Fusión de identidad: Una revisión sistemática

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Resumen

El objetivo de la presente investigación fue realizar una revisión sistemática de los estudios empíricos que han reportado el uso de la teoría de fusión de identidad. Para esto, la revisión siguió los lineamientos y recomendaciones de la declaración PRISMA. Las bases de datos consultadas fueron Web of Science, Scopus, ProQuest, ScienceDirect, Willey Online Library, EBSCO y JSTORE. En total, se revisaron 52 estudios empíricos, en español y en inglés, publicados entre los años 2009 y 2018, que cumplían con los criterios de selección. La mayoría de los estudios dan evidencia de que la fusión de identidad es un fuerte predictor de conductas extremas de sacrificio por el grupo, y también, se ha asociado generalmente a variables como la identificación con el grupo, el compromiso grupal, el apoyo social percibido, la lealtad incluso en condiciones de ostracismo, los sentimientos, afectos y emociones hacia el grupo, y la percepción de parentesco, entre otras. Al final se discuten sus implicaciones y limitaciones.
Palabras clave: fusión de identidad, sacrificio extremo, identidad grupal, apoyo social.

Identity fusion: A systematic review

Abstract

The objective of the present investigation was to conduct a systematic review of empirical studies that have reported the use of identity fusion theory. The review followed guidelines and recommendations of the PRISMA statement. The following databases were used Web of Science, Scopus, ProQuest, ScienceDirect, Willey Online Library, EBSCO and JSTORE databases. Empirical studies were selected, in Spanish and English that were published between 2009 and 2018. 52 articles were found that met the selection criteria. Most studies give evidence that identity fusion is a strong predictor of extreme sacrifice behaviors by the group. Likewise, identity fusion has generally been associated with variables such as: identification with the group, group commitment, perceived social support, loyalty even in ostracized conditions, feelings, affects and emotions towards the group, perception of kinship, among other. Its implications and limitations are discussed.
Keywords: identity fusion, extreme sacrifice, group identity, social support.

Identity fusion: a systematic review

The theory of identity fusion has completed a decade since the first article introducing it to the field of psychology was published (Swann, Gómez, Seyle, Morales, & Huici, 2009). This theory was born with the intention of explaining a particular phenomenon: why are some people capable of making extreme sacrifices, to the point of giving their lives for their group? The authors propose that this disposition to extreme sacrifice would be motivated by a highly salient personal and group identity between individuals, with a visceral feeling of deep union between the personal self and the social self, so that the delimitation between both identities becomes indistinguishable (e.g., Gómez & Vázquez, 2015; Swann, Jetten, Gómez, Whitehouse, & Bastian 2012).

As a construct, identity fusion is associated with relational ties (i.e., feelings toward individual group members) and collective ties (i.e., feelings toward the group as a whole; e.g., Gómez et al., 2019; Gómez, Brooks et al., 2011), which create the perception of connection and reciprocal strength between personal identity and group identity (Besta, 2018; Gómez, Brooks et al., 2011). Because of this strong unity with the group, the merged individuals represent the other group members as if they were their own relatives (Robert, Virpi, & John, 2019; Swann, Buhrmester et al., 2014; Whitehouse et al., 2014), motivating them to perform extreme behaviors in favor of the group (e.g., Buhrmester & Swann, 2015; Fredman et al., 2015; Swann & Buhrmester, 2015).

Identity fusion has been founded on four fundamental principles that conceptually capture its nature. Multiple investigations have demonstrated consistent evidence of these principles, supporting the theoretical basis of identity fusion (e.g., Besta, Mattingly, & Błażek, 2015; Gómez, Morales, Hart, Vázquez, & Swann, 2011; Heger & Gaertner, 2018; Vázquez, Gómez, & Swann, 2017): the personal agent self, identity synergy, relational ties, and irrevocability (Gómez & Vázquez, 2015; Swann et al., 2012).

The principle of the personal agent self suggests that the merged person maintains intentional actions that benefit the group (Fredman et al., 2015). These actions are outstanding even in group contexts, where the personal self is activated along with the social self (Swann, Gomez, Huici, Morales, & Hixon, 2010). In this way, the merged person feels capable of performing behaviours that in his or her opinion will have consequences for the whole group (Gómez & Vázquez, 2015).

The principle of identity synergy refers to the synchrony that develops the personal self with the social self forming a reciprocal combination between both identities (Gómez, Brooks et al., 2011; Swann et al., 2009), which causes that when one is activated, the other is also activated, amplifying the behavior of the merged person (Heger & Gaertner, 2018; Swann et al., 2012).

The principle of relational ties refers to the fact that the merged subjects recognize the members of the group both by their personal identities and by their social identities (Swann, Gómez, Dovidio, Hart, & Jetten, 2010). The combination of both identities through this type of recognition develops in the merged individuals a strong bond with the group members (e.g., Besta, 2014; Gómez, Brooks et al., 2011).

Finally, the principle of irreversibility refers to the fact that merged persons tend to remain merged over time (Vázquez et al., 2017; Swann et al., 2012; Swann et al., 2015). This is because fused people build the relational and collective ties that bind them emotionally intensely to the group (Gómez et al., 2019), thus reinforcing the sense of their social and personal selves (Gómez, Morales et al., 2011).

While there have been some theoretical studies that account for the fundamental properties of identity fusion theory (e.g., Buhrmester & Swann, 2015; Fredman et al, 2012; Swann & Buhrmester, 2015; Whitehouse & Lanman, 2014; Yuan, Tao, & Lu, 2014), to date no article has conducted a review that systematically synthesizes and groups all the empirical studies that have involved identity fusion. Therefore, the objective of the present theoretical study (Montero & Leon, 2007), is to perform a systematic review of the empirical studies (Ato, Lopez, & Benavente, 2013) that have reported the use of the identity fusion construct between the years 2009 to 2018.

Method

Procedure and search strategies

A systematic review of the literature was conducted following the guidelines and recommendations of the PRISMA statement, complying with items 1, 2, 3, 6, 7, 8, 9, 10, 11, 14, 17, 18, 23, 24, 25, 26 and 28 of its checklist (Liberati et al., 2009; Urrútia & Bonfill, 2010). The search for articles published between 2009 and 2018 was configured by consulting seven databases (n = 351; Web of Science = 87, Scopus = 55, ProQuest = 65, ScienceDirect = 46, Willey Online Library = 35, EBSCO = 38 and JSTORE = 25). Article research was limited to studies conducted in

English and Spanish using the keywords "identity fusion" and "fusión de identidad". The search was limited to the following areas of research: *social psychology*; *social identity*; *identity*; *behavior*; *group dynamics*; *psychology*; *group identity*; *social sciences*; *social behavior*. Only articles with empirical data were included, discarding theoretical and instrumental works on identity fusion.

Selection of studies

The studies were selected in stages (see Figure 1). First, all the articles collected in the databases mentioned above were compiled (*n* = 351). Second, the titles were read and all duplicate articles were removed (*n* = 142). Third, the titles, abstracts, keywords and instruments used were

read, eliminating articles that did not meet the inclusion criteria (*n* = 129). Finally, a full-text reading was carried out by eliminating articles on theoretical, instrumental or non-centric studies on identity fusion (*n* = 28).

Summary of results

Once the selection was completed (*n* = 52), the results were synthesized in order to compare the different studies. This procedure was carried out by extracting the following data: 1) author(s), 2) year of publication, 3) sample(s), 4) research design, 5) fusion measuring instrument(s), 6) reference group(s), 7) variables/manipulations included in the studies and 8) main results.
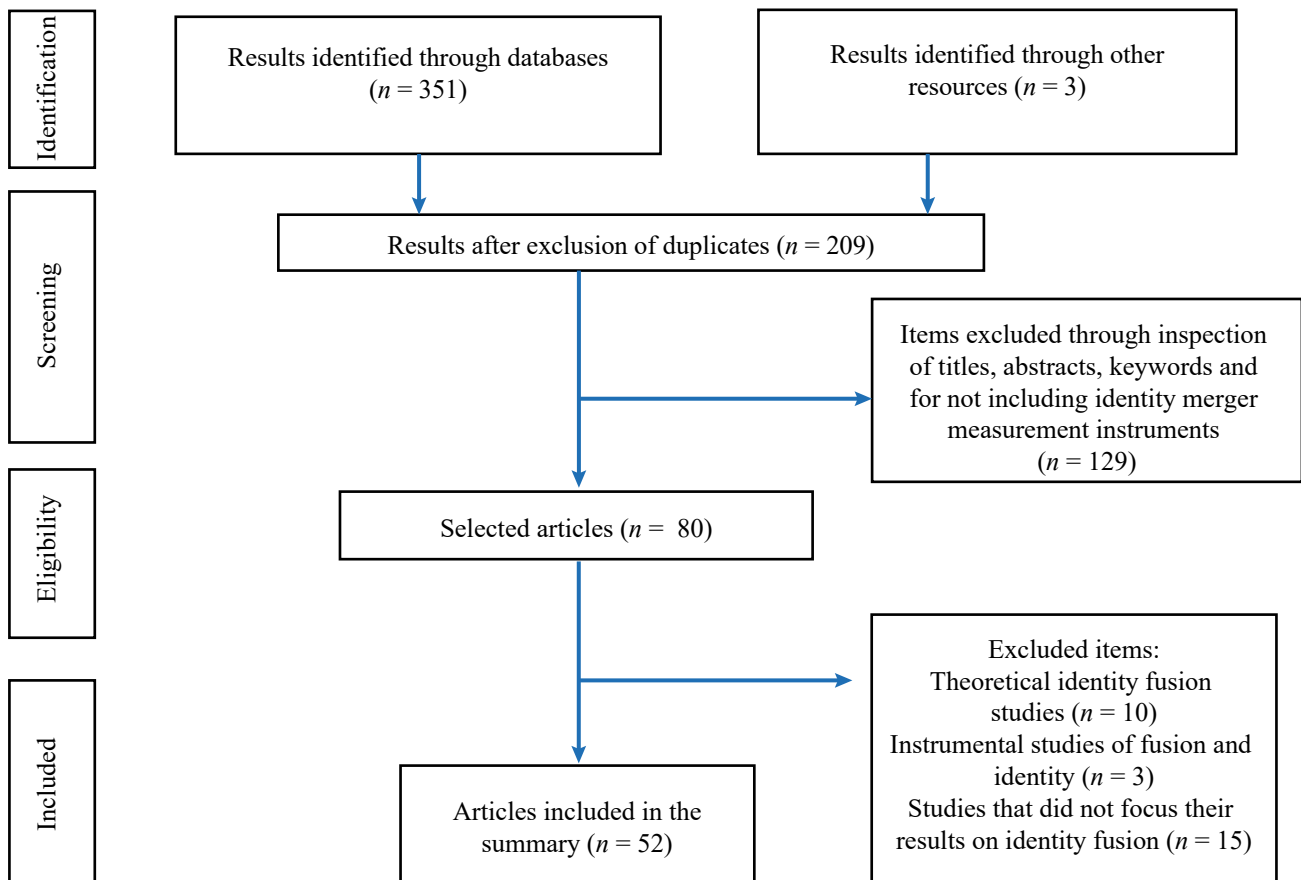

