Identity fusion predicts violent pro-group behavior when it is morally justifiable

Juana Chinchilla, Alexandra Vazquez & Ángel Gómez

⊞ View supplementary material ↗

📅 Published online: 06 Aug 2021.

✎ Submit your article to this journal ↗

📊 Article views: 103

🔍 View related articles ↗

⬚ View Crossmark data ↗

▥ This article has been awarded the Centre for Open Science 'Open Data' badge.

⬡ This article has been awarded the Centre for Open Science 'Open Materials' badge.

Check for updates

Identity fusion predicts violent pro-group behavior when it is morally justifiable

Juana Chinchilla, Alexandra Vazquez, and Ángel Gómez

UNED

ABSTRACT
Identity fusion is a visceral feeling of oneness with a group that predicts extreme pro-group behaviors. However, the effects of fusion depending on the nature of such behaviors -violent versus nonviolent- and the factors that may incline strongly fused individuals to display them still remain unexplored. To fill this gap, we performed two correlational studies in which we examined whether moral beliefs regarding the justifiability of violence moderate the relationship between fusion with the family (Study 1), or with the country (Study 2), and willingness to engage in violent and nonviolent progroup acts. Results showed that strongly fused participants were more willing to act violently than weakly fused participants, but only when their beliefs in the moral justifiability of violence were high. In contrast, their willingness to engage in nonviolent acts was not influenced by moral beliefs.

Identity fusion is a visceral feeling of oneness with a group that predicts extreme pro-group behaviors. Recent research has demonstrated that this feeling of extraordinary connection can also be established to another individual, an animal, an object, or an activity (Gómez et al., 2020). Although dozens of studies conducted in five continents and in different contexts have consistently shown that identity fusion predicts costly sacrifices and willingness to fight and die for the group among others, and preliminary research has used identity fusion as an approach to explain football violence (Newson, 2017), no empirical research up to date has explored whether the nature of such pro-group behavior (violent vs. nonviolent) affects the predictive character of fusion, and whether beliefs in the moral justifiability of violence moderate the relationship between fusion and pro-group actions. Identifying the variables that determine whether strongly fused individuals pursue the goals of the group through violent versus nonviolent activities would provide important insights into the conditions under which identity fusion has negative or positive social consequences (Swann & Buhrmester, 2015), and that is the main aim of this research.

Research on identity fusion originated in the aftermath of the 9/11 attacks in New York, and the Madrid train bombings, as an attempt to explain why some terrorists and members of other violent groups engage in extreme self-sacrificial behaviors (Swann et al., 2009). Identity fusion theory postulates that this type of acts might result from a psychological state in which individuals feel so deeply entrenched into the group and emotionally committed to it that they are willing to promote its interests and that of its members even when that comes at a high cost to the self (Gómez et al., 2020; Swann et al., 2014). Consequently, a considerable amount of research has included measures of willingness to fight and die and to engage in costly pro-group sacrifices and has found that fusion is positively related to them (e.g., Gómez, Brooks et al., 2011; Gómez et al., 2017; Gómez, Morales et al., 2011; Swann, Gómez, Huici et al., 2010; Swann et al., 2009). Other research has also shown that the

tendency of strongly fused individuals to put the group ahead of themselves increases in circumstances of group threat (Sheikh et al., 2016) and that, in some cases, this might boost their aggressive inclinations as well (Vázquez et al., 2020).

The focus of this area of research in the study of terrorism has given rise to some doubts about the nature of the relationship between fusion and violence; and some authors question themselves whether we should always expect a positive relationship between both variables or not (Kiper & Sosis, 2018). Albeit such doubts are easily understandable, identity fusion theory only postulates that fusion drives people to put their behavior at the service of the well-being of the group and to pay important personal costs in order to do that. The specific form that these sacrifices take (violent vs. nonviolent) is supposed to vary as a function of ideological factors, including group norms and personal moral beliefs (Gómez et al., 2020; Whitehouse, 2018). In this vein, previous research suggests that one of the causes of fusion, as it is transformative experiences shared with other group members, might constitute a risk factor that increases the likelihood of individuals lending support, or engaging in, violent behaviors when they share an ideology that considers violence as legitimate (Kavanagh et al., 2020). However, given the youth of the theory, the impact of such ideological factors on fused individuals' behavior still remains unexplored. We wanted to address this gap through two studies that explore whether personal beliefs regarding the moral justifiability of violence moderate the relationship between identity fusion and pro-group violence without influencing the relationship between fusion and extreme nonviolent pro-group acts.

Identity fusion, threats, ideology, and extreme pro-group behaviors

Identity fusion is a type of psychological bond with a group that takes place when the borders between the personal identity -the characteristics of individuals that make them unique- and social identity -the characteristics of individuals that derive from their group membership- become porous or permeable. As a result of that, both identities stay simultaneously active and synergistically motivate pro-group behaviors. Moreover, fused persons experience deep feelings of personal agency -capacity to initiate and control intentional behaviors- that they put at the service of the group's interests. Additionally, fused persons feel attracted to other group members because of their personal characteristics as well as of their group membership and perceive them as if they were brothers or sisters. Lastly, group membership gives meaning to the personal and social identities of fused individuals what causes that once individuals become fused with a group, they tend to remain fused (Swann et al., 2012).

The studies on the behavioral effects of fusion have consistently found that this phenomenological experience of oneness with a group gives rise to extreme behaviors. For example, identity fusion predicts willingness to (1) fight and die for the group (Bortolini et al., 2018; Gómez, Brooks et al., 2011; Gómez, Morales et al., 2011; Gómez et al., 2017; Swann, Gómez, Huici et al., 2010; Vázquez et al., 2017); (2) die in order to kill terrorists who threaten the group (Swann, Gómez, Dovidio et al., 2010); (3) volunteer for armed combat (Whitehouse et al., 2014); (4) die for one or more ingroup members in several versions of the trolley dilemma (Gómez, Brooks et al., 2011; Swann et al., 2014); or (5) engage in irreversible surgical change of the primary sexual characteristics in individuals suffering from gender dysphoria (Swann et al., 2015). In addition to that, some researchers have thought about the contextual factors that impact the relationship between fusion and the tendency to engage in extreme pro-group behaviors and have concluded that circumstances in which the personal or the group identity are under threat might make this tendency stronger (e.g., Gómez, Brooks et al., 2011; Sheikh et al., 2016; Swann et al., 2009; Vázquez et al., 2020).

