & Jetten, 2010).

Of particular relevance to our interest in the processes that give rise to endorsement of extreme pro-group behavior, several studies showed that the effects of fusion could be amplified either by increasing people's physiological arousal (Swann, Gómez, Huici, et al., 2010) or priming their personal self-views (Gómez, Brooks, et al., 2011; Swann, Gómez, Seyle, Morales, & Huici, 2009). Similarly, in one study, group-directed personal agency (e.g., "I am responsible for my group's actions") mediated the relationship between identity fusion and pro-group behavior (Gómez, Brooks, et al., 2011). In another, relational ties (e.g., "Members of my country are like my family to me") mediated the relationship between identity fusion and endorsement of pro-group behavior (Swann et al., in press). In all of the foregoing research, measures of identification were relatively poor predictors of extreme pro-group outcomes and agency did not mediate the effects of identification on pro-group behavior. Together, this evidence suggests that identity fusion is qualitatively distinct from social identification (for further discussion, see Buhrmester et al., 2012; Gómez, Brooks, et al., 2011; Swann et al., 2012).

Of particular relevance here, evidence that increasing physiological arousal amplifies the effect of fusion on pro-group behavior (Swann, Gómez, Huici, et al., 2010) suggests that people's emotional responses may play a role in motivating fused persons to enact pro-group behavior, including behaviors that have moral overtones. The role of emotion in moral decision making has recently attracted the attention of several researchers. For example, after a decades-long emphasis on the impact of relatively controlled, explicit beliefs in moral judgment (Kohlberg, 1969; Turiel, 1983), researchers have now provided evidence for the importance of automatic, intuitive processes in moral behavior (Blair, 1995; Haidt, 2001; Pizarro & Salovey, 2002).

A case in point is "moral dumbfounding," in which people blithely endorse moral judgments that subsequent questioning reveals they have no rational basis for having made (Haidt, 2001). Such immediate, non-conscious, intuitive processes share many of the properties of emotional reactions. Evidence of the role of such

processes in moral reasoning has persuaded several researchers to propose that two separate mental systems (Chaiken & Trope, 1999; Posner & Snyder, 1975) govern moral decision making—one that is rapid, automatic, and emotion-driven and another that is deliberate and logical (e.g., Greene, 2007, 2009; Greene, Morelli, Lowenberg, Nystrom, & Cohen, 2008; Lombrozo, 2009). Recent evidence using Jacoby's (1991) process dissociation model has offered direct support for the operation of these dual systems. Whereas some moral judgments (viz., those involving deontological principles) were uniquely related to emotional processes such as empathic concerns and religiosity, other moral judgments (viz., those involving utilitarian principles) were uniquely related to need for cognition. Furthermore, just as a time-pressure manipulation selectively reduced adherence to utilitarian principles, an empathy enhancing manipulation selectively increased adherence to deontological principles (Conway & Gawronski, 2013).

Here, we suggest that a dual process approach can also be used to illuminate the unique moral judgments of persons who are strongly versus weakly fused to their group. That is, insofar as fusion taps a visceral feeling of oneness with the group, threats to other group members may activate the same emotions of tension, distress, and anxiety that they would experience were they themselves in danger. Moreover, these emotional reactions should compel them to apply deontological principles to the plight of their group members and resolve to save them. Among the many who decide to sacrifice themselves, the implications of their own death should come to mind only after contemplating the plight of the group. Furthermore, if they decide *not* to sacrifice themselves, they should do so while resigning themselves to find another way to save the ingroup (i.e., deny the implications of the binary options in the dilemma).

In contrast, when weakly fused persons learn that members of their group are imperiled, the relative absence of feeling one with the group will ensure that they experience minimal distress on behalf of the group members. Free of emotional reactions to the plight of the group, their immediate focus may be on how to insure their own personal survival. If they have time to reflect, weakly fused participants may go on to ask themselves if it is morally defensible to murder five ingroup members to save one person (themselves). They may conclude that it is not. As such, in those relatively rare instances in which weakly fused individuals do walk down the path to self-sacrifice, they may be prompted them to do so by carefully reasoned, utilitarian principles. To test these ideas, we developed two new intragroup versions of the trolley dilemma (Foot, 1967), a widely used paradigm in the moral judgment literature.

Identity Fusion in Two Intragroup Versions of the Trolley Dilemma

In previous intragroup variations of the trolley dilemma (Swann, Gómez, Dovidio, et al., 2010), participants first imagined that they were standing on an overpass above some train tracks. Down the tracks, they could see that five ingroup members were trapped and were about to be crushed by a runaway train. As such, participants first learned of the plight of several ingroup members (activating their social self); only after this they learned of their option to save the ingroup members by sacrificing themselves (activating their personal self). Conceivably, activating the social self prior to the personal self may have elevated the psychological potency of the social self, causing strongly fused participants to endorse pro-group behavior to a greater degree than they would have otherwise. In addition, in this dilemma, the extreme behavior (dying for the ingroup) was always the pro-group behavior.

To determine whether fusion effects were limited by either the order in which the social self was activated or the relative extremity of the pro-group behavior, we constructed two new variations of the trolley dilemma that varied these factors. As in previous research (see Gómez, Brooks, et al., 2011; Swann, Gómez, Dovidio, et al., 2010), in one variation participants first learned that several ingroup members were imperiled (activating their social self) and then learned that they could save those ingroup members by placing themselves in jeopardy (activating their personal self and availing them of the possibility of enacting an extreme pro-group behavior). In a second variation, participants first learned that they themselves were in jeopardy (activating their personal self) and then learned that they could save themselves by (surreptitiously) placing several ingroup members in peril (activating their social self and availing them to the possibility of enacting an extreme anti-group behavior). In the latter variation, we expected that strongly fused persons would still be particularly inclined to endorse pro-group action, with weakly fused persons endorsing the extreme anti-group option of ensuring their own survival by placing several group members in harm's way. In short, our new intragroup variations of the trolley dilemma tested whether fusion effects would generalize to scenarios in which the social self was activated after the personal self and in which there was an option for extreme anti-group behavior to guarantee personal survival.

We named the first of the new intragroup variations of the trolley dilemma the *summoning the death train* scenario. Individual participants learned that a runaway train was about to crush and kill five ingroup members (citizens of his/her country) unless they flipped a switch that diverted the train to their own railway track, killing them but leaving the five ingroup members unharmed. Participants then chose between letting the train crush the five ingroup members or flipping the switch to sacrifice their own lives.

The second new trolley dilemma was the *luring others to their death* scenario. It began by having participants imagine that they were themselves trapped on a railway track, with a deadly train hurtling their way. Then, they learned that a group of five fellow citizens was 200 m away, and if participants called them, they would come to help. Their fellow citizens were unaware, however, that upon arriving, they would become trapped between the train and the participant, saving the participant but killing them. Participants then chose between doing nothing and dying versus saving their own lives by inviting the five ingroup members into a deathtrap.

With these two new variations of the trolley dilemma in hand, we conducted a series of seven investigations. The first three experiments examined the basic properties of the "summoning" and "luring" dilemmas. Experiment 1 was designed to provide information regarding participants' perceptions of the morality of sacrificing oneself, versus five ingroup members, in the context of each dilemma. We expected that in adherence to widely shared social values, most participants would recognize self-sacrifice as more moral than sacrificing others to save oneself. Experiment 2 asked whether, in both dilemmas, identity fusion would influence endorsement of self-sacrifice, with strongly fused persons tending

to endorse sacrificing themselves to save other ingroup members, whereas weakly fused participants would not. Experiment 3 tested our assumption that strongly fused persons endorsed self-sacrifice out of devotion to fellow group members against the rival hypothesis that they were unconcerned with self-preservation.

In the remaining four experiments, we used the new dilemmas to examine participants' conscious thoughts and emotions while they decided whether to sacrifice themselves or members of their group. We were especially interested in the processes that underlay the tendency for strongly fused persons to endorse sacrificing themselves for ingroup members. Insofar as strongly fused persons experience a visceral feeling of oneness with other group members, when they learned that other group members were in grave danger, they should experience emotional reactions that would motivate them to save ingroup members from their plight. Even if they fail to endorse sacrificing themselves, they should resolve to find another way to save the ingroup members. In contrast, learning that members of their group are imperiled should produce relatively little group-related emotional distress among weakly fused persons. Instead, their initial impulse should be to focus on preserving their *own* lives. If given enough time to reflect, some weakly fused participants may become concerned with the objectively problematic decision of endorsing the murder of five ingroup members to save themselves. They may accordingly endorse self-sacrifice. We tested these hypotheses in Experiment 4.

One implication of the foregoing analysis is that curtailing the amount of time that people have before responding to the dilemma should magnify the differences between strongly versus weakly fused individuals. That is, if people are informed that members of their group are imperiled and required to indicate immediately whether they would sacrifice themselves to save these group members, their emotionally charged, intuited response should prevail (e.g., Rand, Greene, & Nowak, 2012; Suter & Hertwig, 2011). Specifically, hurrying participants' responses should exaggerate the tendency for strongly fused people to endorse sacrificing themselves for ingroup members and for weakly fused people to save themselves at the expense of ingroup members. We tested these ideas in Experiment 5.

A second implication of this analysis is that priming the personal self of participants should have opposite effects on strongly versus weakly fused persons. That is, because fused persons have a visceral sense of oneness with the group, priming the personal self should simultaneously activate both selves. If they then learn that ingroup members are imperiled, the priming manipulation should amplify their immediate emotional impulse to sacrifice themselves for the ingroup members. In contrast, because weakly fused persons lack a visceral sense of oneness with the group, priming the personal self should activate their personal self only. When they then learn that ingroup members are imperiled, the priming manipulation should amplify their impulse to focus on their own personal survival. Their willingness to engage in self-sacrifice should therefore decline (see also Conway & Gawronski, 2013). We tested these hypotheses in Experiment 6.