Figure 1. PRISMA flowchart: Literature identification and selection process.

Table 1
Synthesis of empirical studies addressing the theory of identity fusion

Author(s)	Sample(s)	Design	Instrument	Reference Group	Related variables	Main results
	Study 1: 200 university students from Spain (82 women; average age = 35; *SD* = 9.23).	CO	MP	Spain	IG	Identity Fusion is a unique state of unity with a group, which is categorically different from the non-fusion state. Fusion was related to measures of group identification, and it was quite common for Spaniards to feel merged with their country. Fused participants took more time and attributed more difficulty to choosing to be fused with the group. In addition, fused participants considered themselves central and believed that they were unique among group members in their willingness to act on behalf of the group. The results revealed that activation of the personal or social identities of the fused individuals increased their willingness to support extraordinary behaviors, such as fighting or dying for the group. Finally, it was concluded that fusion was not a personality trait, as being fused with one group would have little bearing on the likelihood of fusing with other groups.
	Study 2: 120 university students from Spain (87 women; mean age = 33.90; *SD* = 6.52)	CO	MP	Spain	Reflection time	
	Study 3: 177 university students in Spain (101 women; mean age = 33.04; *SD* = 12.02)	CO	MP	Spain	IG DIS	
	Study 4: 151 university students in Spain (126 women; mean age = 32.28; *SD* = 8.83)	CO	MP	Spain	IG DIS	
	Study 5: 251 university students in Spain (143 women; mean age = 33; *SD* = 11.34)	CO	MP	Spain and others		
Swann et al. (2009)	Experiment 1: 627 (pre) and 602 (post 4 to 5 months) university students from Spain (520 women; mean age = 31.17; *SD* = 7.45 [post])	EX	MP	Spain	IG Perception of being a prototypical member of the group Self-verification DIS	
	Experiment 2: 365 (pre) and 326 (post 4 to 5 months) university students from Spain (278 women; mean age = 31.06; *SD* = 7.40 [post])	EX	MP	Spain	IG DIS Self-verification	
	Experiment 3: 435 (pre) and 421 (10-day post) high school students (369 females; mean age = 15.81; *SD* = 0.92 [post])	EX	MP	Spain	IG Self-verification DIS Certainty of identities Uncertainty	

Author(s)	Sample(s)	Design	Instrument	Reference Group	Related variables	Main results
Swann, Gómez, Dovidio et al. (2010)	Study 1: 62 university students in Spain (29 women; mean age = 33.47 years; $SD = 9.14$)	CO	MP	Spain	IG DIS	In four investigations, identity fusion predicted extreme sacrificial behavior, moderating responses to intergroup versions of the tram problem. These effects were quite independent of the effects of a traditional measure of group identification. Repeatedly, the fused individuals expressed an enthusiasm to translate their moral imperatives into action.
	Study 2: 207 university students in Spain (165 women; mean age = 34.23 years; $SD = 9.1$)	CO	MP	Spain	IG DIS	
	Study 3: 66 Spaniards (48 women; mean age = 37.24 years; $SD = 10.97$)	CO	MP	Spain (38%) Europe (6.1%) United States of America (0%)	Prejuicio DIS	
	Study 4: 161 Spaniards (122 women; mean age = 36.07 years; $SD = 9.64$)	CO	MP	Spain	IG DIS	
Swann, Gómez, Huici et al. (2010)	Study 1: 1766 university students in Spain (1293 women; mean age = 31.53 years; $SD = 9.48$)	CO	MP	Spain	Collective identity IG DIS	When the personal agency of the fused ones increases with the excitement, the support of the pro-group actions increases. The results of four experiments supported this proposition. In particular, the increased excitement of participants who fused with a group increased their tendency to act on behalf of the group. People who were not fused showed no such tendency. Likewise, feelings of personal agency partially mediated the effects of the fusion (in the condition of excitement) on donation actions for the group (Experiment 3) and pro-group behavior (Experiment 4). Finally, evidence that the fused individuals donated money to a charity linked to the group itself indicates that not only is the fusion associated with actual manifest behavior, but also that the content of those behaviors may be positive.
	Study 2: 276 university students in Spain (203 women; mean age = 34.55 years; $SD = 8.61$)	CO	MP	Spain (37.7%)	IG DIS Commitment with the group	
	Experiment 1: 245 high school students (99 females; mean age = 15.34; $SD = 0.97$)	EX	MP	Spain (32.7%)	Heart Rate IG Group Physical Exercise DIS	
	Experiment 2: 190 high school students (69 females; mean age = 15.14; $SD = 0.94$)	EX	MP	Spain (38.4%) Europe (5.8%)	Heart Rate IG Group Physical Exercise DIS	
	Experiment 3: 120 high school students (38 females; mean age = 16; $SD = 0.77$)	EX	MP	Spain (39.2%) Europa (15%)	Heart Rate IG Individual Physical Exercise Personal Agency DIS Willingness to donate	
	Experiment 4: 114 high school students (39 females; mean age = 16.01; $SD = 0.78$)	EX	MP	Spain (38.6%) High School (7.6%)	Heart Rate IG Individual Physical Exercise Personal Agency	

Author(s)	Sample(s)	Design	Instrument	Reference Group	Related variables	Main results
Gómez, Morales et al. (2011)	Experiment 1: 86 university students from Spain (55 women; mean age = 33.42; SD = 9.52).	EX	MP	Spain (41.9%)	IG DIS Feeling of exclusion, rejection and/or unequal treatment. Feeling of being ignored. Perceived reason for ostracism.	In four experiments, the fused participants showed greater attachment to the group when they were ostracized. That is, if they were excluded by an external group because of their nationality or by an internal group because of their personal preferences, they expressed greater attachment to the group itself. In addition, fused participants responded to ostracism by showing three different types of compensatory activities: support of extreme actions for the group, rigid determination to stay in the group, and increased charitable giving to the group.
	Experiment 2: 460 university students from Spain (372 women; mean age = 32.10; SD = 8.99).	EX	MP	Spain (32.6%)	IG DIS Feeling of exclusion, rejection and/or unequal treatment. Feeling of being ignored.	
	Experiment 3: 194 university students from Spain (153 women; mean age = 34.22; SD = 9.27).	EX	MP	Spain (33%)	IG DIS Feeling of exclusion, rejection and/or unequal treatment. Feeling of being ignored. Desire to leave the group.	
	Experiment 4: 86 university students from Spain (48 women; mean age = 32.92; SD = 10.29).	EX	MP	Spain (27.9%)	Aptitude test. DIS Willingness to donate funds. Self-esteem. Feeling of exclusion, rejection and/or unequal treatment. Feeling of being ignored.	
Semmani-Azad, Sycara, & Lewis (2012)	101 university students from the University of Waterloo, Canada (18 Chinese; 19 Indians; 64 Canadians)	EX	MV	Countries of origin.	Individualism-collectivism. Personality. Helpful behavior.	There is evidence that regardless of culture, people tend to be more helpful when they are highly fused with their culture. It is also observed that identity fusion not only predicts the help given, but also the request for help.
Buhrmester et al. (2012)	Pre (30 days before the election): 459 Americans and 871 university students from Spain. Post (2 weeks after the election): 267 Americans (162 women; average age = 25.75) and 496 university students from Spain (324 women; average age = 32.99).	CO	MP	United States Political Parties (10.2%). Political parties in Spain (10.5%).	IG Quality of Life	The investigation was conducted during the 2008 election period in the United States and Spain. It showed that people fused with their political party internalized both victory and defeat, but highly identified people internalized only victory.
Howard & Magee (2013)	Study 2: 201 cybernauts from the Reddit.com website (49% women; average age = 23.8; SD = 6.7)	CO	MP	Online Group (Reddit.com).	Group identity Commitment to affection, continuity and morale Positive emotions Perceived social support	In this study the identity fusion scale was significantly related to: affective commitment (r = .55), continuity commitment (r = .37), moral commitment (r = .51) and perceived online social support (r = .38).