The assumption that group threats increase the disposition of highly fused individuals to go to extremes to protect the group has been linked to evolutionary accounts that see human prehistory as a time penetrated by frequent intergroup conflicts and hostilities: a time in which dying by the hands of opposing group members, or as a result of a battle for scarce resources, were no extraordinary things; and in which participation in highly cohesive groups use to draw the line between survival and death (Atran, 2020; Whitehouse, 2018; Whitehouse et al., 2017). According to this view, identity fusion

works as the central node of a psychological machinery that allows for the emergence of highly cohesive coalitions of individuals who are so strongly committed to the group and its members that they are willing to perform extraordinary sacrifices to protect them (Atran, 2020; Swann et al., 2012). Strongly fused persons feel one with the group and perceive other group members as sisters and brothers and, as a result of that, they experience group threats as personal threats which, in turn, leads them to defend and protect the group with the same passion and intensity with which non-fused persons typically try to protect themselves (Gómez, Brooks et al., 2011; Swann et al., 2014, 2009; Whitehouse, 2018).

There is a solid base of empirical evidence in support of the previous view. For instance, Sheikh et al. (2016) performed a study showing that willingness to engage in costly sacrifices for a value was stronger among devoted actors -participants who were fused with a group that shared this value and who saw the value as sacred or non-negotiable- than among non-devoted actors, although the difference between both groups only emerged after participants were reminded that the value was under threat and did not appear under non-threatening circumstances. And Newson. et al. (2018) found that Brazilian fused football hooligans were more willing to fight and die for their fellows than fused mainstream fans, which, as the authors suggest, could be due to the fact that hooligans tend to be exposed to more frequent and serious threats than mainstream fans.

Convergently, other studies have demonstrated that threats to the group may also strengthen the aggressive inclinations targeted at the enemies or rivals of the group among the strongly fused. In particular, Vázquez et al. (2020) conducted several studies using a videogame that allowed participants to annihilate ingroup and outgroup symbols to measure their aggressive inclinations and they found that devoted actors showed more aggressive inclinations than non-devoted actors, but only when the idea that the outgroup constituted a threat to the ingroup had being primed. Complementarily, Fredman et al. (2017) conducted a longitudinal study before, and soon after, the start of the Palestinian Stabbing Intifada to see whether identity fusion impacted support of retaliatory policies under different levels of threat. They discovered that fusion with Judaism was positively related to support of retaliation, and that the link between both variables was stronger after the Intifada began. Finally, Newson. et al. (2018) found that highly fused hooligans had engaged in more violence directed at rival fans than highly fused mainstream football fans, and that both groups did not differ in their engagement in violence against non-rivals. Among weakly fused participants, there were no differences as a function of group membership.

The former studies strongly support the view that group threats act as a catalyst of extreme pro-group behaviors among the fused and, at the same time, they show that they might not be a sufficient condition for them to engage in violence. Specifically, the highest rates of past engagement in violence targeting the rivals of the team found among football hooligans by Newson. et al. (2018) might have been due to the fact that hooligans are exposed to higher levels of threat than mainstream football fans, to the ideological differences that exist between the groups, or to some combination of both factors. Also, albeit Fredman et al. (2017) found an increase in endorsement of retaliatory policies after the beginning of the Intifada among participants who were fused with Judaism, this effect did not replicate among participants fused with Israel, which, as the authors pointed out, also hints to the possibility that beliefs and ideologies play a key role in the determination of the type of behaviors (violent vs. nonviolent) in which fused people decide to engage. Nevertheless, the research conducted up to date has not systematically examined the impact of such ideological factors. Here, we undertook the exploration of one of them, specifically, beliefs regarding the moral justifiability of violence.

Moral beliefs, identity fusion, and extreme violent and nonviolent pro-group behaviors

Three different lines of research suggest that moral beliefs may moderate the effects of identity fusion. First, Swann et al. (2014) conducted several studies with two different versions of the trolley dilemma in which participants were asked to choose between sacrificing their own lives to save the lives of one or several ingroup members or sacrificing the lives of several ingroup members to save their own lives.

Results of these studies manifested (1) that, although all participants considered that self-sacrifice was the morally correct course of action, only the strongly fused chose to sacrifice themselves; (2) that their self-sacrifice was motivated by visceral commitment to the group and feelings of personal distress in response to the plight of the group members rather than by a lack of concern with their self-preservation; (3) that they were more willing to self-sacrifice under time pressure; and (4) that they were insensible to utilitarian considerations regarding the number of lives that could be saved by their actions. Conjointly considered, these results indicate that the relationship between identity fusion and self-sacrificial acts may be due to a deontic imperative that propels individuals to "renounce whatever is necessary to protect the group or its members" and that moral motives play a remarkable role in the determination of fused individuals' pro-group behaviors.

Second, drawing from previous research in the area of motivation, such as the research by Higgins (1997, 1998) which posits a dual-regulation system with a prevention focus (based on needs for security and focused on negative end-states), and a promotion focus (based on needs for achievement and focused on positive end-states), Janoff-Bulman et al. (2009) presented several studies pointing out that there are two systems of moral regulation which differ with regard to their motivational force: the proscriptive and the prescriptive moral regulation systems. The *proscriptive moral system* focuses on what we should not do and involves avoidance motives, overcoming our negative desires, and restraining our motivation to do something bad; whereas the *prescriptive moral system* focuses on what we should do and entails approach motives, overcoming our inertia, and activating our motivation to do something good. In other words, proscriptive morality implies the inhibition of harmful behaviors, and prescriptive morality implies engagement in behaviors that help others by relieving their suffering or advancing their well-being. Because "bad is psychologically stronger than good," the avoidance-based focus on negative (vs. positive) outcomes in proscriptive morality gives rise to a motivational asymmetry between both systems in which the proscriptive system is harsher, stricter, and more demanding than the prescriptive system. The distinction established by Janoff-Bulman et al. (2009) between both systems may help us to understand how fusion and pro-group violence relate.

Strongly fused people feel morally compelled to perform self-sacrifices to protect the group and advance its well-being (Swann et al., 2014), which is a type of motivation that can be framed as pertaining to the prescriptive moral system. If they hold the belief that violence on behalf of groups is morally justifiable, the prescriptive tendency to protect their group could drive them to act more violently against threatening individuals or groups than their weakly fused counterparts. However, if strongly fused persons do not hold the belief that violence on behalf of groups is morally justifiable, inasmuch as the proscriptive moral system is harsher than the prescriptive one, the moral condemnation of violence should prevent them from engaging in violent pro-group behaviors, without influencing their disposition to engage in extreme nonviolent actions. That is, not holding moral beliefs that blatantly oppose the use of violence should be a prerequisite for the fused to engage in pro-group violence.

Third, Bairak (2019) explored the impact of the moral foundations postulated by Curry (2016; Curry et al., 2019) on the relationship between group identification and ingroup favoritism. She found out that group identification was positively related to ingroup favoritism among participants who did not endorse the foundation of reciprocity, whereas both variables were unrelated among participants who endorsed it. It is important to note, however, that there are substantial differences between endorsement of reciprocity and endorsement of the idea that violence is morally justifiable. Likewise, identity fusion and group identification are two different kinds of psychological alignment with the group, and there are many processes, and mechanisms, in which they differ (for a brief summary of the differences and similarities between both constructs see Gómez et al., 2020). Despite these differences with respect to Bairak's (2019) design, we also expect that moral beliefs about violence would moderate the relationship between fusion and engagement in extreme violent acts. In the present research, this hypothesis was put to the test.