A third implication of this analysis is that the strong relational ties that fused persons develop toward other ingroup members should prevent them from thinking of such individuals in utilitarian terms. Note that many people think that the life of even a single family member is sufficient to justify the sacrifice of their own life. Insofar as strongly fused persons develop family like ties to fellow group members, they should be just as inclined to sacrifice their lives for a single member of the ingroup as for multiple members of the ingroup. In contrast, weakly fused persons may take a relatively pragmatic view of the value of the lives of ingroup members. Rather than seeing the lives of each individual ingroup member as sacrosanct, they see the lives of ingroup members as adding incrementally to the value of the group as a whole. For this reason, when it comes to sacrificing their lives for ingroup members, weakly fused persons may be sensitive to utilitarian principles: the more lives at stake, the more inclined they should be to sacrifice their own life. We tested this hypothesis in Experiment 7.

Experiment 1: Moral Perceptions of Self-Sacrifice

The goal of this Experiment was to assess perceptions of the morality of each of the two response options to our intragroup versions of the trolley dilemma. Participants were randomly assigned to read either the *summoning* or *luring* dilemma. They then indicated the degree to which they perceived sacrificing oneself versus the ingroup members to be the morally correct course of action.

Method

Participants. Participants were 41 Spanish undergraduate volunteers (27 women; M_{age} = 34.56 years, SD = 8.95) enrolled in Universidad Nacional de Educación a Distancia (UNED). All participated online, typically from their homes.

Procedure. Participants in the *summoning* condition learned that a runaway train was headed for five Spaniards (i.e., ingroup members for our Spanish participants) who would be crushed unless the participant flipped a switch to divert the train to the participant's railway track. If diverted, the train would crush the participant but spare the ingroup members. Participants in the *luring* condition learned that a runaway train was headed toward the participant, who would be crushed if no one intervened. They also learned the participant could call five Spaniards who were 200 m away. The Spaniards would come to help, not realizing that upon arrival, they would become trapped in the path of the train and killed, saving the participant.

After reading the dilemma, participants responded to a binary assessment of morality. It consisted of a single item that asked the following: "Which of the two choices (self-sacrifice or survival) is the more moral and ethical choice?"

Participants then completed a continuous measure of perceived morality. It consisted of three items. Scales were anchored only at the ends and ranged from 1 (*to let the 5 ingroup members die*) to 6 (*self-sacrifice to save 5 ingroup members*). Participants responded to these items: "The response that is good in general is . . . ," "The right response is . . . ," and "The ethical response is . . . ." Responses to the three items covaried (α = .74), so we accordingly summed them.

Results

Binary measure of perceived morality. A chi-square analysis on the choice participants considered as the more moral was significant, $\chi^2(1) = 26.56$, $p < .001$, indicating that fully 90.2% of participants chose the self-sacrifice option as the more moral and

ethical. In addition, the type of dilemma had little impact on perceptions of morality. That is, a binary logistic regression with type of dilemma as the predictor (summoning vs. luring, effect coding: −1, 1) indicated no effect of dilemma on perceptions of the extent to which the self-sacrifice was moral and ethical ($p = .55$).

Continuous measure of perceived morality. We first compared the overall means for each dilemma against the theoretical midpoint of the scale (3.5). Self-sacrifice was rated as more moral than allowing the ingroup members to die in both the *luring* condition, $t(15) = 5.76$, $p < .001$, and in the *summoning* condition, $t(24) = 2.32$, $p = .029$. An additional analysis, however, revealed an effect of the dilemma on perceptions of morality. Participants in the *luring* condition perceived self-sacrifice as more moral than participants in the *summoning* condition, $t(39) = 2.49$, $p = .017$, $M = 5.12$, $SD = 1.13$ versus $M = 4.12$, $SD = 1.34$, respectively.

Discussion

As expected, the results of Experiment 1 showed that the vast majority of participants recognized sacrificing oneself to save the ingroup members as morally superior to sacrificing others to save oneself. Participants were especially inclined to acknowledge the moral superiority of self-sacrifice in reference to the "luring" dilemma, probably due to the unsavory nature of the alternative option of tricking others into sacrificing their lives to save oneself. Indeed, recent research shows that when people consider committing harm against others, they normatively rely upon a proscriptive morality that is strict and obligation-based (i.e., to not do harm; Janoff-Bulman, Sheikh, & Hepp, 2009). One implication of these different perceptions of the dilemmas is that participants may be more inclined to endorse self-sacrifice in the "luring" than in the "summoning" dilemma. We tested this possibility in Experiment 2.

The most important goal of Experiment 2, however, was to examine the relationship of identity fusion to willingness to sacrifice oneself for ingroup members. We expected that strongly fused participants would be more inclined to endorse self-sacrifice than weakly fused participants. In addition, we expected that these fusion differences would emerge independent of the perceived morality of endorsing self-sacrifice. For example, we expected that weakly fused individuals would tend to acknowledge the moral superiority of endorsing self-sacrifice but nevertheless refrain from endorsing it.

Experiment 2: Self-Sacrifice for Ingroup Members

Experiment 1 accomplished the first step in validating our new intragroup trolley dilemmas by showing that most participants acknowledged the moral superiority of self-sacrifice within both dilemmas. The second step involved testing our hypothesis that identity fusion would predict participant's responses to these dilemmas.

Method

Participants. Participants were 622 Spanish undergraduate volunteers (357 women; $M_{age} = 34.48$ years, $SD = 11.22$) enrolled in UNED. All participated online.

Procedure. Identity fusion was measured using the seven-item verbal fusion scale (Gómez, Brooks, et al., 2011) with reference to the group "My Country" ($\alpha = .83$). Example items are "I am one with my country," and "I am strong because of my country." Respondents indicated the degree to which each statement reflected their relationship with their country on scales ranging from 0 (*strongly disagree*) to 6 (*strongly agree*). Higher scores reflected stronger fusion with country.[1]

Participants then were randomly assigned to the *summoning* or *luring* condition. After indicating their binary response to the dilemma, participants responded to three items that assessed the perceived morality of their response "I believe that my response is good in general," "I think I have chosen the right response," and "I think that my response is ethical." Responses to each question were made on 7-point scales ranging from 0 (*strongly disagree*) to 6 (*strongly agree*). Responses to the three items covaried ($\alpha = .80$), so we accordingly summed them.

Results

Response to the dilemma. We used a binary logistic regression to examine the impact of fusion, dilemma (summoning vs. luring dilemma, effect coding: −1, 1) and the interaction on self-sacrifice for the ingroup members (in all experiments in this report, fusion was centered, and dichotomous predictors were effect-coded). A main effect of fusion emerged, $B = 0.67$, odds ratio (OR) = 1.96, Wald $\chi^2 = 50.82$, $p < .001$, with strongly fused participants preferring to sacrifice themselves more than weakly fused participants. A main effect of the type of dilemma also emerged, $B = -0.43$, OR = 0.65, Wald $\chi^2 = 23.49$, $p < .001$, such that participants chose to self-sacrifice more in the luring dilemma than in the summoning dilemma (49.7% vs. 31.4%). The Fusion × Dilemma Condition interaction was not significant, $B = -0.03$, OR = 0.97, Wald $\chi^2 = 0.09$, $p = .77$.

Perceived morality of one's response. Although weakly fused persons were reluctant to endorse self-sacrifice for the ingroup members, we expected that they would resemble strongly fused persons in recognizing self-sacrifice as more moral than saving oneself at the cost of others. To test this prediction, we conducted a multiple regression in which the predictors were fusion, dilemma type, response to the dilemma, and all two ways and the triple interaction terms as predictors. The criterion was perceived morality. As expected, only the main effect of the response to the dilemma was significant, $b = 0.50$, $t(614) = 9.23$, $p < .001$, such that participants who chose self-sacrifice considered their response as more moral than those who chose to let the five ingroup members die. All other terms were not significant ($ps > .25$).

Discussion

Our findings replicated previous evidence of a link between identity fusion and willingness to self-sacrifice for the ingroup (Gómez, Brooks, et al., 2011; Swann, Gómez, Dovidio, et al.,

[1] In this investigation and all of the experiments in the article, we also included Mael and Ashforth's (1992) group identification scale and conducted preliminary analyses including it as a predictor. As in previous research on identity fusion (see Swann et al., 2012), identification effects were always weaker than fusion effects and never qualified the effects of fusion. We accordingly deleted identification from the primary analyses.

2010) with two new intragroup trolley dilemmas. No matter whether the dilemma required that the participants take action to either sacrifice themselves (i.e., the "summoning" dilemma) or save themselves (i.e., the "luring" dilemma), strongly fused participants displayed a stronger preference for self-sacrifice than weakly fused participants.

The perceived morality of the response did not figure prominently in how participants responded to the dilemma. Not surprisingly, participants who endorsed self-sacrifice indicated that it was the most moral of the two response options. Indeed, participants who endorsed saving themselves admitted that they had endorsed the *less* moral of the two options. Apparently, identity fusion influences whether individuals are willing to *act* on what they feel they morally *should* do.