Author(s)	Sample(s)	Design	Instrument	Reference Group	Related variables	Main results
Besta, Kaźmierczak, & Błażek (2013)	Study 1: 208 cybernauts from different internet forums, social networks and local information in Poland (55 women; average age = 26.4; SD = 8.7)	EX	MP	Poland (26.9%)	IG Self-verification DIS	This study shows that fused people seem to be more sensitive than unfused people to verification or challenge of their group identity. The status of the evaluator, therefore, showed to moderate the behavior of people with a strong attachment to the country, by means of radical support towards the group, after the verification of the identity or the challenge of the group.
	Study 2: 119 university students from Poland (66 women; average age = 21; SD = 1.7)	EX	MP	Poland (27.7%)	IG DIS	
Jaśkiewicz & Besta (2014)	Study 1: 190 residents of Tricity (an urban area located in northern Poland formed by three main cities: Gdansk, Gdynia and Sopot) (109 women; mean age = 32.8 years; SD = 8.66)	CO	MV	City of residence.	Traveling capacity IG Quality of Life	Identity fusion measured the relationship between the ease of walking in the neighborhood and the quality of life in a city, suggesting that more pedestrian-friendly neighborhoods foster greater integration between personal identity and the social identity of the city and/or neighborhood.
	Study 2: 447 residents of Tricity (an urban area located in the north of Poland formed by three main cities: Gdansk, Gdynia and Sopot) (303 women; mean age = 23.7 years; SD = 6.7)	CO	MV	City of residence.	Accessibility in the neighbourhood IG Quality of Life	
Besta (2014)	Study 1: 367 cybernauts from different internet forums, social networks and local information in Poland (112 women; average age = 33.4; SD = 12.3)	CO	MP	Poland (24.8%)	IG DIS. Perceived prototypicality	Fused versus unfused people show a greater willingness to fight for their group, defend the group and self-sacrifice for group members. In addition, people with higher group identification scored higher on social desirability, but not the fused participants. Finally, it turned out that identity fusion was a stronger predictor of passive nationalism than group identification.
	Study 2: 139 Internet cybernauts from Poland (44 women; mean age = 40.5; SD = 15.2)	CO	MP	Poland (31.7%)	IG DIS Perceived prototypicality Nationalism Self-concept	
	Study 3: 163 cybernauts from different Internet forums, social networks and local information in Poland (37 women; average age = 32; SD = 13.2)	CO	MP	Poland (29.4%)	IG Perceived prototypicality DIS	
	Study 4: 203 cybernauts from different Internet forums, social networks and local information in Poland (62 women; average age = 34.2; SD = 12.9)	CO	MP	Poland (25.6%)	IG. Perceived prototypicality DIS Locus of control Social Desirability	

Author(s)	Sample(s)	Design	Instru-ment	Reference Group	Related variables	Main results
	Experiment 2: 622 university students in Spain (357 women; mean age = 34.48; SD = 11.22).	EX	MV	Spain	DIS	Most people recognize that when several members of their group are in danger, they must try to save them, even if that means risking their own lives. However, when asked what they would really do if faced with this dilemma, many people said that they would selfishly choose to save themselves. This is not the case for people who felt strongly fused with their group. The willingness of strongly fused people to sacrifice themselves to save their group members seems to be mediated by the immediate emotional reactions they experienced when they imagined their group members were in danger. For the strongly fused people, it was almost as if they, or a family member, were in danger. Therefore, they did not hesitate to sacrifice their own lives to save the members who were in danger.
	Experiment 3: 85 university students from Spain (69 women; mean age = 31.40; SD = 10.24).	EX	MV	Spain	DIS Devotion to saving group members	
Swann, Gómez et al. (2014)	Experiment 4: 293 university students from Spain (158 women; mean age = 36.71; SD = 14.10).	EX	MV	Spain	DIS Survival instinct, Distance from victims Emotional commitment to the group Utilitarianism Negation. Morality	
	Experiment 5: 436 university students from Spain (242 women; mean age = 33.90; SD = 11.08).	EX	MV	Spain	DIS Pressure to make a moral decision	
	Experiment 6: 572 university students in Spain (377 women; mean age = 33.21; SD = 9.83)	EX	MV	Spain	DIS	
	Experiment 7: 1368 university students from Spain (757 women; mean age = 35.14; SD = 11.15).	EX	MV	Spain	DIS	

Author(s)	Sample(s)	Design	Instrument	Reference Group	Related variables	Main results
Swann, Buhrmester et al. (2014)	Study 1: 2438 participants from 11 countries (mostly university students) Germany (n = 112; 83% women; mean age = 21.94), Spain (n = 251; 73% women; mean age = 33.67), Poland (n = 147; 55% women; mean age = 23.87), China (n = 239; 28.9% women; mean age = 29.91), Indonesia (n = 636; 47% women; mean age = 18. 89), Japan (n = 106; 75% women; mean age = 19.17), India (n = 100; 49% women; mean age = 21.93), Australia (n = 100; 77% women; mean age = 20.35), South Africa (n = 316; 82% women; mean age = 19.11), United States (n = 250; 79% women; mean age = 34.69) and Chile (n = 181; 77% women; mean age = 22.09).	CO	MV	Country of origin.	DIS	The six studies point out that the perception of shared core characteristics (i.e., genes and values), encourages perceptions of family ties with other group members, which increases support for self-sacrifice. From this perspective, what appears to be selfless behavior by the fused persons is not selfless at all. Rather, when fused persons support sacrifice for other members of the group, they do so out of a sense of personal obligation to those they consider to be extensions of themselves, their family.
	Study 2: 83 university students from China (43 women; average age = 20.82).	EX	MV	China	Essentialism Racism	
	Study 3: 95 citizens of India (29 women; average age = 29.22)	EX	MV	India	Essentialism Racism DIS	
	Study 4: 150 United States citizens (90 women; mean age = 34.6)	EX	MV	United States of America	Value homogeneity DIS	
	Study 5: 121 university students in Spain (96 women; mean age = 33.21; SD = 10.30)	EX	MV	Spain	Family ties Value homogeneity DIS	
	Study 6: 133 (pre) and 111 (6-month post) university students in Spain (63 women; mean age = 37.05; SD = 11.11 [post]).	EX	MV	Spain	Family ties Value homogeneity DIS	

Author(s)	Sample(s)	Design	Instrument	Reference Group	Related variables	Main results
Whitehouse et al. (2014)	179 Libyan revolutionary men, belonging to 4 different battalions of the Misratan Military Council (average age = 28.03; SD = 4.68)	DE	MP	Own family (99%). Own battalion (97%). Other Libyan Revolutionary Battalions (96%). Common Libyans who supported the revolution, but did not belong to a battalion (1%).		The present study shows that the frontline fighters in Libya expressed a stronger fusion with the battalion than the non-combatants. This can be explained by two possibilities. One possibility is that the high levels of fusion with the battalion have caused people to volunteer for frontline combat. Libyan revolutionary battalions were formed organically and without forced coercion, making it possible for those who were highly fused and therefore willing to risk their lives freely to decide to become frontline fighters. Such a scenario would suggest that the fusion forces the group members to translate their intentions into risking their lives on the front line of the war. A second possibility is that the fighting has encouraged fusion with the group, once within the battalion as a frontline fighter.
Yoo, Swann, & Kim (2014)	206 university students from South Korea and 313 university students from the United States.	EX	MV	South Korea. United States of America	IG Consumption	People from a collectivist culture (South Korea) exhibited a higher level of fusion with the country than participants from an individualist culture (United States). The people fused in both countries increased their willingness to be patriotic consumers by showing a high ethnocentric tendency as consumers and favorable responses to patriotic advertising. It is assumed that the highly fused individuals would frame the purchase of household products as an altruistic helping behavior and base their economic decisions on patriotic concern for their fellow citizens.
Lin & Sung (2014)	156 university students in the United States (67% female; average age = 20).	EX	MV	Participants' personal computer brand.	IG. Mark	The present study shows that the highly fused participants are predisposed to follow their relationship with the brand despite being aware of the ethical transgressions it may have.
Sheikh, Atran, Ginges, Wilson, Obeid, & Davis (2014)	62 participants from Beirut and Byblos, Lebanon (16 Shiites, 18 Sunnis, 25 Christians and 3 undefined; 33 women; average age = 24	CO	MP	Religion. Arabs. Lebanon. Friends. Family.	Religiosity. Values. Social distance. Support for expensive sacrifices. Threat to community interests. Sense of control over the community's future. Belief in group superiority.	This study shows that people fused with their religion and with a high moralization of sectarian values, expressed a strong willingness to support costly sacrifices for the group, compared to those fused with high moralization of universal values. In addition, when people believed they had control over their future, fusion increased support for costly sacrifice and social distance from outside groups. These findings have implications for notions of religion as an amplifier and regulator of costly sacrifice, and the impact of identity fusion for and against extreme actions.