Overview of the studies

We performed two correlational studies. Study 1 examined whether beliefs regarding the moral justifiability of violence on behalf of groups moderate the relationship between fusion with family and willingness to engage in extreme violent acts in order to protect the family's stability and continuity. Additionally, Study 1 tested whether such beliefs do not impact the relationship between fusion with family and willingness to engage in extreme nonviolent acts on its behalf.

In Study 2, we wanted to replicate and generalize the results of Study 1 to a different group, focusing on the country rather than on the family.

We did not determine sample size a priori. Both studies where open for a week and then were closed. Participants in both studies were recruited using a snowball procedure wherein university students from an open university invited their acquaintances to volunteer. The materials of the two studies and the data that support the findings are openly available in "Open Science Framework" at https://doi.org/10.17605/OSF.IO/HM5YC

Study 1

Study 1 was designed to test whether beliefs regarding the moral justifiability of violence moderate the relationship between fusion with the family and willingness to engage in extreme nonviolent and violent behaviors when the stability and continuity of the family is under threat. On the one hand, we expected that strongly fused participants would be more willing to engage in *extreme nonviolent acts* for their family than weakly fused participants regardless of their moral beliefs. On the other hand, we anticipated that strongly fused participants would be more willing to engage in *extreme violent acts*, but only when they believe in the moral justifiability of violence.

Method

Participants
Four hundred and seventy-eight participants volunteered for the study (95.6% Spaniards, 62.1% women, mean age = 37.68, SD = 12.91), and it was administered on-line, via Qualtrics. A sensitivity analysis conducted with G*Power (Faul et al., 2007) after participants' recruitment revealed that this sample (n = 478) had 80% power to detect a minimum effect size of f^2 = 0.02 in a multiple regression with three predictors, asuming an alpha significance criterion of 0.05.

Procedure
First, participants responded to a 3-item measure of *moral beliefs in the justifiability of violence* (e.g., "Because of moral objections, I would never justify the use of violence to protect the continuity and stability of a group," "I would find it very difficult to be friends with someone who believes it is morally justifiable to kill in order to protect the stability and continuity of a group," α = .73) adapted from Zaal et al. (2011). Next, participants answered to the 7-item verbal measure of *fusion with family* (e.g., "I am one with my family," "I make my family strong," α = .80) by Gómez et al. (2011). In this study, and also in Study 2, we preferred to use the verbal measure of fusion instead of the original pictorial measure (Swann et al., 2009) or the Dynamic Identity Fusion Index (DIFI, Jiménez et al., 2015) because of the explicit recommendation of the authors to use the verbal option when it is possible (see also Gómez et al., 2020). Finally, we asked participants to imagine that the stability and continuity of their family is under a heavy threat, and complete a 5-item measure of *willingness to engage in extreme nonviolent behavior* (e.g., "I would be willing to openly express the idea that the threat should stop, even if I were at risk of being rejected by people important to me," "I would be willing to die for organizing strikes and demonstrations against this threat," α = .82),[1] followed by a 5-item measure of *willingness to engage in violent behavior* (e.g., "I would be willing to use violence against other people to end this threat," "I would be willing to kill to end this threat," α = .95), developed for the study.

We performed a principal axis factor analysis on the items of the last two scales with oblique rotation (direct oblimin). Results manifested that the items loaded on two different factors, with each item loading onto the expected factor, and factors loadings ranging from .673 to .966 (see Supplementary Online Materials, SOM). Responses to the measures used in all studies ranged from 1 (*completely disagree*) to 7 (*completely agree*). Higher scores indicate lower beliefs in the justifiability of violence and higher levels of fusion with the family and willingness to engage in extreme nonviolent and violent behavior, respectively.

Results

Table 1 shows the means, standard deviations, and Pearson correlations of the variables. Fusion with the family was positively related to all the variables. Moral beliefs were positively related to willingness to engage in extreme nonviolent acts and negatively related to willingness to engage in violent acts. Lastly, willingness to engage in extreme nonviolent acts was positively related to willingness to engage in violent acts.

Given that our dependent measures were nested within participants, we first performed a two-level mixed model analysis with random intercept, including identity fusion (mean centered), moral beliefs (mean centered), type of behavior (0 = violent; 1 = nonviolent), and the two-way and three-way interactions as fixed effects predictors, and participants' answers to the scales of willingness to engage in extreme nonviolent and violent behaviors as dependent variable. We fitted a variance components covariance structure for the random effect and used maximum likelihood to estimate the parameters in the analysis.

Table 3 shows the parameters estimates of the effects included in the model. Results showed that the three-way interaction between identity fusion, moral beliefs, and type of behavior was not significant, $p = .211$. However, the expected two-way interaction between fusion and moral beliefs, and between moral beliefs and type of behavior were significant, $ps \leq .002$, indicating that the effect of identity fusion on the willingness of participants to engage in pro-family behaviors varied as a function of their

Table 1. Means, standard deviations and correlations between measures (studies 1 and 2).

		M	SD	1	2	3
Study 1 (Fusion with the Family)	1. Moral Beliefs	5.16	1.35	-		
	2. Identity Fusion	4.84	1.15	.11*	-	
	3. Nonviolent Behavior	4.54	1.33	.12**	.27**	-
	4. Violent Behavior	3.18	1.86	−.32**	.14**	.32**
Study 2 (Fusion with the Country)	1. Moral Beliefs	5.67	1.42	-		
	2. Fusion with Country	3.30	1.45	−.10	-	
	3. Nonviolent Behavior	3.26	1.19	−.04	.23**	-
	4. Violent Behavior	1.86	1.27	−.37**	.24**	.34**

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

Table 2. Parameter estimates for the effects included in the model (study 1; fusion with the family).

Fixed Effects	B	SE	t	p	95% CI
Intercept	3.20	0.07	48.10 (871.01)	< .001	3.07, 3.33
Fusion with the Family	0.29	0.06	5.01 (871.01)	< .001	0.18, 0.41
Moral Beliefs	−0.63	0.05	−13.05(871.01)	< .001	−0.72, −0.53
Type of Behavior	1.35	0.08	17.27 (478)	< .001	1.19, 1,50
Fusion X Moral Beliefs	−0.13	0.04	−3.12 (871.01)	.002	−0.21, −0.05
Fusion X Type of Behavior	0.02	0.07	0.35 (478)	.722	−0.11, 0.16
Moral Beliefs X Type of Behavior	0.62	0.06	11.09 (478)	< .001	0.51, 0.73
Fusion X Moral Beliefs X Type of Behavior	0.06	0.05	1.25 (478)	.211	−0.03, 0.15
Variance Components	**Estimate**	**SE**	**Z**	**p**	**95% CI**
Random Intercept Variance	0.66	0.10	6.56	< .001	0.49, 0.88
Residual Variance	1.45	0.10	15.46	< .001	1.27, 1.64

ts degrees of freedom are included between parentheses.