Our results also showed that the relationships between fusion and self-sacrifice were similar for each dilemma, as indicated by the lack of an interaction between fusion and dilemma type. This also means that the effects of identity fusion were similar, regardless of the order of identity activation (i.e., social before personal, or vice versa) or the nature of the extreme behavior (dying to save the ingroup members, murdering others to save oneself).[2]

The results of the first two experiments suggest that strongly and weakly fused persons perceived the dilemmas in much the same way. Nevertheless, the relative willingness of strongly fused persons to endorse self-sacrifice may not have reflected devotion to the group as we had expected. Instead, strongly fused persons may have endorsed self-sacrifice because they were less concerned with self-preservation than weakly fused persons. We addressed these competing explanations of the effects of fusion in Experiment 3.

Experiment 3: Is Self-Sacrifice a Sacrifice for Strongly Fused People?

Method

Participants. Eighty-five Spanish undergraduate students from UNED (69 women; M_{age} = 31.40 years, SD = 10.24) participated online for course credit.

Procedure. After learning that the experiment involved responses to moral dilemmas, participants completed the verbal fusion scale (Gómez, Brooks, et al., 2011) with reference to the group "My Country" (α = .85). Then, in counterbalanced order, participants responded to a self-preservation scale and a devotion to saving ingroup members scale on 7-point scales ranging from 0 (*strongly disagree*) to 6 (*strongly agree*). The self-preservation scale (α = .70) included three items ("The most important thing for me when I am in danger is to survive," "I think that the desire to survive is among the most basic of all motives," and "I want to live more than anything else"). The devotion to saving ingroup members scale (α = .70) included three items: "I am devoted to saving ingroup members," "I would kill to save members of my group," and "Protecting the lives of ingroup members is really important to me." After completing these scales, participants were randomly assigned to respond to the *luring* or the *summoning* dilemma.

Results

Relation of fusion to desire for self-preservation and devotion to saving ingroup members. As expected, fusion was unrelated to desire for self-preservation, $r(83) = .02$, $p = .85$, but was related to devotion to saving ingroup members, $r(83) = .35$, $p = .001$.

Response to the dilemmas. Overall, 36.5% of participants chose self-sacrifice. We used a binary logistic regression to examine the impact of fusion, dilemma (summoning vs. luring dilemma), and the Fusion × Condition interaction on self-sacrifice for ingroup members. The analysis yielded a main effect of fusion, $B = 1.89$, OR = 6.61, Wald $\chi^2 = 4.59$, $p = .032$, indicating that strongly fused participants were more willing to sacrifice themselves than weakly fused participants. There was also a main effect of the dilemma condition, $B = -1.28$, OR = 0.28, Wald $\chi^2 = 6.47$, $p = .01$. More participants chose to self-sacrifice in the luring dilemma than in the summoning dilemma (50% vs. 23.3%). The Fusion × Dilemma Condition interaction was not significant, $B = -0.88$, OR = 0.42, Wald $\chi^2 = 2.62$, $p = .10$. When we decomposed this (non-significant) interaction, strongly fused participants were slightly more willing to self-sacrifice in the luring dilemma, $B = 1.01$, OR = 2.75, Wald $\chi^2 = 6.35$, $p = .012$, than in the summoning dilemma, $B = 2.77$, OR = 15.91, Wald $\chi^2 = 3.87$, $p = .049$, but both values were significant. This finding reinforces our assumption that fusion has similar effects on responses to the two dilemmas.

Further analyses revealed that self-sacrifice was predicted by devotion to protect ingroup members, $B = 0.96$, OR = 2.62, Wald $\chi^2 = 11.56$, $p < .001$, but not by desire for self-preservation ($p = .98$). When fusion and devotion to protect ingroup members were entered simultaneously as predictors, devotion predicted self-sacrifice, $B = 0.89$, OR = 2.43, Wald $\chi^2 = 9.04$, $p = .003$, whereas fusion did not ($p = .35$), presumably because the devotion to protect ingroup members scale directly asked about self-sacrifice (correlation between the devotion to protect ingroup members scale and self-sacrifice is .40, $p < .001$).

Mediational analyses. We conducted a mediational analysis to determine whether the effect of fusion on response to the dilemma was mediated by devotion. A bootstrapping test (n boots = 5,000; Preacher & Hayes, 2008) showed that fusion predicted the response to the dilemma, $b = 0.50$, $p = .036$, and the mediator, devotion, $b = 0.35$, $p < .001$. However, when the mediator was included in the analyses, the effect of fusion on the choice to the dilemmas was not significant ($p = .35$). This suggests that devotion fully mediated the effects of fusion on endorsement of self-sacrifice (95% CI [.0859, .6657]).

[2] To test the group specificity of fusion effects, we also conducted an exact replication of Experiment 2 except that we substituted five outgroup members (i.e., "foreigners") for five ingroup members (i.e., Spaniards) in both dilemmas. As expected, fusion with Spain had no impact on endorsement of self-sacrifice in either dilemma. This result replicates previous evidence that fusion with Spain had no influence on willingness to sacrifice the self for members of other countries (Swann, Gómez, Dovidio, et al., 2010). In addition, fusion was unrelated to perceptions of morality in both dilemmas. Consistent with Experiment 2, the only significant predictor of morality perceptions was one's response to the dilemma. Details of this experiment are available from the first author.

Discussion

The results of Experiment 3 point to two major conclusions. Most important, the heightened willingness of strongly fused persons to endorse self-sacrifice cannot be attributed to a diminished desire for self-preservation, as strongly fused persons were every bit as committed to self-preservation as weakly fused persons. Furthermore, devotion to the group—rather than desire for self-preservation—fully mediated the effect of fusion on endorsement of self-sacrifice.

The second conclusion was that the influence of fusion on responses to the summoning and luring dilemmas was similar on all outcome measures. This finding, together with converging evidence from Experiments 1 and 2, provided empirical justification for using the two dilemmas interchangeably in the remaining experiments in this article. Experiment 4 utilized the summoning dilemma, and subsequent experiments alternated between the luring and summoning dilemmas.

Experiment 4: "Think-Aloud" Protocols as a Window Into Thoughts and Emotions of Participants

If the results of Experiment 3 indicate that devotion to the group guided the responses of strongly fused participants, they fail to reveal precisely how such devotion influenced how participants construed the dilemmas. In Experiment 4, we directly assessed participants' cognitive and emotional reactions to the *summoning* dilemma by presenting them with the dilemma and asking them to think out loud as they decided what to do. In adopting this "think aloud" paradigm, we acknowledge that self-reports have a somewhat checkered history within psychology, in general, and social psychology, in particular (Nisbett & Wilson, 1977). Nevertheless, the most telling critiques of this approach have focused on *retrospective* self-reports. These critiques are justified because when people look back upon their behaviors, a great deal of information is either completely lost or systematically degraded by numerous sources of bias. Nevertheless, this problem is vastly diminished when participants report on their thoughts *concurrently*, that is, *while* they make decisions (Ericsson & Simon, 1993). We accordingly examined participants' concurrent verbal protocols as they decided how to respond to the dilemma.

Method

Participants. Participants were 293 Spanish undergraduates (158 women; $M_{age} = 36.71$ years, $SD = 14.10$) enrolled at UNED. All completed the experiment via a paper and pencil questionnaire for course credit.

Procedure. After learning that the experiment involved responses to moral dilemmas, participants completed some questionnaires, including the verbal scale of fusion with country ($\alpha = .89$). Participants then read the "summoning the death train" dilemma. Immediately after reading the dilemma, participants in the *think aloud condition* learned that they should verbalize their thoughts about the dilemma as they were reaching a decision. Participants in the *control condition* received no such instructions and instead made their decision quietly. When they had come to a decision, participants in both groups responded to the dilemma and completed the items tapping the *perceived morality* of their response ($\alpha = 82$).[3]

Rating the audiotapes. After Swann, Stein-Seroussi, and Giesler (1992), we sought to develop a coding scheme that would capture all of the thoughts that participants generated. To this end, we had four undergraduate assistants (who were unfamiliar with the nature and purposes of our research) listen to participants' "think aloud" audiotapes. Assistants identified five distinct rationales that participants offered as they considered whether they would self-sacrifice for the group or allow the five ingroup members to die.

1. *Survival instinct.* The speaker asserted that his/her life was the most important thing and that his/her response was instinctive, natural, and typical because the motive to survive is the most fundamental human motivation. An example is as follows: "The most important motivation is the instinct to survive."

2. *Distancing from victims.* The speaker individuated, derogated, or distanced victims from the group or from oneself. An example is as follows: "I do not know them personally. They are not my family."

3. *Emotional engagement with the group.* The speaker expressed tension, distress, and anxiety regarding the plight of the group members and a near-instantaneous belief that the morally correct course of action was to sacrifice oneself. An example is as follows: "It would be horrible if they should die and I know without thinking that sacrificing myself is the right thing to do."

4. *Utilitarianism.* The speaker argued that it is better that five compared to one Spaniards to survive. An example is as follows: "It is better to save five lives than only one, even when the one life is mine."

5. *Denial.* The speaker rejected the binary choice that the experiment presented and wished for a better alternative. An example is as follows: "It should be possible to find a way to save all five people and me."

After these five distinct rationales were generated, we began by presenting a new group of four judges (undergraduates also unfamiliar with the purposes of the research) with each of the above descriptions of the five categories. A sixth "other" category was added to accommodate potential responses that did not fit within any of the five rationales: "If you felt the speaker's thoughts were not covered by the five categories, please write down the reason in the space provided" (no judges used this option). Training consisted of providing judges with an elaborated version of the five categories to ensure that they understood them. Judges then rated the extent to which participants verbalized each rationale on a scale ranging from 0 (*definitely not the participant's rationale*) to 4 (*definitely the participant's rationale*). To maximize comprehension, we provided judges with transcripts of the protocols to read as they listened to the audiotapes.