Author(s)	Sample(s)	Design	Instrument	Reference Group	Related variables	Main results
Besta, Gómez, & Vázquez (2014)	Study 1: 365 university students from Poland (197 women; average age = 21.81; SD = 4.46) Study 2: 138 adults in Poland (69 women; mean age = 26.88; SD = 4.76)	CO CO	MV MV	Poland Religious group	IG. DIS Willingness to deny group irregularities IG. DIS Willingness to deny group irregularities	Identity fusion was a better predictor of support for extreme pro-group behavior than group identification. Consistently, the results indicated that identity fusion predicts support for extreme behavior and a willingness to deny the group's wrongdoing, regardless of whether the reference group was the country or a religious group.
Besta, Mattingly et al. (2015)	Study 1: 365 university students from Poland (197 women; average age = 21.81; SD = 4.46) Study 2: 138 adults in Poland (69 women; mean age = 26.88; SD = 4.76) Study 3: 174 students of adult schools in Poland (144 women; average age = 28.85; SD = 9.54)	CO CO CO	MV MV MV	Poland Poland Family Religious group Poland	IG. Self-concept Personal Agency IG. Clarity of Self-Concept Personal Agency IG. Identity Clarity of Self-Concept Personal Agency Fulfillment of goals	These studies give evidence that feelings of self-concept mediated the link between identity fusion and personal agency, however, this pattern of results did not emerge for group identification on any of its different measures. Therefore, clarity of self-concept may be responsible for the fact that fused people have a high sense of agency and control, thus, they do not passively follow the action of others, but are predisposed to initiate pro-group actions, given their clearer and more coherent vision of their identity.
Besta, Szulc, & Jaśkiewicz (2015)	155 university students from Poland (74 women; average age = 19.6; SD = 0.91) and 24 violent football fans (2 women; average age = 22.9; SD = 2.26)	CO	MV	Polonia	Social Dominance Orientation IG. Authoritarianism DIS Acceptance of violent change in the social system	It is evident that right-wing and left-wing authoritarianism mediate the effects of fusion and dominance on the acceptance of violence. One could speculate that when a person has a marked orientation towards the hierarchy or is intensely fused with his or her country, and is at the same time authoritarian, his or her support for extreme behavior and violent change of the system will be greater.
Buhrmester, Fraser, Lanman, Whitehouse, & Swann (2015)	Preliminary study: 321 participants surveyed through MTurk (53% women; average age = 29.3) Study 1: (pre: one week before the 2013 Boston bombings) 80 US participants surveyed through MTurk (53% women; mean age = 29.3) and (post: 2 days after the bombings) 47 participants (62% women; mean age = 36) Study 2: (1-3 days after the attacks) 120 US participants surveyed through MTurk (54% women; mean age = 37.3) Study 3: (5 to 6 days after the attacks) 133 US participants surveyed through MTurk (58% women; mean age = 34)	CO CO CO CO	MV MV MV MV	United States of America United States of America United States of America United States of America	Perception of kinship Perception of kinship Actions to support victims Feelings of concern for those affected. Perception of kinship Proximity to the victim Willingness to sacrifice Perception of kinship Support to victims. Donations	This study was conducted in the context of the attacks that occurred in Boston, United States, in 2013. A confirmatory factor analysis showed that the measures of fusion and kinship perception represent overlapping constructs, but are nevertheless different. In addition, strongly fused individuals proved to be especially suited to develop perceptions of group members as psychological relatives worthy of sacrifice and support to the group. Finally, it is evident that psychological kinship mediates the effect of identity fusion on: (1) support actions, (2) empathic concern, (3) self-sacrifice, (4) letters of support to the victims of the attack and (5) donations in favour of the victims.

Author(s)	Sample(s)	Design	Instrument	Reference Group	Related variables	Main results
Gaviria, Ferreira, Martínez, & Whitehouse (2015)	Study 1: 68 students from a school in Madrid (32 women; age 6-12).	Exploratory (Focus Groups)			Identity Group concept.	It is reported that personal identity through self-descriptions begins to mature from the age of 8 to 9. As for social identity, participants do not manage to understand gender as a collective category, although they do understand their being associated with a gender. All children, even the youngest, expressed some degree of special connection with particular individuals or groups, and would be willing to take costly actions for them. Most participants described themselves as being strongly 'fused' with the group they valued most (family, friends, and classmates), with responses associated with the social self-prevailing over items related to their personal self. This would imply that the fusion does not emerge, but rather, develops gradually. Since the children did not evidence a developed personal and/or group identity, the authors suggest the existence of a feeling prior to what they called protofusion, whose fundamental component is the strength of the relational ties with the other members of the group.
	Study 2: 72 students from a school in Madrid (6 boys and 6 girls from each level were randomly selected; age between 6 and 12 years)	Exploratory (Interviews)	MV	Family, friends and classmates.	Identity	
Jong, Whitehouse, Kavanagh, & Lane (2015)	Study 1: 194 participants resident in Northern Ireland, surveyed through the Qualtrics Panel (71 women; mean age = 53.95; SD = 9.83)	CO	MV	Unionists Republicans	Reflection	Participants who reported more shared negative experiences had more time to reflect on their experiences and were more engaged with their party. Direct exposure to the 2013 Boston Bombings and the degree of self-reported suffering as a result of that event predicted the extent to which participants reflected on their negative experience, which in turn predicted the fusing of identity with Boston. The increased importance of the shared negative event raised the levels of fusion among people who experienced high levels of negative affect. This provides evidence that a greater number of shared negative experiences increase identity fusion among group members.
	Study 2: 115 participants residing in Boston, surveyed through MTurk (42 women; mean age = 29.3; SD = 8.24)	CO	MV	Boston	Memories Negative experiences shared. Reflection	
	Study 3: 99 participants residing in Boston, surveyed through MTurk (42 women; mean age = 29.5; SD = 7.98)	EX	DIFI MV	Boston	Memories Affects	
Páez, Rimé, Basabe, Wlodarczyk, & Zumeta (2015)	Study 2: 115 (pre: 2 days before the event) and 330 (post: 2 days after the event) participants in the Tamborrada de San Sebastián in the Basque Country (44.4% women; mean age = 40.26; SD = 12.16)	CO	MP	Folklore group (Tamborrada)	Social Integration Empowerment Social beliefs Affects Shared flow Happiness Collective Efficiency Emotional Synchrony	Participation in a collective meeting led to higher levels of identity fusion and group integration. After participating in a group action, collective self-esteem and identity fusion increased comparatively more in the collective condition than in the control condition (individual action). Likewise, synchrony and shared flow were greater during the collective activity than during the individual activity. The results confirm that collective emotional meetings increase identity fusion, emotional synchrony, feelings of belonging and social integration of the participants.
	Study 4: 42 university students from the Basque Country (44.4% women; average age = 21.69; SD = 3.78).	EX	MP	University student group.	Self-esteem Emotional Synchrony Shared flow	

Author(s)	Sample(s)	Design	Instru-ment	Reference Group	Related variables	Main results
Swann et al. (2015)	38 transsexual participants from the Gender Identity Unit at the Hospital Clinic in Barcelona, Spain (22 HaM and 16 MaH; mean age = 31.37; SD = 8.63)	CO	MP	Own gender identity.	IG. Willingness to undergo a surgical alteration of their sexual characteristics. DIS	The present study shows that fused participants were more willing to surgically alter their primary sexual characteristics, compared to unfused participants. In addition, fused participants expressed a greater willingness to sacrifice important personal relationships.
Vázquez, Gómez, Ordoñana, & Paredes (2015)	1522 participants from Spain (58.4% women; mean age = 32.28; SD = 10.30).	CO	MV	Spain. Sibling.	Identification with the sibling DIS	This study shows that the fusion of identity with the sibling is positively associated with extreme behavior to help him. These findings seem to suggest that the link between fusion and extreme behavior also extends into the interpersonal realm.
Reddish, Tong, Jong, Lanman, & Whitehouse (2016)	150 Singaporean university students (59.3% female; average age = 21.70)	EX	MP MV	National University of Singapore	Entitativity IG.	It is evident that identity fusion is positively related to entitativity (r = .19) and perceived cooperation (r = .26).
Sheikh, Gómez, & Atran (2016)	Field study: 260 participants from Morocco (50% women; young people aged 18-25 and adults aged 42-50)	CO	MP	Friends (43%).	Perception of Sharia as sacred. DIS Support for the militant jihad	When devout actors believe that, their values are under threat, they have strong values and feel a visceral connection with a group, they are able and willing to make extreme sacrifices on behalf of the group. This personal commitment keeps the principles and positions that privilege the group in spite of the risks or costs.
	Experimental study: 644 participants from Spain (63% women; mean age = 35).	EX	DIFI	Friends (46%).	Perception of Democracy as sacred. DIS Intergroup Formidability	
Zumeta, Oriol, Telletxea, Amutio, & Basabe (2016)	276 university students in Spain (71% women; average age = 21; SD = 2.28)	CO	MV	Sports group you belong to.	Collective identity Shared flow Emotional Synchronization Collective Efficiency	Identity fusion was positively related to shared flow (r = .48), emotional synchronicity (r = .73), and collective effectiveness (r = .51). The findings of this study show that emotional synchronicity mediates the relationship between identity fusion and perceived collective efficacy.
Zumeta, Basabe, Wlodarczyk, Bobowik, & Páez (2016)	Study 2: 550 (pre: 4 days before the event; post: 4 days after the event) participants in the Tamborrada de San Sebastián in the Basque Country (49.3% women; mean age = 42.75; SD = 13.98)	CO	MV	Folklore group (Tamborrada)	Participation Social Integration Shared flow Well-being Collective Efficiency	Fusion was positively related to all study variables (level of participation: r = .43, shared flow: r = .46, personal well-being: r = .46, collective effectiveness: r = .56; social integration: r = .47). The results show that the experience of shared flow mediates the relationship between the level of participation and identity fusion.