Table 3. Parameter estimates for the effects included in the model (study 2; fusion with the country).

Fixed Effects	B	SE	t	p	95% CI
Intercept	1.84	0.08	24.25 (415.89)	< .001	1.69, 1.99
Fusion with the Country	0.18	0.05	3.42 (415.89)	.001	0.08, 0.28
Moral Beliefs	−0.29	0.05	−5.39 (415.89)	< .001	−0.40, −0.19
Type of Behavior	1.42	0.09	16.05 (230)	< .001	1.24, 1,59
Fusion X Moral Beliefs	−0.07	0.03	−2.07 (415.89)	.039	−0.13, −0.00
Fusion X Type of Behavior	0.01	0.06	0.15 (230)	.882	−0.11, 0.13
Moral Beliefs X Type of Behavior	0.27	0.06	4.35 (230)	< .001	0.15, 0.40
Fusion X Moral Beliefs X Type of Behavior	0.08	0.04	2.19 (230)	.029	0.01, 0.16
Variance Components	**Estimate**	**SE**	**Z**	**p**	**95% CI**
Random Intercept Variance	0.43	0.09	4.70	< .001	0.28, 0.65
Residual Variance	0.89	0.08	10.72	< .001	0.74, 1.07

*t*s degrees of freedom are included between parentheses.

moral beliefs, and that the effect of moral beliefs depended on the type of behavior. All the main effects were significant too, $p < .001$.

We conducted further separate multiple regression analyses on willingness to engage in extreme nonviolent and violent acts. For the analyses of both dependent variables, moral beliefs (mean centered), fusion (mean centered), and the two-way interaction term were entered simultaneously as predictors into the analyses.

Extreme nonviolent behavior
The effect of the overall model was significant, $F(3,474) = 13.96$, $p < .001$, $R^2 = .08$, $f^2 = 0.09$. Results revealed a significant main effect of fusion, $B = 0.31$, $t(474) = 6.18$, $p < .001$, 95% CI [0.21, 0.42], such that willingness to engage in extreme nonviolent acts increased as fusion went stronger. The main effect of moral beliefs was not significant, $B = 0.00$, $t(226) = −0.06$, $p = .954$, 95% CI [−0.08, 0.08], neither was the interaction between fusion and moral beliefs, $B = −0.07$, $t(226) = −1.88$, $p = .07$, 95% CI [−0.14, 0.00].

Violent behavior
The effect of the overall model was significant, $F(3,474) = 53.77$, $p < .001$, $R^2 = .25$, $f^2 = 0.33$. The main effects of fusion, $B = 0.29$, $t(474) = 4.50$, $p < .001$, 95% CI [0.16, 0.42], and of moral beliefs, $B = −0.63$, $t(474) = −11.71$, $p < .001$, 95% CI [−0.73, −0.52], were significant as well, such that willingness to engage in extreme violent acts increased as fusion and moral beliefs went stronger.

Results showed a significant interaction between identity fusion and moral beliefs too, $B = −0.13$, $t(474) = −2.80$, $p = .005$, 95% CI [−0.22, −0.04]. Simple slope analyses revealed that fusion with the family was positively related to willingness to engage in extreme violent behavior among participants who agreed with the idea that violence is morally justifiable, $B = 0.47$, $t(474) = 5.18$, $p < .001$, 95% CI [0.29, 0.65], but not among participants who did not thought that violence is morally justifiable, $B = 0.11$, $t(474) = 1.27$, $p = .204$, 95% CI [−0.07, 0.29], see Figure 1.

Discussion

Study 1 indicated that, among participants who held strong beliefs about the moral justifiability of violence, willingness to engage in violence on behalf of the family increased as increased the level of fusion. By contrast, among participants who held weak beliefs about the moral justifiability of violence, willingness to engage in violence did not vary as a function of fusion with family. At the same time, Study 1 revealed that the moderating role of beliefs in the moral justifiability of violence did not extend to willingness to engage in extreme nonviolent behaviors, which, as expected, only increased as increased the degree of fusion.
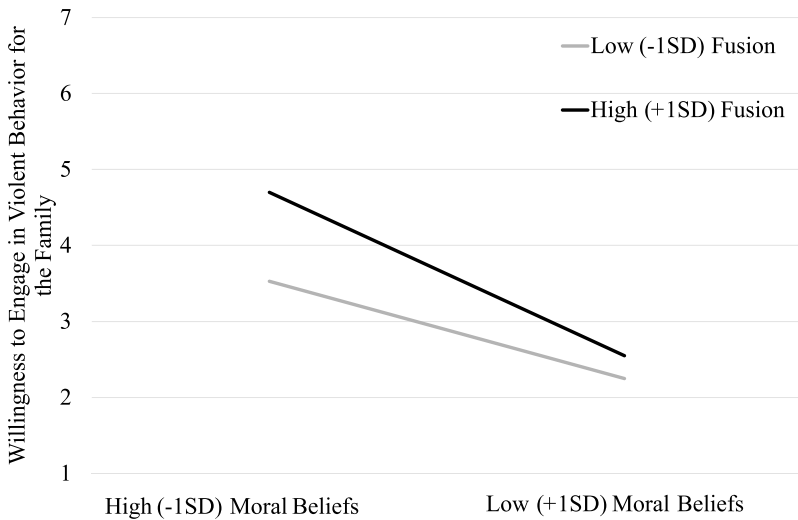
Figure 1. Willingness to engage in violent behavior for the family as a function of identity fusion and moral beliefs in the justifiability of violence.

Study 2

Study 2 was designed to test whether the results found in Study 1 replicate when considering a different focal group: the country. As in the previous study, we expected that strongly fused participants would be more willing to engage in *extreme nonviolent acts* for their country than weakly fused participants regardless of their moral beliefs. Additionally, we hypothesized that strongly fused participants would be more willing to engage in *extreme violent acts* than weakly fused participants if participants believed that violence is morally justifiable, but there would be no differences if participants did not believe that violence is morally justifiable.

Method

Participants
Two hundred and thirty participants volunteered for the study (97.8% Spaniards, 63.9% women, mean age = 40.10, *SD* = 13.14), and it was conducted on-line, via Qualtrics. A sensitivity analysis conducted with G*Power (Faul et al., 2007) after participants' recruitment revealed that this sample (*n* = 230) had 80% power to detect a minimum effect size of $f^2 = 0.04$ in a multiple regression with three predictors, asuming an alpha significance criterion of 0.05.