Interjudge reliability (assessed with Cohen's kappas) was quite respectable: survival instinct (.90), distancing victims (.83), emo-

[3] In this experiment as well as Experiments 5–7, we included a measure of perceived morality. In every instance, analyses revealed only a main effect of the response to the dilemma, $B = 0.33$, $t(566) = 7.50$, $p < .001$, such that participants who chose self-sacrifice considered their behavior as more moral than those who chose to let the five ingroup members die. To minimize redundancy, we refrained from reporting this variable in Experiments 5–7.

Table 1
Predictors of Thoughts and Feelings in Experiment 4

	Main effect of the decision to the dilemma			Main effect of identity fusion			Fusion × Decision to the Dilemma interaction		
Thoughts and feelings	*B*	*b*	*sr*	*B*	*b*	*sr*	*B*	*b*	*sr*
Survival instinct	−0.70***	−0.33***	−.31***	−0.66***	−0.37***	−.31***	0.45**	0.25**	.21**
Distancing victims	−0.44**	−0.22**	−.21**	−0.59***	−0.36***	−.30***	0.48***	0.28***	.24***
Emotional engagement	0.48***	0.37***	.34***	0.34***	0.31***	.26***	0.31**	0.27**	.24**
Utilitarianism	0.65***	0.61***	.57***	−0.27***	−0.30***	−.25***	−0.26***	−0.29***	−.25***
Denial	−0.28*	−0.17*	−.16*	0.34**	0.25**	.21**	−0.41**	−0.28**	−.25**

Note. *B* = raw regression coefficient; *b* = standardized regression coefficient; *sr* = semipartial correlation.
* $p < .05$. ** $p < .01$. *** $p < .001$.

tional engagement with the group (.92), utilitarianism (.90), and denial (.82). We accordingly averaged all the judges' response to each item.

Results

Responses to the dilemma. Overall, 22.2% of participants chose to sacrifice themselves. To determine whether our predictor variables influenced responses, we centered fusion, effect coded the experimental condition (−1, 1), and computed the Fusion × Condition interaction (Aiken & West, 1991). With these terms as predictors, we conducted a binary logistic regression on responses to the dilemma. The analysis yielded a main effect of fusion, $B = 0.70$, OR = 2.01, Wald $\chi^2 = 19.18$, $p < .001$, indicating that strongly fused participants were more willing to self-sacrifice than weakly fused. No other effects were significant ($ps > .11$).

Rationales for responses to the dilemma. To determine whether participant's "think alouds" differed as a function of fusion and response to the dilemma, we conducted a series of regressions including fusion, response to the dilemma (effect coding: –1, 1), and the Fusion × Response interaction on each of the five cognitive-emotional processes. The results of the regressions are shown in Table 1. In all five regressions, significant Fusion × Response interactions qualified main effects of fusion and response to the dilemma.

To decompose the interactions, we conducted simple slope analyses. As shown in Figure 1, among participants who chose to sacrifice themselves, strongly fused persons were especially likely to verbalize *emotional engagement with the group* rationales, $B = 0.60$, $t(121) = 3.87$, $p < .001$, whereas weakly fused participants were especially likely to verbalize *utilitarian* rationales, $B = -0.61$, $t(121) = -3.97$, $p < .001$.[4] As shown in Figure 2, no differences were found for either of these categories among participants who chose to let five ingroup members die ($ps > .76$). Figure 2 also shows that among participants who chose to let five ingroup members die, strongly fused participants were especially likely to verbalize *denial* rationales, $B = 0.54$, $t(121) = 5.67$, $p < .001$, whereas weakly fused participants were especially likely to verbalize *survival instinct* and *distancing from victim's* rationales, $B = -0.63$, $t(121) = -7.70$, $p < .001$, and $B = -0.65$, $t(121) = -7.51$, $p < .001$, respectively. No differences were found on these rationales for participants who chose self-sacrifice ($ps > .38$; see Figure 1).

Mediational analyses. We conducted a mediational analysis to determine whether the effect of fusion on response to the dilemma was mediated by emotional engagement associated with Spaniards. The results are displayed in Figure 3. A bootstrapping test (n boots = 5,000; Preacher & Hayes, 2008) confirmed our expectation that emotional engagement with the group partially mediated the effect of fusion on the response to the dilemma.

Discussion

As in Experiments 2 and 3, strongly fused persons endorsed self-sacrifice for fellow group members more than weakly fused participants. Mindful of the fact that self-sacrifice was considerably more common among strongly fused participants, we examined the rationales participants offered as they endorsed self-sacrifice. Strongly fused endorsers of self-sacrifice responded with rationales that emphasized group-related emotions, explaining that it was upsetting to them that their group members were in such a predicament. Many also noted an immediate impulse to forfeit their life to save the lives of the ingroup members. In contrast, among the few weakly fused participants who endorsed self-sacrifice, the decision emerged more slowly and was marked by utilitarian rationales—"Self-sacrifice is called for because the lives of five people are more valuable than the life of one." Tellingly, their reasoning was devoid of any reference to attachment to the group members. Instead, their reasoning focused on minimizing the number of lives lost.

Strongly and weakly fused participants also differed in the rationales they offered for *failing* to endorse self-sacrifice. The mental gymnastics of strongly fused participants were especially intriguing. Even as they decided to consign the ingroup members to their deaths by refusing to endorse self-sacrifice, strongly fused participants denied that they were forsaking their ingroup members. Instead, they insisted that "there must be a different option!" or "the group members must be saved!" In contrast, when weakly fused persons endorsed letting ingroup members perish, they insisted that they were, quite understandably, following their gut survival instincts. They attempted to excuse their decision to prioritize their own survival over that of group members by attempting to distance themselves psychologically from the victims.

[4] These results are based on the explanations provided by the 134 participants in the think aloud condition. Of these 134, nine did not say anything during the think aloud period, yielding a total *N* of 125. We included three predictors in the regression: fusion, choice, and Fusion × Choice interaction, yielding 121 degrees of freedom.

One way of contrasting the responses of strongly and weakly fused participants is in terms of the content of their deontological and utilitarian impulses. For strongly fused persons, their deontological impulse was shaped by emotional distress associated with the possibility that several group members might die. This impulse often led them to endorse self-sacrifice. When it did not, their most common follow-up response was to deny the reality of the dilemma they confronted.

For weakly fused persons, their deontological impulse was shaped by their survival instinct, an impulse that encouraged them to endorse self-preservation. When they resisted this impulse, their follow-up response was to engage in utilitarian reasoning, a process that led a limited number of weakly fused persons to endorse self-sacrifice.

If our participants were indeed motivated by quick, affect-laden, deontological impulses to either ensure the survival of their group members (strongly fused) or ensure their own survival (weakly fused), then manipulations that are designed to amplify deontological impulses should exaggerate the characteristic responses of participants. To test this possibility, in Experiment 5 we hurried participants' responses, a technique that research on moral decision making has shown to amplify deontological responding (Suter & Hertwig, 2011).

Experiment 5: Amplifying Fusion Effects Through Time Pressure

In this experiment, we hurried the responses of some participants using a time-pressure manipulation. We predicted that pressure to respond quickly would exaggerate the tendency for strongly fused persons to self-sacrifice for the group relative to participants who were not under time pressure. In contrast, we predicted that pressure to respond quickly would exaggerate the tendency for strongly fused persons to *refrain from* self-sacrifice for the group relative to participants who were not under time pressure. We tested these predictions using the luring dilemma.

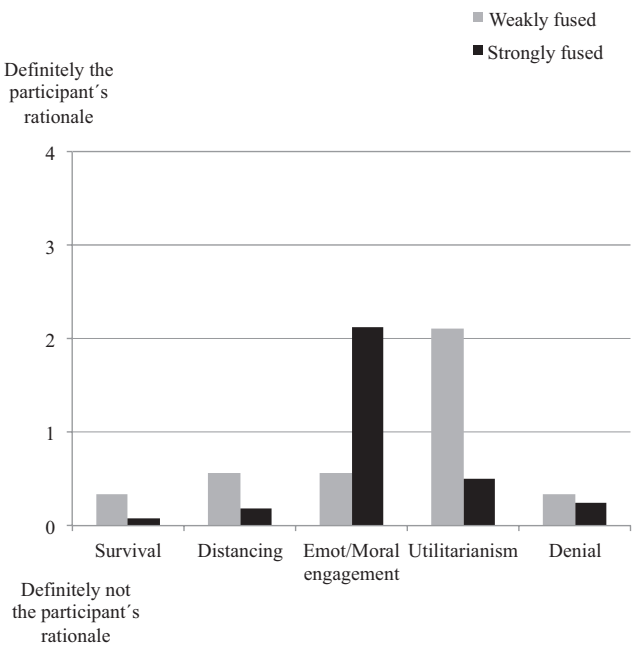

Figure 1. Thoughts and feelings of participants who decided to sacrifice themselves for the group in Experiment 4. Emot = emotional.