Author(s)	Sample(s)	Design	Instrument	Reference Group	Related variables	Main results
Newson, Buhrmester, & Whitehouse (2016)	146 participants, British football fans (15.07% female; average age = 37.14; SD = 13.09)	CO	MV	Football club.	Group identification. Loyalty to the group. Duration of support for the club.	The present study shows that both euphoric and dysphoric events induce self-conformation leading to identity fusion. In addition, there was evidence to suggest that dysphoric events act on the individual to increase loyalty regardless of the time spent in the group. Three mediation analyses showed that identity fusion mediates the relationship between self-conformation (either through dysphoric or euphoric experiences) and group loyalty.
Dahling & Gutworth (2017)	Study 1B: 288 U.S. participants surveyed through MTurk (54% female; mean age = 33.90; SD = 11.68)	CO	MV	Work organization.	Normative Conflict. Disidentification. Emotional and normative commitment.	This study shows that identity fusion is negatively related to normative conflicts (r = -.43) and disidentification (r = -.54), while affective engagement (r = .80) and normative engagement (r = .70) are positively related.
Steffens, Peters, Haslam, & van Dick (2017)	Study 1: 394 U.S. participants surveyed through MTurk (187 women; mean age = 37.22; SD = 12.40)	EX	MV	The leader's merger with the United States of America.	Attribution of Leadership Charisma.	In this study, participants were consulted about the perceived fusion between a leader and his or her country. Participants felt that a leader who was perceived as dead (rather than alive) was assumed to be more attached to his or her country, and this, in turn, made them seem more charismatic than leaders in life. In other words, identity fusion measured the relationship between a leader's death and the perception of his charisma.
Fredman, Bastian, & Swann (2017)	Study 1: 255 (pre) and 220 (3-month post) participants from Israel (54.2% women; mean age = 39.93 [post])	CO	MV	Israel. Religion (Judaism).	Hostility towards an external group Support for retaliatory policies. Religious fundamentalism Conservatism Intrinsic religiosity	Fusion into Israel was moderately related to fusion into Judaism ([pre] r = .49; [post] r = .53). This study showed that the fusion with religion was not only associated with support for retaliation and hostility against Palestinians before the start of the Intifada in 2015, but also predicted an increase in retaliation after the Intifada began. Moreover, the fusion with religion predicted these results beyond the fusion with the nation, conservatism, intrinsic religiosity and religious fundamentalism.
Joo & Park (2017)	91 university students from South Korea (50 women; average age = 23.16; SD = 2.16)	EX	MV	Romantic couples.	Inclusion of other in the self Passionate love Communal orientation DIS	Fusion was positively related to the inclusion of the other in the self (r = .68) and passionate love (r = .72). This study shows that identity fusion predicted the decision of sacrifice to save the couple at the cost of one's life only when the decision was made under the pressure of time. Other relevant concepts such as the inclusion of the self in the other, passionate love and community orientation did not predict sacrifice.

Author(s)	Sample(s)	Design	Instrument	Reference Group	Related variables	Main results
Vázquez, Ordoñaña, Swann, & Whitehouse (2017)	Study 1: 190 twins from Spain, surveyed by telephone (50.5% women; mean age = 55.69; SD = 6.24).	CO	MV	Twin sibling.	Wish to contact Desire for co-experience	Fusion was positively related to the desire for contact (r = .45) and the desire for co-experience (r = .60). In three studies evidence is presented where the fusion of identity with the twin measured the effect of zygosity on the desires for contact and co-experience with the twin. Monozygotic twins showed a higher level of fusion than dizygotic twins, in turn, showed greater desire for contact and co-experience with their twin, a greater probability of forgiving the twin after a disappointment, and a willingness to prioritize the twin compared to other relatives. These results suggest that identity fusion may be a key evolved mechanism of psychological kinship.
	Study 2: 482 twins from Spain, surveyed by telephone (53.1% women; mean age = 55.78; SD = 6.76)	CO	MV	Twin sibling.	Willingness to trust the twin. Disappointment with the twin.	
	Study 3: 226 twins from Spain, surveyed by telephone (49.1% women; mean age = 55.30; SD = 6.37)	CO	MV	Twin sibling.	Prioritize the twin sibling. Prioritize the parents. Prioritize the children.	
Vázquez, Gómez, & Swann (2017)	Study 1: 126 university students in Spain (73.8% female; mean age = 33.19; SD = 10.18) (Pre [1 month before scandal], post [1 week after scandal])	EX	MV	Spain	IG. Personal Agency Desire to leave the group. DIS	In study 2, fusion was strongly related to collective ties (pretest fusion: r = .67; posttest fusion: r = .74), relational ties (pretest fusion: r = .53; posttest fusion: r = .55), personal agency (pre-test fusion: r = .22; post-test fusion: r = .40), desire to leave the group (pre-test fusion: r = -.46; post-test fusion: r = -.45) and DIS (pre-test fusion: r = .48; post-test fusion: r = .61). These three studies show that the absolute fusion scores of the strongly fused participants were sensitive to contextual influences. The changes in fusion shown by the strongly fused individuals were modest in magnitude. In no case did the fusion levels of the strongly fused individuals' approach those of the moderately or weakly fused individuals. The decline in fusion was not accompanied by significant changes in personal agency, the willingness to fight and die for the group, or the desire to leave the group. Finally, the ranking order of the participants' fusion scores remained remarkably stable in all three studies.
	Study 2: 95 university students in Spain (57.9% women; mean age = 34.94; SD = 10.09) (Pre-post with 2 months of difference, after the news of intentions of independence from Catalonia).	EX	MV	Spain	IG. Collective and relational ties. Personal Agency Mobility measure DIS	
	Study 3: 441 participants (university students and general population of Spain) (63% women; mean age = 37.26; SD = 11.70). (Pre-post with 10 months of difference, after the regional elections in Catalonia).	EX	MV	Spain	Collective and relational ties. DIS Valencia and the relevance of the possible independence of Catalonia.	

Author(s)	Sample(s)	Design	Instrument	Reference Group	Related variables	Main results
Besta, Jaśkiewicz, Kosakowska-Berezecka, Lawendowski, & Zawadzka (2018)	Pilot study: 110 university students from Poland (90 women; average age = 23.34; *SD* = 6.21)	CO	MV	Participants of the memory.	Self-expansion Self-Efficacy Self-Stereotype-Agency	This study shows that identity fusion is positively related to self-expansion (Study 1: *r* = .48; Study 2: *r* = .61), self-efficacy (*r* = .13), group effectiveness (Study 1: *r* = .43; Study 2: *r* = .22), personal agency (*r* = .17), and collective action (*r* = .25). The results of the three studies revealed a psychological path where self-expansion and self-efficacy mediate the relationship between identity fusion and collective action.
	Study 1: 781 attendees at music festivals in Poland (469 women; average age = 27.88; *SD* = 8.39)	CO	MV	Participants of the musical event.	Self-expansion Self-Stereotype-Agency Self-Efficacy Group Efficacy	
	Study 2: 103 bicycle activists, gathered in Tricity, Poland (45 women; mean age = 33.76; *SD* = 11.48)	CO	MV	Participants of the protest event.	Self-expansion Group Efficacy Collective Action	
	Study 3: 69 supporters and attendees of equality day in Poland (44 women; average age = 29.76; *SD* = 9.50)	CO	MV	Participants of the equality day.	Self-expansion Group Efficacy Collective Action	
Besta (2018)	Study 1: 244 participants from Poland (125 women; mean age = 36.05; *SD* = 12.06)	CO	MV	Poland. Gender.	Measurement of the independent and interdependent Self	The first study shows that the independent self-moderates the relationship between the interdependent self and the fusion with the gender, but not, the fusion with the country. The second study shows that the relationship between interdependent self and identity fusion was stronger at a high level of independent self. The third study shows that personal agency and self-verification moderated the effect of fusion on self-description as community being and group verification. Finally, in the fourth study fusion was positively related to agency (*r* = .35), communion (*r* = .26), independent self (*r* = .33), interdependent self (*r* = .38), self-verification (*r* = .29), and group verification (*r* = .62). Three models of moderation were performed: 1) the relationship between interdependent self and identity fusion was stronger at a high level of independent self, 2) the relationship between communion and identity fusion was stronger at a high level of agency self-description, 3) the relationship between identity fusion and the desire for collective verification was stronger at a high level of self-verification.
	Study 2: 164 participants from Poland (83 women; age ranges: 18-24 = 20.1%, 25-34 = 27.4%, 35-44 = 21.3%, 45-54 = 16.5%, 55 or more = 14.6%)	CO	MV	Most important social group, except family, friends or country.	Measurement of the independent and interdependent Self	
	Study 3: 166 participants from Poland (85 women; age ranges: 18-24 = 17.5%, 25-34 = 33.1%, 35-44 = 22.3%, 45-54 = 13.3%, 55 or more = 13.9%).	CO	MV	Most important social group, except family, friends or country	Agency and Communion. Verification of the Self and the Collective	
	Study 4: 796 football fans in Poland (92 women; mean age = 27.64; *SD* = 7.87)	CO	MV	Other football fans.	Measurement of the independent and interdependent Self Agency and Communion. Verification of the Self and the Collective	
Besta & Kossakowski (2018)	568 football club fans in Poland (65 women; average age = 27.02; *SD* = 8.12)	CO	MV	Other supporters of the football club he belongs to.	Self-expansion Collective Efficacy Collective action Acceptance of the social system Negative police perception.	Identity fusion was positively related to negative police perception (*r* = .31), self-expansion (*r* = .63), group effectiveness (*r* = .31), and collective action tendencies (*r* = .57). In addition, negative police perception and acceptance of the social system moderated the relationship between identity fusion and collective action. Finally, identity fusion was related to collective action, through the mediation of self-expansion and group efficacy.