Procedure
Moral beliefs, identity fusion, willingness to engage in extreme nonviolent behavior, and *willingness to engage in violent behavior* were measured with the same procedure and scales used in Study 1 adapted to the country, α = .70, .89, .80, and .95, respectively. As in the previous study, we asked participants to imagine that the stability and continuity of the country is under threat before measuring their behavioral inclinations. We conducted a principal axis factor analysis on the items of the last two scales with oblique rotation (direct oblimin). Results of the analysis showed that the items loaded on two different factors, with each item loading onto the expected factor, and factors loadings ranging from .558 to .975 (see SOM).

Results

Table 1 shows the means, standard deviations, and bivariate correlations between the variables. Fusion with the country was positively related to willingness to engage in extreme nonviolent and violent behaviors, willingness to engage in extreme nonviolent behaviors was positively related to willingness to engage in violent behaviors, and moral beliefs were negatively related to willingness to engage in violence. The relationships between identity fusion and moral beliefs, and between moral beliefs and extreme nonviolent behaviors were not significant.

We performed a two-level mixed model analysis with random intercept, including identity fusion (mean centered), moral beliefs (mean centered), type of behavior (0 = violent; 1 = nonviolent), and the two-way and three-way interactions as fixed effects predictors, and participants' answers to the scales of willingness to engage in extreme nonviolent and violent behaviors as dependent variable. We fitted a variance components covariance structure for the random effect and used maximum likelihood to estimate the parameters in the analysis.

Table 2 shows the parameters estimates of the effects included in the model. The two-way interaction between fusion and moral beliefs, and between moral beliefs and type of behavior were significant, $ps \leq .039$, manifesting that the effect of identity fusion on the willingness of participants to engage in behaviors on behalf of the country varied as a function of their moral beliefs, and that the effect of moral beliefs depended on the type of behavior. The three-way interaction between fusion, moral beliefs, and type of behavior was significant too, $p = .029$, showing that the effect of the interaction between identity fusion and moral beliefs differs as a function of the behavior analyzed. All main effects were also significant, $ps \leq .001$.

We also conducted separate multiple regression analyses on willingness to engage in extreme nonviolent and violent acts. For each dependent variable, moral beliefs (mean centered), fusion (mean centered), and the two-way interaction term were entered simultaneously as predictors into the analyses.

Extreme nonviolent behavior

The effect of the overall model was significant, $F(3,226) = 4.33$ $p < .001$, $R^2 = .05$, $f^2 = 0.05$. Results showed as well a main effect of fusion, $B = 0.19$, $t(226) = 3.53$, $p = .001$, 95% CI [0.08, 0.30], indicating that willingness to engage in extreme nonviolent acts increased as fusion went stronger. The main effect of moral beliefs was not significant, $B = -0.02$, $t(226) = -0.33$, $p = .738$, 95% CI [−0.13, 0.09], neither was the interaction between fusion and moral beliefs, $B = 0.03$, $t(226) = 0.47$, $p = .640$, 95% CI [−0.05, 0.08].

Violent behavior

The effect of the overall model was significant, $F(3,226) = 18.24$, $p < .001$, $R^2 = .20$, $f^2 = .0.25$. The main effects of fusion, $B = 0.18$, $t(226) = 3.38$, $p = .001$, 95% CI [0.07, 0.28], and moral beliefs, $B = -0.29$, $t(226) = -5.40$, $p < .001$, 95% CI [−0.40, −0.19], were significant, indicating that willingness to engage in extreme violent acts increased as fusion and moral beliefs went stronger.

Additionally, there was a significant interaction between identity fusion and moral beliefs, $B = -0.07$, $t(226) = -2.07$, $p = .040$, 95% CI [−0.13, −0.003]. Simple slope analyses showed that fusion with the country was positively related to willingness to engage in extreme violent behavior among participants who agreed with the idea that violence is morally justifiable, $B = 0.28$, $t(226) = 3.95$, $p < .001$, 95% CI [0.14, 0.41], but not among participants who did not thought that violence is morally justifiable, $B = 0.08$, $t(226) = 1.12$, $p = .263$, 95% CI [−0.06, 0.22] see Figure 2.

Discussion

Study 2 replicated the pattern of effects founded in Study 1. Specifically, among participants who held strong beliefs about the moral justifiability of violence, there was a positive relationship between
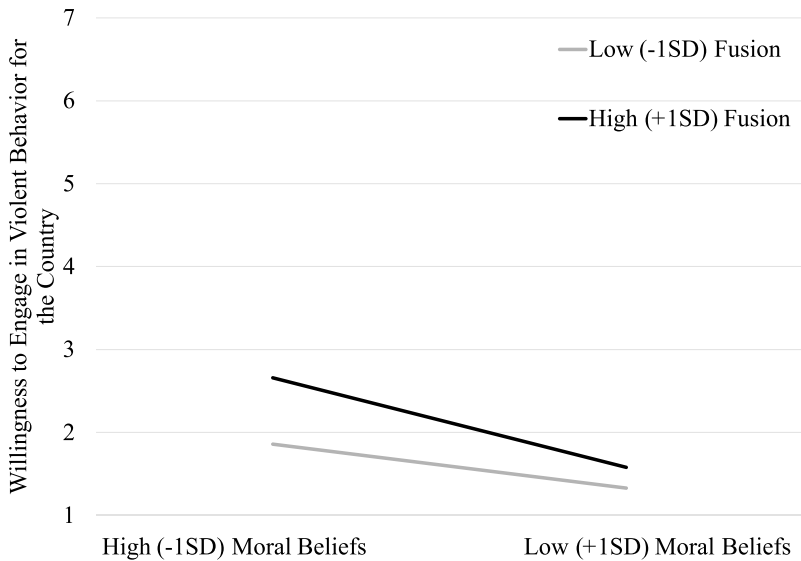
Figure 2. Willingness to engage in violent behavior for the country as a function of identity fusion and beliefs and moral beliefs in the justifiability of violence.

identity fusion and willingness to engage in pro-group violence, whereas both variables were unrelated among participants who held weak beliefs about its moral justifiability. Study 2 showed as well that fusion was positively related to willingness to engage in extreme nonviolent acts, and that the relationship between both variables was not moderated by moral justifiability of violence. Importantly, Study 2 extended these findings to the country, suggesting that the moderating role of beliefs about the justifiability of violence is important when individuals are fused with extended -large groups in which individuals do not personally know each other- as well as with local groups -small groups of intimate others- (Swann et al., 2012).

General discussion

The present research explored, for the first time, the moderating role of moral beliefs in the willingness of fused people to engage in pro-group behaviors entailing different degrees of violence. In two studies considering a local (family) or an extended group (country), we found that highly fused participants were more willing to engage in violence to protect their group from a serious threat than weakly fused participants, but only if they believed that pro-group violence is morally justifiable. Among those individuals who did not believe that violence is justifiable, fusion did not predict willingness to use violence.