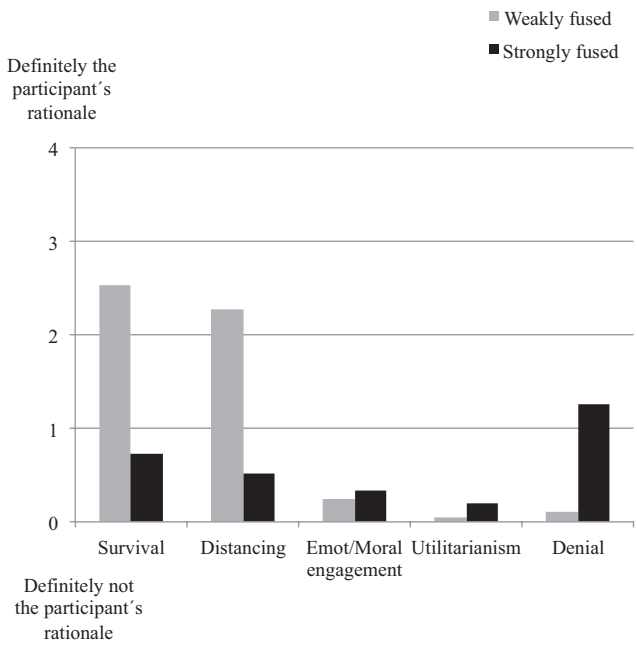

Figure 2. Thoughts and feelings of participants who chose to allow five ingroup members to die in Experiment 4. Emot = emotional.

Method

Participants. Participants were 607 students at UNED who participated online for course credit. Nineteen participants were not included in the analysis because they failed to correctly identify the nationality of the five members in the track or failed to respond to this item. After Rand et al. (2012), we excluded from the analyses participants in the time-pressure condition who took longer than 10 s ($N = 52$) and participants in the control condition who took less than 10 s ($N = 100$). This left a sample of 436 participants (242 women; $M_{age} = 33.90$ years, $SD = 11.08$) for analysis. Although restoring these participants to the analyses weakened our findings slightly, all significant effects remained significant.[5]

[5] When we restored all participants for the analyses, the sample was $N = 588$ (336 women; $M_{age} = 34.01$ years, $SD = 11.10$). For the verbal scale of fusion, $\alpha = .83$. On the response to the dilemma, overall, 61.4% of participants chose to self-sacrifice. The binary logistic regression on response to the dilemma yielded a Fusion × Time Pressure interaction, $B = 0.57$, OR = 1.76, Wald $\chi^2 = 24.13$, $p < .001$. Strongly fused participants were more willing to self-sacrifice in the time-pressure condition than in the control condition, $B = 0.36$, OR = 1.43, Wald $\chi^2 = 7.79$, $p = .005$. In contrast, weakly fused participants were less willing to self-sacrifice in the time-pressure condition than in the control condition, $B = -0.66$, OR = 0.51, Wald $\chi^2 = 29.88$, $p < .001$. This interaction qualified a main effect of fusion, $B = 0.90$, OR = 2.46, Wald $\chi^2 = 61.03$, $p < .001$, wherein strongly fused participants preferred to sacrifice themselves for the group to a greater degree than weakly fused participants. No other effects were significant ($ps > .09$).

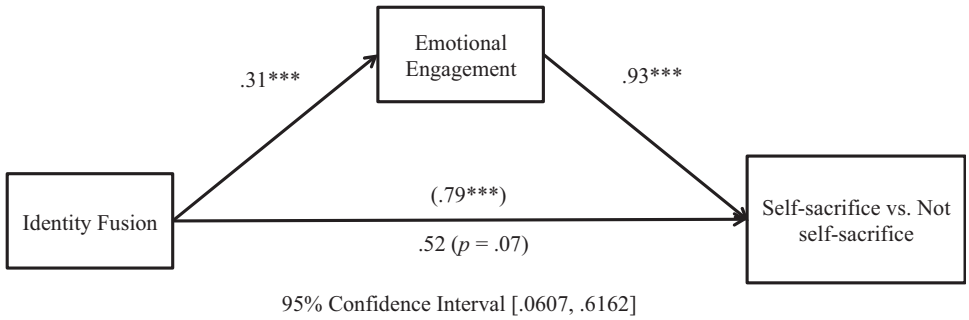

Figure 3. Emotional engagement mediates the effect of identity fusion on self-sacrifice in Experiment 4. *** $p < .001$.

Procedure. After learning that the experiment involved responses to moral dilemmas, participants responded to some questionnaires that included the verbal scale of fusion with country ($\alpha = .81$). Participants were randomly assigned to one of two experimental conditions. In the *time-pressure condition*, participants received instructions to respond to the dilemma in no more than 10 s. In the *control condition*, participants received no instructions about timing. Participants then read the *luring* dilemma. Afterwards, they completed the same outcome measures used in the previous experiments.

Results

Response to the dilemma. Overall, 59.6% of participants chose to self-sacrifice. We used a binary logistic regression to examine the impact of fusion (centered), dilemma condition (control vs. time-pressure; effect coding: −1, 1), and the Fusion × Condition interaction on response to the dilemma. A main effect of fusion emerged, $B = 1.06$, OR = 2.89, Wald $\chi^2 = 51.06$, $p < .001$, indicating that strongly fused participants preferred to sacrifice themselves for the ingroup members. This main effect was qualified by a Fusion × Time Pressure interaction, $B = 0.78$, OR = 2.18, Wald $\chi^2 = 27.65$, $p < .001$. As seen in Figure 4, strongly fused participants were more willing to self-sacrifice in the time-pressure condition than in the control condition, $B = 0.51$, OR = 1.67, Wald $\chi^2 = 11.76$, $p < .001$. In contrast, weakly fused participants were less willing to self-sacrifice in the time-pressure condition than in the control condition, $B = -0.73$, OR = 0.48, Wald $\chi^2 = 26.14$, $p < .001$. No other effects were significant ($ps > .25$).

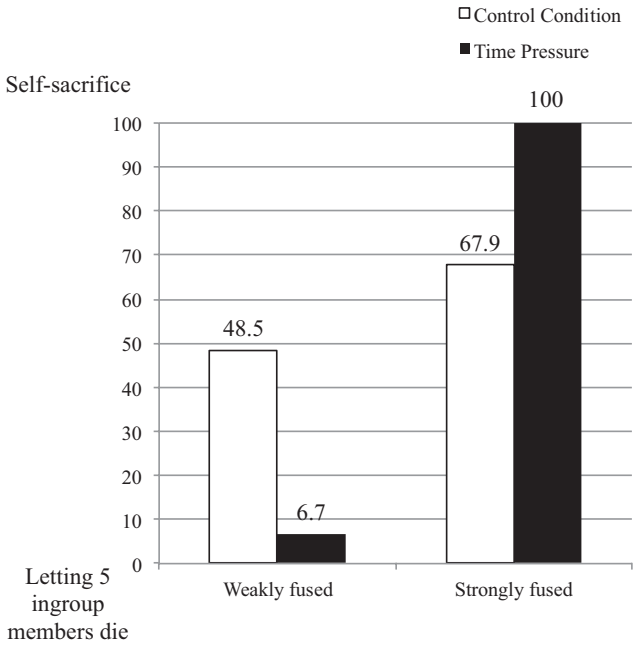

Figure 4. Self-sacrifice as a function of identity fusion and time pressure in Experiment 5. Values for weakly versus strongly fused participants were ±1 *SD* from the mean ($M = 2.47$, $SD = 1.22$).

Discussion

Our findings confirmed our expectation that strongly versus weakly fused people would have very different responses to the dilemma when given little time to consider the situation. In particular, encouraging participants to respond to the dilemma quickly increased the tendency for participants to "go with their gut." For strongly fused persons, their gut told them to save their group members; for weakly fused persons, their gut told them to save themselves. Presumably, this pattern reflected a tendency for time pressure to amplify participants' unique deontological responses to the dilemma (Suter & Hertwig, 2011).

Time pressure is surely not the only way to engage the visceral sense of oneness that strongly fused persons have with their group, however. Alternatively, focusing attention on either the personal or social self should amplify the tendency of fused persons to translate their pro-group sentiments into action. In contrast, because weakly fused persons lack a sense of oneness between the personal and social self, the only way to amplify their tendency to enact pro-group action is to focus attention on the social self; attention to the personal self should have no such effects. In the next experiment, we test this reasoning by examining participants' reactions to manipulations that prime either their personal or social self.

Experiment 6: Activating the Personal Versus Social Self

To test our hypotheses, in Experiment 6 we examined the effects of priming either the personal or social self relative to a base-line

control condition in which participants received no prime whatsoever. Insofar as strongly fused persons experience a visceral sense of oneness with the group, priming the personal self should simultaneously activate their social and personal self, resulting in elevated levels of self-sacrifice for the group in both conditions relative to controls. Insofar as weakly fused persons lack a visceral sense of oneness with the group, priming the social self should produce elevated levels of self-sacrifice relative to those in personal-self-activation and control conditions.

Method

Participants. Participants were 572 Spanish undergraduates (377 women; M_{age} = 33.21 years, SD = 9.83) enrolled at UNED. All participated online in exchange for course credit.

Procedure. After learning that the experiment involved responses to moral dilemmas, participants completed the fusion with one's country scale (α = .85). Participants were then randomly assigned to one of the three conditions. Participants in the *personal self activation condition* were asked to think about their personal selves (i.e., what they are personally like, things they personally like, words that best describe personal features). Participants in the *social self activation condition* were asked to think about themselves as Spaniards (i.e., what they and other members of their country are like, the things they like as Spaniards, and words that best describe their Spanish features). Participants in the *control condition* were asked to objectively describe the place where they were answering the questionnaire (e.g., their apartment). After the manipulation, participants read and responded to the *summoning* dilemma.