Author(s)	Sample(s)	Design	Instrument	Reference Group	Related variables	Main results
Buhrmester, Burnham, Johnson, Curry, Macdonald, & Whitehouse (2018)	160 (pre-post 1 week) mostly university students (80%) from the United States (89%) (83% women; mean age = 53.7; SD = 12.02)	CO	MV	Animal (Lion Cecil). Animalist organization (WildCRU).	Dysphoria Status Reflection depth Own and group centrality. Pro-group consequences.	This study showed that dysphoric reactions to the death of an iconic lion (Cecil) generated fusion with him and, in turn, fusion with other supporters of an animalist organization (WildCRU). Cohesion among the organization's donors was further enhanced for those who continued to reflect deeply on Cecil's death and felt that his death was a central event in their own lives. It seems that the fusion can be extended to other species, despite the distance in time and space.
Buhrmester, Newson, Vázquez, Hattori, & Whitehouse (2018)	Study 1: (pre) 754 participants from England, Spain and Brazil (54% women; mean age = 32.9; SD = 12.4). (Post: n = 211). Study 2: 267 U.S. participants surveyed through MTurk (56% female; mean age = 36.6; SD = 11.7)	CO	MV	Country (England, Spain or Brazil). United States of America	Willingness to donate Hypercompetitive attitude	The studies show that the fusion motivates to maximize the relative advantage of the own group over the external group in a competitive context where part of the essence of the group is threatened. Strongly fused individuals who believed that their national sport was part of the essence of the country were more likely to donate more funds to the group's own institutions, even to the detriment of the institutions that helped the external group, even if this meant a great personal cost.
Carnes & Lickel (2018)	Study 1: 204 participants from the United States surveyed through MTurk (58.3% women; mean age = 35.44; SD = 12.72) Study 2: 209 participants from the United States surveyed through MTurk (54.2% women; mean age = 34.79; SD = 12.61) Study 3: 203 U.S. participants surveyed through MTurk (57.1% female; mean age = 35.22; SD = 11.27) Study 4: 406 U.S. participants surveyed through MTurk (57.1% female; mean age = 33.49; SD = 11.51) Study 5: 601 U.S. participants surveyed through MTurk (57.9% female; mean age = 33.40; SD = 10.93)	CO / CO / CO / EX / EX	MV	Family. United States of America.	Moral motives IG DIS Willingness to give the group. Negative events through positive or neutral memories of the group. Group Emotions. Moral motives DIS Willingness to give the group.	The first study shows that identity fusion mediates the relationship between the moral convictions of group members and their willingness to engage in extreme sacrificial behavior for the group. The second and third studies show that identity fusion mediates the relationship between moral motives (support and social order) and extreme sacrificial behavior (DIS) and support for the group. The fourth study shows that positive emotions such as elevation and gratitude mediate the relationship between positively evaluated negative events and identity fusion. Finally, the fifth study proposes a structural model that evidences that positive events foster feelings of uplift and gratitude when an event is adverse, and that these positive emotions then predict the support of moral motives and give support to the group, through the mediation of identity fusion.

Author(s)	Sample(s)	Design	Instrument	Reference Group	Related variables	Main results
Grinde, Nes, MacDonald, & Wilson (2018)	849 participants from intentional communities in the United States and Canada (584 women; mean age = 53; SD = 16)	CO	MV	Intentional community.	Life satisfaction Personality Meaning of life Social Support Time in the community. Community satisfaction. Life change. Religious activity	Fusion was positively related to life satisfaction ($r = .30$), social support ($r = .32$), emotional stability ($r = .11$), extraversion ($r = .15$), and kindness ($r = .14$). The study shows that the most important predictor of life satisfaction for both men and women was the meaning of life. However, for men, social support was the second most important predictor, followed by identity fusion. While, for women, the second strongest predictor was life change, followed by social support.
Heger & Gaertner (2018)	Study 1: 191 university students in the United States (100 women).	CO	MV	Group of belonging that the participant chose. The least and most merged group, first and last drawing respectively.	IG DIS	All three studies evidenced data consistent with the identity-synergy principle of identity fusion theory regarding sacrificing the self for the group and the group for the self through willingness to fight. This same pattern was not the same when the sacrifice was to give life. In other words, the highly fused participants were only willing to give their own life, but not that of a group member, or of the group in general, to save their own life.
	Study 2: 197 (189 after some excluded data) university students in the United States (108 women).	EX	MP		IG DIS	
Kossakowski & Besta (2018)	309 fans of Polish football clubs (39 women; average age = 26)	CO	MV MP	Family (60.2%). Friends (24.3%). Football Club (38.5%). Football fans (25.9%). Poland (58.6%). Europe (7.4%).	Right-wing cultural and economic belief scale DIS	The fusion was positively related to the willingness to fight for the group ($r = .65$) and right-wing cultural values ($r = .28$). The fusion with football fans and right-wing cultural values predicted a willingness to fight for the group.

Author(s)	Sample(s)	Design	Instrument	Reference Group	Related variables	Main results
	Study 1: 201 American participants of European origin who were not Jewish (43.3% women; mean age = 34.6; SD = 10)	CO	MV	Palestine (external group).	Political orientation Social Dominance Activist Identity Palestinian competence Political Effectiveness Anger Protest intentions Willingness to engage in extreme non-normative protests	The merger was positively related to activist identity (r = .61 > .78), anger (r = .20 > .29), leftist political orientation (r = .17 > .25), political effectiveness (r = .31 < .22), conflict awareness (r = .36), normative protest (r = .36 > .60) and non-normative protest (r = .47 > .57).
	Study 2: 215 university students in Norway (59.1% women; average age = 24.99; SD = 5.83)	CO	MV	Kurdistan (external group). Palestine (external group).	Political orientation Social Dominance Activist Identity Palestinian competence Political Effectiveness Anger Protest intentions Willingness to engage in extreme non-normative protests	Studies 1 and 2 show that the merger with external groups (Kurdistan or Palestine) mediates the relationship between political orientation and the willingness to engage in normative and extreme non-normative protests. The activist identity only mediated this relationship with normative protests. The third study shows that when Kurds were described as victims of an oppressive occupation, the leftist political orientation predicted higher levels of fusion with the external group and, conse-
Kunst et al. (2018)	Study 3: 234 Euro-American participants surveyed through MTurk (54.3% women; mean age = 36.13; SD = 11.62)	EX	MV	Kurdistan (external group).	Political orientation Social Dominance Activist Identity Palestinian competence Political Effectiveness Anger Protest intentions Willingness to engage in extreme non-normative protests	quently, greater willingness to engage in extreme non-norma-tive protest. This same model is not replicated in the condition of symmetrical or neutral warfare. The fourth study shows that when participants experienced a high moral political obligation to support the Kurds, the leftist political orientation predicted a higher fusion with the external group, but not when the moral obligation was low. Furthermore, the leftist political orientation
	Study 4: 83 participants aspiring to become foreign combatants for the Kurdish People's Protection Units, YGP (3.7% women; average age = 31.6; SD = 8.8).	CO	MV	Kurdistan (external group). Own ethnic-ity.	Political orientation Moral-polit-ical obligation. Perception of the political orientation of the Kurds and members of ISIS DIS. Like-lihood of joining YPG (Kurdish People's Protection Units)	indirectly led to a higher probability of joining the YPG, and the external DIS. This relationship was mediated by the high fusion when participants experienced high moral obligation, but not when they experienced low moral obligation.
Misch, Fergusson, & Dunham (2018)	2699 participants belonging to 10 samples taken between 4 weeks before and after the 2016 elections in the United States (Democrats: n = 1732; 55% women; mean age = 35.85; SD = 11.91) (Republicans: n = 967; 47% women; mean age = 38.6; SD = 12.47)	CO	DIFI	Political party. Candidate.	Willingness to donate Happiness	The study shows that the fusion with the political party tended to be greater as the election approached, and that after the re-sults, this link with the party began to stabilize as time went by. The winners showed higher levels of identity fusion with their party than the losers. Finally, the fusion with the political party could predict higher levels of donations before the election.