Our results make several contributions to different domains. At a theoretical level, our studies advance identity fusion research in at least two important ways. First, these studies represent the first systematic exploration of the effects of explicit moral beliefs on fused individuals' disposition to engage in pro-group violence. This being the case, they help solve the doubts about how to interpret the nature of the relationship between fusion and violence that have been recently expressed within the field (Kiper & Sosis, 2018; Swann & Buhrmester, 2015), showing that whether fused individuals engage or not in pro-group violence when the group is under threat is contingent upon what they believe about the moral justifiability of violence and, by extension, that fusion is neither intrinsically bad nor good. Fused individuals are heavily inclined to protect their group, but they are not necessarily more violent than their non-fused counterparts. Second, our studies complement previous research on the moderators that attenuate fusion effects on extreme self-

sacrifices, like knowing that other group members are strongly morally motivated to sacrifice themselves or the degree of certainty with regard to the own level of fusion (Paredes et al., 2018; Paredes et al., 2019). These last factors seem to have an indiscriminate or generalized impact on self-sacrifices, whereas our studies identify a new moderator variable that may attenuate, and even cancel out, fusion effects on violence, without influencing its effects on extreme nonviolent acts: personal beliefs in the moral justifiability of violence. Complementarily, our studies also advance research on the two systems of moral regulation (Janoff-Bulman et al., 2009), suggesting that the proscriptive moral system is stronger than the prescriptive system even in those individuals who take the protection of the group as a moral mandate, as the fused typically do (Swann et al., 2014).

At a practical level, recent research has discovered that there is a majority of individuals who are fused with their groups among combatants and ISIL terrorists, as well as among persons at risk of radicalization (Gómez et al., 2017; Sheikh et al., 2016; Whitehouse et al., 2017). Related to that, our research highlights new paths that may be followed by program developers and practitioners to tackle the societal and personal problems caused by those people who use terrorism as a means to preserve or promote the well-being of the groups they are fused with. As compared to other strategies suggested before, which are mostly focused on reverting the process of fusion (e.g., Gómez et al., 2019), this new strategy is only focused on the change of moral considerations regarding violence, and, as such, it does not imperil the sense of personal and social meaning that fused individuals experience as a result of their visceral union with their group.

Of course, our research has several limitations as well. First of all, we did not include manipulations checks to find out if the participants in our studies truly imagined that the stability and continuity of the group were under threat. Including them would have increased our trust in the fact that the participants followed our instructions, but we think that this is a minor concern because all the items of the scales of behavioral intentions explicitly mention the threat and the studies that have been conducted with participants extracted from the same pool have invariably shown that they are very sensitive to verbal instructions that depict the group or its members as being under different levels of threat (e. g., Sheikh et al., 2016; Vázquez et al., 2020). In addition to that, our studies follow a correlational approach and, as such, they do noy allow to directly establish causality. Undoubtedly, obtaining additional experimental evidence would be advisable, but moral beliefs and convictions are at the nucleus of our identity (Aquino & Reed, 2002); what drives people to defend them in different ways when they face disconfirmatory information and make them extraordinarily resistant at social influence attempts (e.g., Aramovich et al., 2011; Skitka, 2010). On account of that, manipulating moral beliefs regarding the moral unjustifiability of violence would be a really difficult venture.

Our studies highlight some future avenues and lines of research too. Some studies could explore the effects of moral beliefs regarding the moral justifiability of violence on behalf of the specific group to which individuals are fused and compare them to the effects of beliefs regarding violence on behalf of groups in general. Several studies have shown that the relationship between moral beliefs and behaviors is stronger when we measure such beliefs using scales that tap specifically onto the behaviors of interest than when we use scales that do not tap onto them (e.g., Maio, 2019). In consonance to that, we expect that the effects of moral beliefs referring to the focal group would be stronger than the effects of general beliefs that we have found in our research. Other studies could examine the processes that are behind the development of proscriptive beliefs against violence in fused people. As Wineski and Skitka (2017), we suspect that some emotions, like disgust or anger, may play an important role in this process of moralization. Research could also examine whether the effect of moral beliefs that we found in our studies extends to other ideological factors, like the group norms or its narratives (Elnakouri et al., 2018; Ginges & Shackleford, 2018; Gómez et al., 2020). In this respect, it has been consistently found that there are notable differences between groups with regard to their moral norms and shared beliefs about the nature of morality, the group, and intergroup relations (Fiske & Rai, 2015; Louis et al., 2018). Besides of that, personal moral convictions are not individually forged. They are developed and shaped through the exposure to the ideas of significant others and can stem from group values and

narratives that are gradually internalized (Ellemers, 2017; Kruglasnki et al., 2019). Because fused individuals are not an exception to this general rule, we believe that the narratives and norms of the group with which individuals fuse are a key determinant of their predisposition to engage in violence on its behalf. The studies by Fredman et al. (2017) and Newson. et al. (2018) already point to this possibility. Finally, it could be interesting to delve into the boundary conditions under which moral proscriptive beliefs exert their effects. Consistently with Bandura's moral disengagement theory (Bandura, 1990), we consider that the impact of this kind of beliefs may be selective rather than universal, and that fused people who believe that violence is unjustifiable will not refrain themselves from acting aggressively if they dehumanize the other, disregard the harm caused by their acts, or are able to displace feelings of responsibility.

Conclusions

Identity fusion theory was developed around a decade ago to capture the psychological processes and mechanisms that explain extreme pro-group behaviors. Since then, several dozens of studies have shown that this visceral feeling of oneness with the group can drive individuals to engage in extreme acts (like willingness to fight and die or displaying costly self-sacrifices) on its behalf, which has generated doubts about how to interpret the nature of the relationship between identity fusion and pro-group violence (Kiper & Sosis, 2018; Swann & Buhrmester, 2015). The existence of an association between both variables has never been established by the theory, which assumes that the type of pro-group acts (violent vs. nonviolent) in which fused individuals engage are determined by ideological factors, such as personal moral beliefs or convictions (Gómez et al., 2020). Our studies confront this tenet with empirical data for the first time and show that, although fused individuals may be highly motivated to protect the group or its members, they are willing to engage in violence only if they believe that that is morally justifiable, but not if they do not believe so. Identity fusion, therefore, should not be taken as a sufficient condition for the emergence of pro-group violence.

Note

1. We planned the two studies included in the paper simultaneously and considered the possibility of using different scales to measure extreme nonviolent acts, but a few weeks before we started collecting the data for Study 1 two workers at the landfill of Zaldivar (in the Basque Country) were buried alive by a rubbish avalanche, and the management of the rescue and recovery tasks by local authorities was so poor that it caused a wave of acts of protest and social mobilization, many of which were organized by the own families of the workers. Given that these events were widely reported by the Spanish media and all the population was presumably aware that there are circumstances in which it might be reasonable to engage in political acts to protect the interests and integrity of the family, we changed our mind and decided to use the same scale in both studies to increase the comparability of the results (please, note that the sample was mostly composed by Spaniards). None of the participants in Study 1 with whom we talked after the study told to us that any of the items was unrealistic or unbelievable.