Results

Response to the dilemma. Overall, 29.7% endorsed the self-sacrifice option. We followed the same analytic strategy as Swann et al. (2009, Experiment 3) to determine whether fusion and identity activation condition interactively predicted dilemma responses. Fusion was first centered. Then, two orthogonal contrasts were created for the identity activation variable. The first orthogonal contrast compared the control condition with the mean of personal and social self activation condition (−2, 1, 1). The second orthogonal contrast compared the personal self activation condition with the social self activation condition (0, 1, −1). Then, in a binary logistic regression, fusion, identity activation condition (orthogonally coded), and both two-way interactions were entered as predictors of the response to the dilemma.

As predicted, the regression showed an interaction between the first orthogonal contrast and fusion, B = 0.29, OR = 1.33, Wald χ^2 = 10.17, p = .001, indicating that the difference between the control condition and the mean of personal and social self activation conditions varied as a function of fusion. As can be seen in Figure 5, among strongly fused participants, those in both the personal and social self activation conditions were more willing to self-sacrifice than control participants, B = 0.40, OR = 1.33, Wald χ^2 = 18.79, $p < .001$, but no such pattern emerged among weakly fused persons, B = 0.12, OR = 1.13, Wald χ^2 = 0.92, p = .34.

The analysis also revealed an interaction between the second orthogonal contrast and fusion, B = −0.97, OR = 0.38, Wald χ^2 = 27.41, $p < .001$, indicating that the difference between the personal and the social self activation conditions varied as a function of fusion. As shown in Figure 5, strongly fused participants responded similarly in the personal self and the social self activation conditions, B = −0.13, OR = 0.88, Wald χ^2 = 0.67, p = .41. Weakly fused participants expressed more willingness to self-sacrifice for the ingroup members in the social self activation condition than in the personal self activation condition, B = 1.55, OR = 4.73, Wald χ^2 = 40.61, $p < .001$.

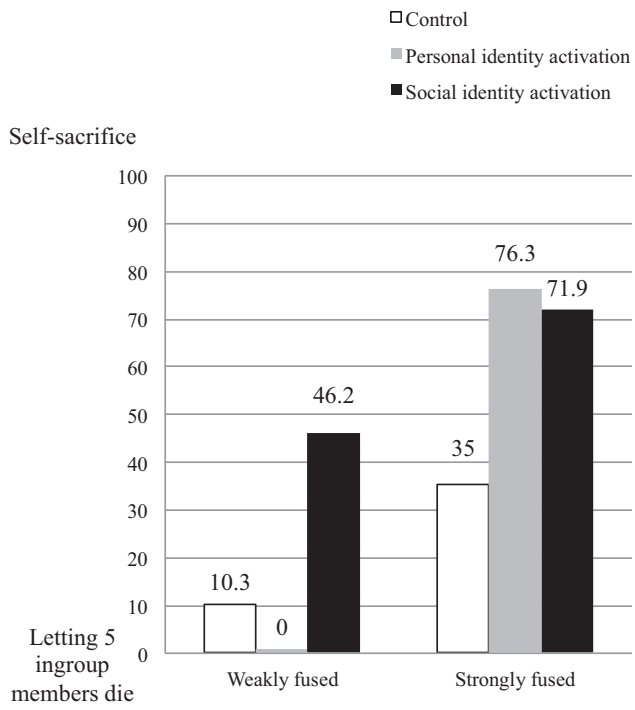

Figure 5. Self-sacrifice as a function of identity fusion and identity activation in Experiment 6. Values for weakly versus strongly fused participants were ±1 SD from the mean (M = 2.31, SD = 1.22).

The foregoing interactions qualified two main effects. First, there was a main effect of fusion, B = 1.07, OR = 2.91, Wald χ^2 = 57.65, $p < .001$, such that strongly fused persons expressed more willingness to self-sacrifice than weakly fused persons. Second, there was a main effect of the second orthogonal contrast, B = 0.77, OR = 2.16, Wald χ^2 = 22.07, $p < .001$, indicating that self-sacrifice was greater in the social self activation condition than in the personal identity activation condition. No other effect was significant (p = .13).

Discussion

Consistent with our assumption that strongly fused persons have a visceral sense of oneness with the group, our findings revealed that strongly fused participants were particularly inclined to endorse self-sacrifice when either their personal or social selves were activated. In contrast, weakly fused participants were especially inclined to endorse self-sacrifice after their social selves were activated but not after their personal selves were activated. This pattern of results also supports our assumption that strongly fused persons experience close relational ties with fellow group mem-

bers. That is, insofar as fused individuals develop strong, family like ties between themselves and other group members, it is not surprising that activating their personal selves augmented their desire to protect the individuals with whom they were so strongly aligned.

The strong relational, family like ties that fused persons presumably develop toward other ingroup members have a further implication. To the extent that people experience a sense of oneness with the group, they may be just as inclined to sacrifice their lives for a single member of the ingroup as for multiple members of the ingroup. After all, if the death of a "family" member is equivalent to my own death, then the death of five family members is likewise my own death. In contrast, weakly fused persons may take a more emotionally detached, analytic view of the value of the lives of ingroup members. Rather than seeing the lives of individual ingroup members as equivalent to their own death, they see the lives of each ingroup member as adding incrementally to the group category. For this reason, when it comes to sacrificing their lives for ingroup members, weakly fused persons may be sensitive to utilitarian principles: The more lives that are in danger, the more inclined they should be to sacrifice their own life. We tested this hypothesis in Experiment 7.

Experiment 7: For Whom Is Self-Sacrifice Utilitarian?

Method

Participants. Participants were 1,368 Spanish undergraduates at UNED (757 women; M_{age} = 35.14 years, SD = 11.15). All participated online for course credit.

Procedure. After learning that the experiment involved responses to moral dilemmas, participants completed the verbal scale of fusion with country (α = .81). Participants were randomly assigned to read one of two versions of the *luring* dilemma. In one version, there were five ingroup members whom one could lure to their deaths to save oneself. In the other version, there was only one ingroup member to lure.

Results

Response to the dilemma. Overall, 62.2% of participants chose self-sacrifice. We used a binary logistic regression to examine the impact of fusion (centered), dilemma condition (five vs. one other ingroup member to lure; effect coded −1, 1), and the Fusion × Condition interaction on the response to the dilemma. The analysis yielded a main effect of fusion, B = 0.53, OR = 1.70, Wald χ^2 = 63.55, $p < .001$, indicating that strongly fused participants were more willing to self-sacrifice. There was also a main effect of the experimental condition, B = −0.13, OR = 0.87, Wald χ^2 = 5.16, p = .023. More participants chose to self-sacrifice for five ingroup members than for one ingroup member (66.8% vs. 60.6%). These main effects were qualified by a Fusion × Condition interaction, B = 0.25, OR = 1.76, Wald χ^2 = 14.43, $p < .002$. As can be seen in Figure 6, simple slope analyses showed that weakly fused participants were more willing to sacrifice for five ingroup members than for one ingroup member, B = −0.39, OR = 0.68, Wald χ^2 = 19.83, $p < .001$. However, strongly fused were equally willing to sacrifice for one ingroup member compared to five ingroup members.

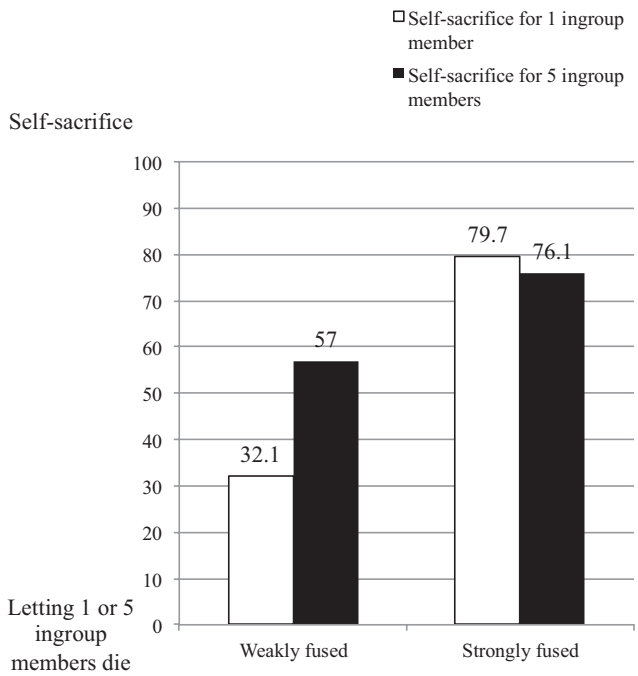

Figure 6. Self-sacrifice as a function of identity fusion and number of ingroup members in Experiment 7. Values for weakly versus strongly fused participants were ±1 SD from the mean (M = 2.82, SD = 1.19).

Discussion

The results of Experiment 7 revealed that strongly fused participants were equally willing to self-sacrifice for one as for five ingroup members. Such individuals therefore appeared to follow deontological principles (e.g., "do no harm to any group member"), in that the life of even a single ingroup member was sufficient to justify sacrificing one's own life. In contrast, weakly fused participants appeared to follow utilitarian principles when deciding to sacrifice themselves for the group, expressing more willingness to self-sacrifice for five than for one ingroup member.

General Discussion

Although many ridiculed Fan Meizhong for leaving his students in the lurch when an earthquake struck, our findings suggest that Fan is not alone in his unwillingness to risk his life to save others. Our participants responded to a pair of intragroup moral dilemmas in which it was apparent to most people that the morally correct response was to sacrifice one's life to save several people. Nevertheless, about half of our participants endorsed saving their own life over the morally correct response, even when saving themselves came at the expense of the lives of five innocents. Hence, although nearly all of our participants *knew* what was right, only those who were strongly fused endorsed translating their moral knowledge into *doing* what was right. This raises an intriguing question: What were our participants thinking and feeling? More specifically, what were the cognitive and emotional processes responsible for the moral resolve of fused individuals?