Author(s)	Sample(s)	Design	Instrument	Reference Group	Related variables	Main results
Newson, Bortolini, Buhrmester, da Silva, da Aquino, & Whitehouse (2018)	439 male soccer fans completed a survey through Qualtrics (mean age = 25.72; SD = 8.02)	CO	MV	Fellow football fans.	DIS Social Adjustment Psychological kinship Violence	Fusion was positively related to willingness to sacrifice for the group ($r = .51$), violence ($r = .28$), and psychological kinship ($r = .77$). Fusion was not associated with social adjustment, but was shown to predict willingness to fight and die for the group, and to selectively physically violate other groups that are potentially threatening to one's own group.
Paredes, Briñol, & Gómez (2018)	Study 1: 65 participants surveyed through MTurk (72% women; mean age = 24.91; SD = 10.72)	EX	MV	United States of America	Self-sacrifice DIS	Three experiments show that being informed that other fused members are also willing to sacrifice themselves for the group on moral grounds lessens the willingness to sacrifice in the present moment, postponing it for the future. This suggests that the attenuation of willingness to sacrifice is due to the high confidence of strongly fused individuals to delay self-sacrifice if others are willing to sacrifice in the present moment.
	Study 2: 128 university students in Spain (74.2% women; mean age = 38.20; SD = 12.14)	EX	MV	Spain	Self-sacrifice DIS	
	Study 4: 155 university students in Spain (74.9% women; mean age = 35.21; SD = 11.16)	EX	MV	Spain	Need for uniqueness Self-sacrifice DIS	
Segal, Jong, & Halberstadt (2018)	200 participants from New Zealand surveyed through MTurk (112 women; mean age = 52.32; SD = 16.66)	EX	MP MV	Christchurch.	Positive and negative affect Emotions Perceived earthquake damage. Supernatural beliefs about the earthquake.	This study shows that fusion mediates the relationship between memory of a traumatic event and prosocial behavior. In addition, the relationship between memory and blending was moderated by fear and personal harm.
van Dick, Fink, Steffens, Peters, & Haslam (2018)	241 participants from Germany surveyed online (60.1% women; average age = 29.6; SD = 26.66)	EX	MV	The leader's fusion with Germany.	Charisma of the leader Leadership Identity	This study shows that the leadership of the leaders, their fusion with the country and their charisma were perceived as significantly higher after their death.
Walsh & Neff (2018)	150 newly married couples (husbands: average age = 29.1; SD = 5.3) (wives: average age = 27.2; SD = 4.9)	CO	MP	Romantic Couple.	Negative relationship behaviors. Addressing marital conflict Surveillance of negativity. Decision making Inclusion of the self in the other	The present study shows that individuals who perceived a balanced identity with their partner (greater fusion) showed reduced vigilance for threats to the relationship and showed more constructive responses to marital conflict. Conversely, individuals who perceived an unbalanced partner identity (overshadowed or dominant) exhibited less relationship-healthy behaviors.

Note: CO = Correlational; DE = Descriptive; EX = Experimental; MP = Pictorial Measure; MV = Verbal Measure; IG = Group Identification; DIS = Willingness to fight and die for the group; HaM = male-to-female; MaH = male-to-female. The percentage in the reference group column refers to the percentage of participants fused with the group.

Results

The main results of each study are described in Table 1. Within the 52 articles included in the synthesis, 117 empirical studies covering identity fusion were detected as part of their results. Regarding the research designs, of the 117 studies, 69 (59%) were correlational, 45 (38.5%) experimental, 2 (1.7%) exploratory and 1 (0.9%) descriptive. In terms of the origin of the participants, more than 23 countries were identified, the main ones being Spain with 38% (n = 49), the United States with 20.2% (n = 26), Poland with 18.6% (n = 24) and other countries (e.g., Germany, Australia, Brazil, Chile, China, England, India, Indonesia, Israel, Japan, Lebanon, Libya, Morocco, New Zealand, Norway, Singapore, South Africa, South Korea) with 23.3% (n = 30).

As for the participants, 45% (n = 58) were university students, 38.8% (n = 50) general population and 16.3% (n = 21) other types of population (e.g., activists, soccer fans, twins, couples, guerrillas, military, transsexuals, children and adolescents).

Regarding fusion measurement instruments, 34.2% (n = 41) of the studies used the pictorial measure of identity fusion (Swann et al., 2009), 63.3% (n = 76) the verbal measure of identity fusion (Gómez, Brooks et al., 2011) and 2.5% (n = 3) the dynamic index of identity fusion (DIFI, Jiménez et al., 2016).

Regarding reference groups or targets, 64.1% (n = 75) of the studies used the country as a reference group, 14.5% (n = 17) family and friends, 29.1% (n = 34) specific groups (e.g., political parties, guerrillas, military, sports groups, online groups, educational institutions, intentional communities, cities of residence) and 10.3 (n = 12) other reference targets (e.g., candidates, trademarks, public figures).

Regarding the variables that have been most studied along with identity fusion, those related to identity (n = 64; 54.7%), motivation to sacrifice (n = 60; 51.3%), relationship with the group (n = 41; 35.3%), individual psychological variables (n = 30; 25.6%), bonds (n = 24; 20.5%) and other variables (n = 41; 35.3%) have been studied. While the least studied variables along with identity fusion have been feelings and emotions (n = 20; 17.1%), personal agency (n = 14; 12%), well-being (n = 7; 6%) and affections (n = 5; 4.3%). The grouping of the variables studied in relation to identity fusion can be seen in Table 2.

Table 2

Grouping of variables studied in relation to identity fusion

Categories	Variables
Related to Identity	Group Identity Collective Identity Identity Essentialism Values (individualism - collectivism; value homogeneity; fundamentalism; conservatism; utilitarianism; communality) Nationalism Certainty of identity Activist Identity Attribution of the leader's charisma
Motivation Sacrifice	Willingness to sacrifice for the group Willingness to sacrifice Self-sacrifice Support for expensive sacrifices
Affects	Positive effects Negative effects Affects Emotional commitment
Emotion and emotional experience	Emotions Group Emotions Recalling negative experiences Negative emotions (feeling excluded, feeling ignored) Emotional Synchrony Passionate love Anger Dysphoria

Categories	Variables
Relationship with the group	Willingness to give - donate to the group
	Commitment to the group; loyalty
	Group support - duration of support
	Concern for group members
	Behaviors that help group members
	Willingness to deny group irregularities, accept violence as a method of social change or extreme behaviour.
	Negative perception of a group; Racist prejudice - androgyny
	Desire to leave or join the group
	Perception of closeness or distance to the group
	Perception of the group as sacred
	Collective action
	Hostility towards a group
	Perception of group superiority
	Perception of threat to the group
	Perception of being a prototypical member of the group
Individual psychological variables	Self-concept
	Locus of control
	Social Desirability
	Self-esteem
	Authoritarianism
	Self-Efficacy
	Personality
	Sense of life
	Control over the future
	Reflection capacity
	Ostracism
	Uncertainty
	Competitive attitude
	Need for uniqueness - independence - inclusion with the other
	Decision-making process
Well-being	Quality of Life
	Life satisfaction
	Happiness
	Well-being
	Community Satisfaction
Agency and personal growth	Agency staff
	Agential Autostereotype
	Empowerment
	Self-expansion
	Flow
Social ties	Family ties (kinship - identification - trust - behaviors - prioritization - coping styles)
	Collective ties (social support; participation; desire for contact; social integration; collective effectiveness; norms; social disruption
Others	Morality
	Pressure to make a moral decision
	Religiosity
	Brand Consumption
	Survival instinct
	Meeting goals - social mobility - life change
	Social beliefs - political orientation
	System Acceptance
	Entitativity
	Desire for experience
	Group and individual physical exercise
	Heart rate

Note: Some variables may belong to more than one category.

Finally, the main results of the articles analyzed indicate that identity fusion is a strong predictor of extreme sacrificial behaviors by the group (e.g., Besta et al., 2013; Gomez, Morales et al., 2011; Heger & Gaertner, 2018; Kunst et al., 2018; Paredes et al., 2018; Sheikh et al., 2016; Swann et al, 2009; Swann et al., 2010; Swann, Buhrmester et al, 2014; Swann, Gómez et al, 2014; Vázquez, Gómez, & Swann, 2017) and behaviours that involve giving (e.g., Gómez, Morales et al, 2011; Segal et al, 2018; Semnani-Azad et al, 2012) and asking for help from the group (e.g., Reddish et al, 2016; Semnani-Azad et al, 2012). In commercial contexts, identity fusion has been successful in predicting consumer preferences for domestic products (Yoo et al., 2014), and consumers fused with their brands were predisposed to follow their relationship with their marks despite being aware of some of their ethical transgressions (Lin & Sung, 2014).