Disclosure statement

Funding

Notes on contributors

Juana Chinchilla is a pre-doctoral researcher at UNED. Her research focuses on the interplay between identity fusion, morality, and pro-group behavior. She is also interested in the study of extreme, non-normative collective action.

Alexandra Vázquez is Associate Professor of Social Psychology at UNED. Her research interests are focused on intergroup and intragroup relations. She has conducted numerous studies on identity fusion, stereotypes and prejudice, intergroup conflict, and morality.

Ángel Gómez is a Full Profesor of Social Psychology at UNED and the director of the research group Social psychology of inter and intragroup relations: Strategies for improvement. Together with Prof. William B. Swann Jr., he is one of the initiators of identity fusion research. He is conducting extensive research on the causes, consecuences, and mechanisms of identity fusion; and he is also interested in the study of the strategies for improving intergroup relations and reducing intergroup conflicts and violence, such as direct and extended contact, recategorization, and verification of ingroup identities.

ORCID

Alexandra Vazquez http://orcid.org/0000-0002-6040-9102

Data availability statement

The data described in this article are openly available in the Open Science Framework at https://osf.io/hm5yc/?view_only=9e5c270012fd492ea0b453cfa6fb43d5.

Open Scholarship

This article has earned the Center for Open Science badges for Open Data and Open Materials through Open Practices Disclosure. The data and materials are openly accessible at https://osf.io/hm5yc/?view_only=9e5c270012fd492ea0b453cfa6fb43d5.

References

Aquino, K., & Reed, A. (2002). The self-importance of moral identity. *Journal of Personality and Social Psychology*, *83*(6), 1423–1440. https://doi.org/10.1037/0022-3514.83.6.1423

Aramovich, N. P., Lytle, B. L., & Skitka, L. J. (2011). Opposing torture: Moral conviction and resistance to majority influence. *Social Influence*, *7*(1), 21–34. https://doi.org/10.1080/15534510.2011.640199

Atran, S. (2020). Psychology of transnational terrorism and extreme political conflict. *Annual Review of Psychology*, *72* *(1)*, 471–501. https://doi.org/10.1146/annurev-psych-010419-050800

Bairak, F. (2019). *Morality as a moderator of the relationship between group identification and ingroup favoritism* [Unpublished master's thesis]. Baskent University.

Bandura, A. (1990). Selective activation and disengagement of moral control. *Journal of Social Issues*, *46*(1), 27–46. https://doi.org/10.1111/j.1540-4560.1990.tb00270.x

Bortolini, T., Newson, M., Natividade, J. C., Vázquez, A., & Gómez, A. (2018). Identity fusion predicts endorsement of pro-group behaviours targeting nationality, religion, or football in Brazilian samples. *British Journal of Social Psychology*, *57*(2), 346–366. https://doi.org/10.1111/bjso.12235

Curry, O. S. (2016). Morality as cooperation: A problem-centered approach. In R. D. Hansen (Ed.), *The evolution of morality* (pp. 27–52). Springer International Publishing. https://doi.org/10.1007/978-3-319-19671-8_2

Curry, O. S., Mullins, D. A., & Whitehouse, H. (2019). Is it good to cooperate? Testing the theory of morality-as-cooperation in 6O societies. *Current Antropology*, *60*(1), 47–49. https://doi.org/10.1086/701578

Ellemers, N. (2017). *Morality and the regulation of social behavior: Groups as moral anchors.* Routledge. https://doi.org/10.4324/9781315661322

Elnakouri, A., McGregor, I., & Grossman, I. (2018). The importance of environmental threats and ideology in explaining extreme self-sacrifice. *Behavioral and Brain Sciences*, *41*, e201. https://doi.org/10.1017/S0140525X18001723

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G*power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39(2), 175–191. https://doi.org/10.3758/BF03193146

Fiske, A. P., & Rai, T. S. (2015). *Virtuous violence*. Cambridge University Press. https://doi.org/10.1017/CBO9781316104668

Fredman, L. A., Bastian, B., & Swann, W. B., Jr. (2017). God or country? Fusion with Judaism predicts desire for retaliation following Palestinian Intifada. *Social Psychological and Personality Science*, 8(8), 882–887. https://doi.org/10.1177/1948550617693059

Ginges, J., & Shackleford, C. (2018). Self-sacrifice for a cause: The role of ideas and beliefs in motivating human conflict. *Brain and Behavioral Sciences*, 41, e203. https://doi.org/10.1017/S0140525X18001693

Gómez, A., Brooks, M. L., Buhrmester, M. D., Vázquez, A., Jetten, J., & Swann, W. B., Jr. (2011). On the nature of identity fusion: Insight into the construct and a new measure. *Journal of Personality and Social Psychology*, 100(5), 918–933. https://doi.org/10.1037/a0022642

Gómez, A., Chinchilla, J., Vázquez, A., López-Rodríguez, L., Paredes, B., & Martínez, M. (2020). *Recent advances, misconceptions, untested assumptions, and future research agenda for identity fusion theory, e12531*. https://doi.org/10.1111/spc3.12531

Gómez, A., López-Rodríguez, L., Sheikh, H., Ginges, J., Wilson, L., Waziri, H., . . . Atran, S. (2017). The devoted actor´s will to fight and the spiritual dimension of human conflict. *Nature Human Behavior*, 9(1), 673–679. https://doi.org/10.1038/s41562-017-0193-3

Gómez, A., 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-fused persons. *Personality and Social Psychology Bulletin*, 37(12), 1574–1586. https://doi.org/htpps://doi.org/10.1177/0146167211414580

Gómez, A., Vázquez, A., López-Rodríguez, L., Talaifar, S., Martínez, M., Buhrmester, M., Swann, D., & Jr, W. B. (2019). Why people abandon groups: Degrading relational vs. collective ties uniquely impacts identity fusion and identification. *Journal of Experimental Social Psychology*, 85, 103853. https://doi.org/htpps://doi.org/10.1016/j.jesp.2019.103853

Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist*, 52(12), 1820–1300. https://doi.org/10.1037//0003-066x.52.12.1280

Higgins, E. T. (1998). Promotion and prevention: Regulatory focus as a motivational principle. In M. Zanna (Ed.). *Advances in experimental social psychology* (Vol., 30, pp. 1-46). Academic Press.