We began with the assumption that the state of fusion is distinguished by a feeling of oneness with the group and the formation

of close, family-like, relational ties to other group members. The responses of our participants to the dilemmas confirmed this conceptualization. For example, although strongly fused persons were just as concerned with self-preservation as their weakly fused counterparts, strongly fused persons were unique in their devotion to saving members of their group. Further, when strongly fused persons learned that members of their group were imperiled, they reported experiencing emotions similar to what they would experience were they themselves imperiled. These emotional reactions, in turn, mediated the effects of fusion on the endorsement of sacrificing oneself for the ingroup.

Among weakly fused participants, the (less frequently traveled) pathway to self-sacrifice was quite different. Lacking strong relational ties toward their compatriots, when they pondered sacrificing themselves, weakly fused participants initially expressed concerns with their own survival and spoke of their threatened ingroup members in distant, unemotional terms. Later, they shifted to a consideration of utilitarian considerations, such as the number of potential victims who would die in the dilemma. As a result, they were more apt to endorse self-sacrifice for five victims compared to one.

Strength of identity fusion was also related to the reasons for *refraining from* self-sacrifice. When strongly fused participants declined to endorse self-sacrifice, they denied that they were forsaking the ingroup, clinging instead to the illusory idea that there must be a way to save both the ingroup members and themselves. In contrast, weakly fused participants distanced themselves from the group members and focused on themselves. They insisted that their refusal to endorse self-sacrifice was only natural given their possession of a quintessentially human survival motive.

We expected that one of the clearest differences between fused and non-fused participants would be their deontological impulses. On the one hand, we anticipated that upon learning that members of their group were in jeopardy, strongly fused persons would mentally transport themselves into the situation facing their compatriots and experience the group members' emotions as their own. On the other hand, we expected that the threat that the dilemma posed to their personal survival would dominate the immediate reactions of weakly fused persons. For these reasons, we predicted that requiring participants to hurry their response to the dilemma would amplify the divergent deontological impulses of strongly and weakly fused participants. Our results supported this prediction. When we placed participants under time pressure by requiring that they respond to the dilemma quickly, strongly fused participants were especially inclined to endorse self-sacrifice, and weakly fused participants were especially *dis*inclined to endorse self-sacrifice. This suggests that when people feel compelled to act quickly because they are under threat they may be especially likely to translate their feelings of fusion with the group into extreme pro-group behavior.

This difference in the deontological impulses of strongly and weakly fused persons to the dilemmas implies that activating the source of such impulses—their personal selves—should have very different consequences. To test this prediction, we primed the social and personal selves of participants. Not surprisingly, priming their social selves increased endorsement of self-sacrifice among both strongly and weakly fused participants. More interestingly, priming the personal self increased endorsement of self-sacrifice among strongly fused participants but further reduced endorsement of self-sacrifice among weakly fused participants.[6] This evidence that activating the personal selves of strongly fused persons functioned in the same way as activating their social selves provides further evidence of the visceral sense of oneness that strongly fused participants experience with the group.

In summary, in the experiments reported here, we attempted to illuminate directly the nature of the emotional and cognitive processes that cause strongly fused persons to embrace self-sacrifice for the group and weakly fused persons to embrace their own survival. Our findings indicated that strongly and weakly fused persons differed not only in how often they endorsed self-sacrifice to save others, but in the psychological pathway they followed to this destination. When they recognized that their group members were in danger, strongly fused persons immediately felt as if they themselves were in danger and it did not matter whether one or several ingroup members were threatened. At the same time, weakly fused persons focused on their own survival and endorsed the sacrifice of group members. On those relatively rare occasions that weakly fused people winded up endorsing self-sacrifice, they were inspired to do so by a cool calculus that focused on utilitarian concerns such as the impact of their decision on the number of people who would live or die.

Links to Recent Work on Moral Reasoning

Over the last two decades, theorists and researchers have increasingly acknowledged dual process models in which controlled and automatic processes play complementary roles in moral decision making (e.g., Greene et al., 2008; Lombrozo, 2009). Our findings revealed instances of both automatic and controlled processing in the moral decision making of our participants. For example, the relatively automatic, deontological response of strongly fused participants was to save the lives of group members who were imperiled. In contrast, the relatively automatic, deontological response of weakly fused participants was to save themselves.

Additional reflection took strongly and weakly fused participants in very different directions. On the path to deciding to save themselves at the expense of the group, strongly fused participants struggled (without success) to develop a rationale that would allow them to simultaneously save both themselves and the group. On the path to deciding to save the group, weakly fused participants noted that sacrificing themselves would result in fewer people dying than allowing five ingroup members to perish. Apparently, strongly versus weakly fused persons diverged in both their spontaneous and reasoned reactions to the dilemmas.

Our evidence of the impact of the immediate, emotional responses of fused persons on their moral decision making has some parallels in the recent literature on sacred values and culture of honor. In studies of extremists in the Middle East, for example,

[6] This finding might seem to clash with evidence that activating the personal self did not diminish the tendency for non-fused participants to endorse dying for the group (Swann et al., 2009). This likely reflects procedural differences. Unlike the earlier experiment, in this dilemma the personal self was activated by informing participants that they were going to be crushed by the train before referencing the group members. This may have reinforced the impact of the personal-self-activation manipulation. In the earlier experiment, the group members were referenced first, which may have muted the effect of activating the personal self.

researchers have used the label "devoted actors" to refer to individuals whose decisions are determined by "sacred values" that turn on a rule-bound, emotionally arousing moral logic (Sheikh, Ginges, Coman, & Atran, 2012). The rationales underlying the pro-group behavior of these devoted actors are irrational in that they are insensitive to quantity and abhor material tradeoffs (Atran & Ginges, 2012; Ginges, Atran, Medin, & Shikaki, 2007; Ginges, Atran, Sachdeva, & Medin, 2011; see also Skitka, 2002, 2010, for parallel findings with regard to "moral convictions"). Similarly, individuals who adhere to the principles of culture of honor react to perceived slights to in-group members with "illogical" levels of retribution that far exceed what could be justified from an objective standpoint (e.g., Cohen & Nisbett, 1994; Cohen, Nisbett, Bowdle, & Schwarz, 1996). Our data suggest that identify fusion may play a role in the emotional responses of such individuals. Witness, for example, that fused persons became highly emotional when they learned of the plight of members of their group. Moreover, the deontological impulses of strongly fused persons rendered them uniquely insensitive to the number of potential victims of the runaway trolley in Experiment 7.

Such tantalizing links between our research and recent work on moral decision making notwithstanding, one limitation of our work is the use of hypothetical dilemmas (for a review of research on identity fusion that employs alternative methodologies, see Swann et al., 2012). It is reassuring that recent work has demonstrated links between responses to moral dilemmas and theoretically relevant variables such as empathic concern, religiosity, perspective taking and moral identity (Conway & Gawronski, 2013; see also Bartels, 2008; Schnall, Haidt, Clore, & Jordon, 2008). Nevertheless, future work is needed to better understand relationships between *in situ* moral reasoning about self-sacrifice and actual engagement in self-sacrificial behavior. An interesting step along these lines includes interviews of terrorists that have highlighted the close associations between steadfast group commitment, moral justifications, and follow-through of extremist attacks (Atran, 2010; Stern, 2003). Much remains to be done, however.

Conclusions

Most people acknowledge that when several members of their group are imperiled, they should try to save them, even if it means risking their own life. Yet, when asked what they would actually do if confronted with this dilemma, many people said that they would selfishly opt to save themselves. In fact, even when the only way to save their own life was to lure five unsuspecting compatriots into a deathtrap, roughly half of our participants endorsed this morally bankrupt option. Not so for people who felt strongly fused to their group. The willingness of strongly fused persons to sacrifice themselves to save members of their group appear to be mediated by the immediate, emotional reactions that they experienced when they imagined that their group members were in danger. For strongly fused persons, it was almost as if they themselves, or a family member, were in danger. These emotional reactions caused them to do what most people naively believe they would do: endorse translating a sense of what they morally *should* do into a decision about what they *would* do.

References

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.

Aron, A., Aron, E. N., Tudor, M., & Nelson, G. (1991). Close relationships as including other in the self. *Journal of Personality and Social Psychology, 60,* 241–253. doi:10.1037/0022-3514.60.2.241

Atran, S. (2010). *Talking to the enemy: Faith, brotherhood, and the (un)making of terrorists*. New York, NY: Harper Collins.

Atran, S., & Ginges, J. (2012, May 18). Religious and sacred imperatives in human conflict. *Science, 336,* 855–857. doi:10.1126/science.1216902

Bartels, D. M. (2008). Principled moral sentiment and the flexibility of moral judgment and decision making. *Cognition, 108,* 381–417. doi:10.1016/j.cognition.2008.03.001

Billig, M., & Tajfel, H. (1973). Social categorization and similarity in intergroup behaviour. *European Journal of Social Psychology, 3,* 27–52. doi:10.1002/ejsp.2420030103

Blair, R. J. R. (1995). A cognitive developmental approach to morality: Investigating the psychopath. *Cognition, 57,* 1–29. doi:10.1016/0010-0277(95)00676-P

Buhrmester, M. D., Gómez, A., Brooks, M. L., Morales, J. F., Fernández, S., & Swann, W. B., Jr. (2012). My group's fate is my fate: Identity-fused Americans and Spaniards link personal life quality to outcome of 2008 elections. *Basic and Applied Social Psychology, 34,* 527–533. doi:10.1080/01973533.2012.732825

Chaiken, S., & Trope, Y. (Eds.). (1999). *Dual process theories in social psychology*. New York, NY: Guilford Press.