Also, identity fusion has been mainly related to extreme culling behaviors by the group (e.g., Besta, 2014; Besta et al., 2014; Besta, Mattingly et al., 2015; Besta, Szulc et al., 2015; Buhrmester et al., 2015; Carnes & Lickel, 2018; Fredman et al., 2017; Kossakowski & Besta, 2018; Newson et al, 2018; Sheikh et al, 2016; Swann et al, 2009; Swann et al, 2015; Swann, Buhrmester et al, 2014; Swann, Gomez, Dovidio et al, 2010; Swann, Gomez, Huici et al, 2010; Vazquez et al, 2015; Vazquez et al, 2017) or by individuals (Joo & Park, 2017; Vazquez, Gomez, Ordoñana et al, 2017; Walsh & Neff, 2018). In addition, in numerous studies identity fusion has been related to group identity (e.g., Besta et al., 2014; Besta, Mattingly et al., 2015; Besta, Szulc et al., 2015; Buhrmester et al., 2012; Swann et al., 2009; Swann, Gómez, Huici et al., 2010), group support and commitment (e.g., Besta & Kossakowski, 2018; Besta et al, 2018; Besta, 2018; Buhrmester et al., 2015; Buhrmester, Newson et al., 2018; Carnes & Lickel, 2018; Dahling & Gutworth, 2017; Howard & Magee, 2013; Misch et al, 2018; Sheikh et al., 2014; Swann, Gomez et al., 2014; Vazquez, Gomez, & Swann, 2017; Zumeta, Basabe et al., 2016), perceived social support (e.g., Grinde et al, 2018; Howard & Magee, 2013), loyalty (Newson et al., 2016) even under conditions of ostracism (Gómez, Morales et al., 2011), feelings, affections and emotions towards the group (Buhrmester, Burnham et al, 2018; Carnes & Lickel, 2018; Dahling & Gutworth, 2017; Grinde et al., 2018; Howard & Magee, 2013; Jong et al., 2015; Joo & Park, 2017; Paez et al, 2015; Segal et al., 2018; Swann, Gomez et al., 2014; Zumeta, Basabe et al., 2016; Zumeta, Oriol et al., 2016) and values: morals (Kunst et al., 2018; Sheikh et al., 2014; Swann, Gomez et al., 2014), sacred (Carnes & Lickel, 2018; Sheikh et al., 2016), democratic (Sheikh et al., 2016), and cultural (Kossakowski & Besta, 2018).

Other studies have shown that identity fusion is related to the perception of kinship (Buhrmester et al., 2015), quality of life (e.g., Buhrmester et al., 2012; Jaśkiewicz & Besta, 2014), life satisfaction (Grinde et al., 2018), perception of a leader's charisma (Steffens et al, 2017; van Dick et al., 2018), religiousness (Besta et al., 2014; Fredman et al., 2017; Sheikh et al., 2014), nationalism (Besta, 2014), political extremism (Besta, Szulc et al., 2015), political orientation (Kunst et al., 2018) and support for group irregularities (Besta et al., 2014).

On the other hand, the mediation models within the studies analyzed, have shown that the fusion of identity mediates the relationship between: the accessibility of the neighborhood and the quality of life in the neighborhood (Jaśkiewicz & Besta, 2014), moral convictions and the disposition to extreme sacrifice behaviors (Carnes & Lickel, 2018), the memory of a traumatic event and pro-social behavior (Segal et al, 2018), self-conformation and loyalty to the group (Newson et al., 2016), and, the death of a leader and the perception of his or her charisma (Steffens et al., 2017). Likewise, in three studies, the fusion of identity with the twin measured the effect that zygosity had on the desire for contact and the experience with the twin (Vázquez, Gómez, Ordoñana et al., 2017). Finally, fusion with a recently dead iconic (or famous) animal mediated the relationship between the state of dysphoria and fusion with an animalist organization (Buhrmester, Burnham et al., 2018).

In other models of mediation that have involved identity fusion, it has been identified that: personal agency mediates the relationship between identity fusion (in the condition of excitement) and the action of donating money to the group (Swann, Gomez, Huici et al, 2010); both personal agency and invulnerability mediate the relationship between identity fusion and the willingness to fight and die for the group (Gómez, Brooks et al., 2011); emotional engagement mediates the relationship between identity fusion and extreme sacrifice (Swann, Gómez et al., 2014); clarity of self-concept mediates the relationship between identity fusion and personal agency (Besta, Mattingly et al, 2015); right-wing and left-wing authoritarianism mediates the relationship between identity fusion and the inclination towards violence for the change of the social system (Besta, Szulc et al., 2015); right-wing authoritarianism mediates the relationship between identity fusion and the willingness to fight and die for the country (Besta, Szulc et al, 2015); the psychological kinship, mediates the effect of the identity fusion on the support actions, the empathic preoccupation and the self-sacrifice (Buhrmester et al., 2015); the time of reflection on negative events, mediates the relation between a shared negative experience and the identity fusion (Jong

et al, 2015); emotional synchrony, mediates the relationship between the level of collective participation and identity fusion (Páez et al., 2015); emotional synchrony, mediates the relationship between identity fusion and collective effectiveness (Zumeta, Oriol et al., 2016); the experience of shared flow, mediates the relationship between the level of involvement in a collective activity and identity fusion (Zumeta, Basabe et al, 2016); collective, but not relational, bonds mediate the identity fusion before and after three historical events negative for the stability of the group (Vázquez, Gómez, & Swann, 2017); the identity fusion (with an external group), mediates the relation between the political orientation of the left and the extreme protest (Kunst et al, 2018); self-expansion and self-efficacy mediate the relationship between identity fusion and collective action (Besta et al., 2018); self-expansion and group self-efficacy mediate the relationship between identity fusion and collective action (Besta & Kossakowski, 2018); leadership identity and identity fusion mediate the relationship between the death of a leader and the perception of his or her charisma (van Dick et al., 2018).

With regard to models of moderation that have included identity fusion, it has been noted that: the status of a group evaluator moderates the relationship between identity fusion and radical support for the group (Besta et al., 2013); values moderate the relationship between identity fusion and making costly sacrifices (Sheikh et al., 2014); negative affects moderate the relationship between memory of a negative experience and identity fusion (Jong et al., 2015); impulsivity moderates the relationship between identity fusion (with partner) and self-sacrifice by partner (Joo & Park, 2017); independent self-moderates the relationship between interdependent self and identity fusion (Besta, 2018); self-verification moderates the relationship between group verification and identity fusion (Besta, 2018); self-description as an agent moderates the relationship between self-description as a community being and identity fusion (Besta, 2018); and, police perception and acceptance of the system moderates the relationship between identity fusion and collective action (Besta & Kossakowski, 2018).

Finally, in the models of moderate mediation within the articles analyzed, it has been found that: shared values moderate the effect of identity fusion on family ties, while family ties mediate the relationship between identity fusion and support of extreme actions by the group (Swann, Buhrmester et al, 2014); trust in the sacrifice of other fused individuals mediates the relationship between identity fusion and the willingness to fight and die for the group, while justification of sacrifice moderates the effect of trust in the sacrifice of other fused individuals and identity fusion on the willingness to fight and die for the group (Paredes et al, 2018); finally, fear and personal harm caused by a natural disaster moderates the effect of memory (of the natural disaster) on identity fusion, while identity fusion mediates the relationship between memory of the natural disaster and prosocial behavior (Segal et al., 2018).

Discussion

The purpose of this paper was to review and synthesize empirical studies using the theory of identity fusion between 2009 and 2018.

The main results of the articles analyzed indicate that identity fusion is a strong predictor of extreme group-slaughter behaviors. Fused people would be highly oriented to group support and commitment, creating strong relational ties through feelings, affections and emotions towards the group, involving moral values, considered sacred and unrenounceable. This dynamic causes the fused people to feel that the members of their group, are an extension of their own family to which they must protect with determination. Classical theories, by not considering the relevance of relational ties within their constructs, fail to generate models that can predict behaviors of extreme sacrifice by the group, as if it does the theory of identity fusion (Gomez et al., 2019).

The present review demonstrates that the systematic development of evidence supporting the theory of identity fusion is continuously progressing, being applied to diverse populations (e.g., hooligans, football fans, terrorists, combatants, siblings, romantic couples, fighters, military, activists, couples, guerrillas, transsexuals, children and adolescents), reaching countries on five continents (e.g., Spain, United States, Poland, Germany, Australia, Brazil, Chile, China, South Korea, India, Indonesia, England, Northern Ireland, Israel, Japan, Lebanon, Libya, Morocco, Norway, New Zealand, Singapore, South Africa), targeting various reference groups (e.g., countries, families, friends, political parties, combat squads, sports groups, online groups, educational institutions, intentional communities, cities of residence, candidates, trademarks, public figures) and predicting extreme sacrifice even through measurements of actual behavior (e.g., donations, sex change, video game performance, answers to tram dilemmas).

Although all the evidence presented is very valuable, it does have some limitations. Most participants in identity fusion studies are Spanish, American and Polish, half of them university students, i.e., WEIRD population, who are characterized as belonging to Western, educated, industrialized, rich and democratic countries (Henrich, Heine, & Norenzayan, 2010). This is a common problem

in psychology research, so it is necessary to continue investigating the behavior of identity fusion theory in other socio-cultural contexts (Henrich et al., 2010).

A second limitation is that much of the evidence relating to identity fusion and extreme sacrifice for the group is based on the scale of willingness to fight and die used by Swann et al. (2009). In this regard, it would be desirable to continue to provide evidence of the predictive power of identity fusion using different scales (e.g., scale of self-sacrifice: Bélanger, Caouette, Sharvit, & Dugas, 2014) or situations that measure extreme sacrifice for the group (e.g., implicit measure "The Boom Task": Bélanger et al., 2014; Bélanger, Schumpe, Menon, Ng, & Nociti, 2018).

Most studies use the country of origin as the reference group, implicitly implying that there would be no substantial difference between the country as a nation-state (e.g., Spain) or as a people (e.g., Spaniards). In this sense, it would be necessary to state under pressure which is the reference group used in each study, since in different cultural contexts the level of identity fusion with the nation-state could be different from the level of fusion with the people.

Finally, it seems that the theory of identity fusion could have different guidelines that need to be further explored (e.g., interpersonal fusion, protofusion, fusion with organizational groups), and others that have not even been explored (e.g., in migration contexts: fusion with the country of origin/host). This leaves multiple lines of research to be developed and a long way to go.

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