Higgins, E. T., Roney, C. J. R., Crowe, E., & Hymes, C. (1994). Ideal versus ought prediction for approach and avoidance: Distinct regulatory systems. *Journal of Personality and Social Psychology*, 66(2), 276–286. https://doi.org/10.1037//0022-3514.66.2.276

Janoff-Bulman, R., Sheikh, S., & Hepp, S. (2009). Proscriptive versus prescriptive morality: Two faces of moral regulation. *Journal of Personality and Social Psychology*, 96(3), 521–537. https://doi.org/10.1037/a0013779

Jiménez, J., Gómez, A., Buhrmester, M. D., Vázquez, A., Whitehouse, H., & Swann, W. B., Jr. (2015). The dynamic identity fusion index: A new continuous measure of identity fusion for web-based questionnaires. *Social Science Computer Review*, 34(2), 215–228. https://doi.org/10.1177/0894439314566178

Kavanagh, C. M., Kapitány, R., Putra, I. E., & Whitehouse, H. (2020). Exploring the pathways between transformative group experiences and identity fusion. *Frontiers in Psychology*, 11. https://doi.org/10.3389/fpsyg.2020.01172

Kiper, J., & Sosis, R. (2018). Toward a more comprehensive theory of self-sacrifical violence. *Behavioral and Brain Sciences*, 41, e206. https://doi.org/10.1017S0140525X18001802

Kruglasnki, A. W., Bélanger, J. J., & Gunaratna, R. (2019). *The three pillars of radicalization: Needs, narratives and networks*. Oxford University Press. https://doi.org/10.1093(osos/9780190851125.001.0001

Louis, W. R., McGarty, C., Thomas, E. F., Amiot, C. E., & Moghaddam, F. M. (2018). The power of norms to sway fused group members. *Behavioral and Brain Sciences*, 41, e209. https//doi.org/10.1017/S0140525X18001644

Maio, G. R. (2019). *The psychology of human values*. Psychology Press.

Newson, M. (2017). Football, fan violence, and identity fusion. *International Review of the Sociology of Sport*, 54(4), 431–444. https://doi.org/10.1177/1012690217731293

Newson., M., Bortolini, T., Buhrmester, M., Da Silva, S. R., Queiroga da Aquino, J. N., & Whitehouse, H. (2018). Brazil's football warriors: Social bonding and inter-group violence. *Evolution and Human Behavior*, 39(6), 675–683. https://doi.org/10.1016/j.evolhumbehav.2018.06.010

Paredes, B., Briñol, P., & Gómez, A. (2018). Identity fusion leads too willingness to fight and die for the group: The moderating impact of being informed of the reasons behind other members' sacrifice. *Self and Identity*, 17(5), 517–530. https://doi.org/10.1080/15298868.2017.141950

Paredes, P., Santos, D., Briñol, P., Gómez, A., & Petty, R. E. (2019). The role of meta-cognitive certainty on the relationship between identity fusion and endorsement of extreme pro-group behavior. *Self and Identity*, 17(5), 517–530. https://doi.org/10.1080/15298868.2019.1681498

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

Sheikh, H., Gómez, A., & Atran, S. (2016). Empirical evidence for the devoted actor model. *Current Antropology*, *57*(13), S204-S209. https://doi.org/10.1086/686221

Swann, W. B., Jr., & Buhrmester, M. D. (2015). Identity fusion. *Current Directions in Psychological Science*, *24*(1), 52–57. https://doi.org/10.1177/0963721414551363

Swann, W. B., Jr., Gómez, A., Buhrmester, M. D., López-Rodríguez, L., Jiménez, J., & Vázquez, A. (2014). Contemplating the ultimate sacrifice: Identity fusion channels pro-group affect, cognition, and moral decision making. *Journal of Personality and Social Psychology*, *106*(5), 713–727. https://doi.org/10-1037/a0035809

Swann, W. B., Jr., Gómez, A., Dovidio, J. F., Hart, S., & Jetten, J. (2010). Dying and killing for one's group. Fusion moderates responses to intergroup versions of the trolley problem. *Psychological Science*, *21*(8), 1176–1183. https://doi.org/10.1177/0956797610376656

Swann, W. B., Jr., Gómez, A., Seyle, D. C., 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*, *95*(5), 995–1011. https://doi.org/10.1037/a0013668

Swann, W. B., Jr., Gómez, A., Vázquez, A., Guillamón, A., Segovia, S., & Carrrillo, B. (2015). Fusion with the cross-gender group predicts genital sex reassignment surgery. *Archives of Sexual Behavioor*, *44*(5), 1313–1328. https://doi.org/10.1007/s10508-014-0470-4

Swann, W. B., Jr., Gómez, S., Huici, C., Morales, F., & Hixon, J. G. (2010). Identity fusion and self-sacrifice: Arousal as catalyst of pro-group fighting, dying, and helping behavior. *Journal of Personality and Social Psychology*, *99*(5), 824–841. https://doi.org/10.1037/a0020014

Swann, W. B., Jr., Jetten, J., Gómez, A., Whitehouse, H., & Bastian, B. (2012). When group membership gets personal: A theory of identity fusion. *Psychological Review*, *119*(3), 441–456. https://doi.org/10.1037/a0028589

Vázquez, A., Gómez, L., & Swann, W. B.. (2017). Do historic threats to the group diminish identity fusion and its correlates?. *Self and Identity*, *16*(4), 480–503. https://doi.org/10.1080/15298868.2016.1272485

Vázquez, A., López-Rodríguez, L., Martínez, M.,Atran, S., & Gómez, A. (2020). Threat enhances aggressive inclinations among devoted actors via increase in their relative physical formidability. *Personality and Social Psychology Bulletin*, *46*(10), 1461–1475. https://doi.org/htpps://doi.org/10.1177/0146167220907466

Whitehouse, H. (2018). Dying for the group: Towards a general theory of extreme self- sacrifice. *Behavioral and Brain Sciences*, *41*, e192, 1–62. https://doi.org/htpps://doi.org/10.1017/S0140525X18000249

Whitehouse, H., McQuinn, B., Buhrmester, M., & Swann, W. B., Jr. (2014). Brothers in arms: Libyan revolutionaries bond like family. *PNAS*, *111*(50), 17783–17785. https://doi.org/10.1073/pnas.1416284111

Whitehouse, H., Jong, J., Buhrmester, M. D., Gómez, A., Bastian, B., Kavanagh, C. M., Newson, M., Matthews, M., Lanman, J. A., McKay, R., & Gavrilets, S., Jr. (2017). The evolution of extreme cooperation via shared dysphoric experiences. *Scientific Reports, 7:*, 44292. https://doi.org/10.1038/srep44292

Wineski, D. C., & Skitka, L. J. (2017). Moralization through moral schock: Exploring emotional antecedents to moral conviction. *Personality and Social Psychology Bulletin*, *43*(2), 139–150. https://doi.org/10.1177/0146167216676479

Zaal, M. P., Ståhl, C. T., Ellemers, N., & Derks, B. (2011). By any means necessary: The effects of regulatory focus and moral conviction on hostile and benevolent forms of collective action. *British Journal of Social Psychology*, *50*(4), 670–689. https://doi.org/hppts://doi.org/10.1111/j.2044-8309.2011.02069.x