Cohen, D., & Nisbett, R. E. (1994). Self-protection and the culture of honor: Explaining southern violence. *Personality and Social Psychology Bulletin, 20,* 551–567. doi:10.1177/0146167294205012

Cohen, D., Nisbett, R. E., Bowdle, B. F., & Schwarz, N. (1996). Insult, aggression, and the southern culture of honor: An "experimental ethnography." *Journal of Personality and Social Psychology, 70,* 945–960. doi:10.1037/0022-3514.70.5.945

Conway, P., & Gawronski, B. (2013). Deontological and utilitarian inclinations in moral decision making: A process dissociation approach. *Journal of Personality and Social Psychology, 104,* 216–235. doi:10.1037/a0031021

Ellemers, N., Spears, R., & Doosje, B. (1997). Sticking together or falling apart: In-group identification as a psychological determinant of group commitment versus individual mobility. *Journal of Personality and Social Psychology, 72,* 617–626. doi:10.1037/0022-3514.72.3.617

Ericsson, K. A., & Simon, H. A. (1993). *Protocol analysis: Verbal reports as data* (Rev. ed.). Cambridge, MA: MIT Press.

Foot, P. (1967). The problem of abortion and the doctrine of the double effect. *Oxford Review, 5,* 5–15.

Ginges, J., Atran, S., Medin, D., & Shikaki, K. (2007). Sacred bounds on rational resolution of violent political conflict. *Proceedings of the National Academy of Sciences, USA, 104,* 7357–7360. doi:10.1073/pnas.0701768104

Ginges, J., Atran, S., Sachdeva, S., & Medin, D. (2011). Psychology out of the laboratory: The challenge of violent extremism. *American Psychologist, 66,* 507–519. doi:10.1037/a0024715

Gómez, Á., Brooks, M., Buhrmester, M., Vázquez, A., Jetten, J., & Swann, W. B., Jr. (2011). On the nature of identify fusion: Insights into the construct and a new measure. *Journal of Personality and Social Psychology, 100,* 918–933. doi:10.1037/a0022642

Gómez, Á., Morales, J. F., Hart, S., Vázquez, A., & Swann, W. B., Jr. (2011). Rejected and excluded forevermore, but even more devoted: Irrevocable ostracism intensifies loyalty to the group among identity highly fused persons. *Personality and Social Psychology Bulletin, 37,* 1574–1586. doi:10.1177/0146167211424580

Greene, J. D. (2007). The secret joke of Kant's soul. In W. Sinnott-Armstrong (Ed.), *Moral psychology* (Vol. 3, pp. 35–80). Cambridge, MA: MIT Press.

Greene, J. D. (2009). The cognitive neuroscience of moral judgment. In M. Gazzaniga (Ed.), *The cognitive neurosciences* (4th ed., pp. 987–999). Cambridge, MA: MIT Press.

Greene, J. D., Morelli, S. A., Lowenberg, K., Nystrom, L. E., & Cohen, J. D. (2008). Cognitive load selectively interferes with utilitarian moral judgment. *Cognition, 107,* 1144–1154. doi:10.1016/j.cognition.2007.11.004

Haidt, J. (2001). The emotional dog and its rational tail: A social intuitionist approach to moral judgment. *Psychological Review, 108,* 814–834. doi:10.1037/0033-295X.108.4.814

Jacoby, L. L. (1991). A process dissociation framework: Separating automatic from intentional uses of memory. *Journal of Memory and Language, 30,* 513–541. doi:10.1016/0749-596X(91)90025-F

Janoff-Bulman, R., Sheikh, S., & Hepp, S. (2009). Proscriptive versus prescriptive morality: Two faces of moral regulation. *Journal of Personality and Social Psychology, 96,* 521–537. doi:10.1037/a0013779

Kohlberg, L. (1969). Stage and sequence: The cognitive-developmental approach to socialization. In D. A. Goslin (Ed.), *Handbook of socialization theory and research* (pp. 347–480). New York, NY: Rand McNally.

Lombrozo, T. (2009). The role of moral commitments in moral judgment. *Cognitive Science, 33,* 273–286. doi:10.1111/j.1551-6709.2009.01013.x

Mael, F., & Ashforth, B. (1992). Alumni and their alma maters: A partial test of the reformulated model of organizational identification. *Journal of Organizational Behavior, 13,* 103–123. doi:10.1002/job.4030130202

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98,* 224–253. doi:10.1037/0033-295X.98.2.224

Nisbett, R. E., & Wilson, T. D. (1977). Telling more than we can know: Verbal reports on mental processes. *Psychological Review, 84,* 231–259. doi:10.1037/0033-295X.84.3.231

Pizarro, D. A., & Salovey, P. (2002). On being and becoming a good person: The role of emotional intelligence in moral development and behavior. In J. Aronson (Ed.), *Improving academic achievement: Impact of psychological factors on education* (pp. 247–266). doi:10.1016/B978-012064455-1/50015-4

Posner, M. I., & Snyder, C. R. R. (1975). Facilitation and inhibition in the processing of signals. In P. M. A. Rabbitt & S. Domic (Eds.), *Attention and performance V* (pp. 669–682). New York, NY: Academic Press.

Postmes, T., Haslam, S. A., & Jans, L. (2013). A single-item measure of social identification: Reliability, validity, and utility. *British Journal of Social Psychology, 52,* 597–617. doi:10.1111/bjso.12006

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40,* 879–891. doi:10.3758/BRM.40.3.879

Rand, D. G., Greene, J. D., & Nowak, M. A. (2012, September 20). Spontaneous giving and calculated greed. *Nature, 489,* 427–430. doi:10.1038/nature11467

Schnall, S., Haidt, J., Clore, G. L., & Jordan, A. H. (2008). Disgust as embodied moral judgment. *Personality and Social Psychology Bulletin, 34,* 1096–1109. doi:10.1177/0146167208317771

Sheikh, H., Ginges, J., Coman, A., & Atran, S. (2012). Religion, group threat and sacred values. *Judgment and Decision Making, 7,* 110–118.

Skitka, L. J. (2002). Do the means always justify the ends, or do the ends sometimes justify the means? A value protection model of justice reasoning. *Personality and Social Psychology Bulletin, 28,* 588–597. doi:10.1177/0146167202288003

Skitka, L. J. (2010). The psychology of moral conviction. *Social and Personality Psychology Compass, 4,* 267–281. doi:10.1111/j.1751-9004.2010.00254.x

Smith, E. R., Seger, C. R., & Mackie, D. M. (2007). Can emotions be truly group level? Evidence regarding four conceptual criteria. *Journal of Personality and Social Psychology, 93,* 431–446. doi:10.1037/0022-3514.93.3.431

Spencer, R. (2008, June 2). China earthquake: Teacher admits leaving pupils behind as he fled Chinese earthquake. *The Telegraph*. Retrieved from http://www.telegraph.co.uk

Stern, J. (2003). *Terror in the name of God: Why religious militants kill*. New York, NY: Ecco.

Suter, R. S., & Hertwig, R. (2011). Time and moral judgment. *Cognition, 119,* 454–458. doi:10.1016/j.cognition.2011.01.018

Swann, W. B., Jr., Buhrmester, M., Gómez, Á., Jetten, J., Bastian, B., Vázquez, A., . . . Zhang, A. (in press). What makes a group worth dying for? Identity fusion fosters perception of familial ties, promoting self-sacrifice. *Journal of Personality and Social Psychology*.

Swann, W. B., Jr., Gómez, Á., Dovidio, J. F., Hart, S., & Jetten, J. (2010). Dying and killing for one's group: Identity fusion moderates responses to intergroup versions of the trolley problem. *Psychological Science, 21,* 1176–1183. doi:10.1177/0956797610376656

Swann, W. B., Jr., Gómez, Á., Huici, C., Morales, F., & Hixon, J. G. (2010). Identity fusion and self-sacrifice: Arousal as catalyst of progroup fighting, dying, and helping behavior. *Journal of Personality and Social Psychology, 99,* 824–841. doi:10.1037/a0020014

Swann, W. B., Jr., Gómez, Á., Seyle, C. D., Morales, J. F., & Huici, C. (2009). Identity fusion: The interplay of personal and social identities in extreme group behavior. *Journal of Personality and Social Psychology, 96,* 995–1011. doi:10.1037/a0013668

Swann, W. B., Jr., Jetten, J., Gómez, Á., Whitehouse, H., & Bastian, B. (2012). When group membership gets personal: A theory of identity fusion. *Psychological Review, 119,* 441–456. doi:10.1037/a0028589

Swann, W. B., Stein-Seroussi, A., & Giesler, R. B. (1992). Why people self-verify. *Journal of Personality and Social Psychology, 62,* 392–401. doi:10.1037/0022-3514.62.3.392

Tajfel, H., & Turner, J. (1979). An integrative theory of intergroup conflict. In W. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Monterey, CA: Brooks/Cole.

Turiel, E. (1983). *The development of social knowledge: Morality and convention*. Cambridge, England: Cambridge University Press.

Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. Oxford, England: Basil Blackwell.

Turner, J. C., Sachdev, I., & Hogg, M. A. (1983). Social categorization, interpersonal attraction and group formation. *British Journal of Social Psychology, 22,* 227–239. doi:10.1111/j.2044-8309.1983.tb00587.x

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