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Thomas Arciszewski,
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REVIEWED BY

Licínio Zitha,
University of Minho, Portugal
Tolu Odukoya,
Georgia Southern University,
United States

*CORRESPONDENCE

Ángel Gómez
✉ agomez@psi.uned.es

†These authors share first authorship

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Breaking social bonds: from hypothetical to real reasons for defusion

Ángel Gómez^{1,2*†}, M. Martínez^{3†}, L. López-Rodríguez^{2,4},
A. Vázquez^{1,2} and M. Hettiarachchi⁵

¹Departamento de Psicología Social y de las Organizaciones, Universidad Nacional de Educación a Distancia, Madrid, Spain, ²ARTIS International, St. Michaels, MD, United States, ³Departamento de Psicología, Universidad Rey Juan Carlos, Madrid, Spain, ⁴Departamento de Psicología, Universidad de Almería, Almería, Spain, ⁵General Sir John Kotelawala Defence University, Colombo, Sri Lanka

Introduction: Identity fusion was originally formulated as a visceral feeling of oneness with a group that motivates individuals to make extraordinary self-sacrifices on its behalf. This investigation aims to examine the reasons that could motivate, that is, hypothetical, or that motivated, that is, real, defusion, depending on the group's nature, and explore whether the mechanisms of defusion observed in ordinary groups extend to other groups that have exercised different types of collective violence, such as current hooligan group members and former insurgent group members.

Methods: Three studies using participants from the general population indicated three main reasons for defusion: degrading relational ties (i.e., sentiments toward individual group members), degrading collective ties (i.e., sentiments toward the group as a whole), and external factors (i.e., beyond individuals' control). Studies 1 and 2 examined hypothetical defusion in the future in local (i.e., small, direct-contact groups) and extended groups (i.e., large, indirect-contact groups; Study 1), as well as in ascribed (i.e., not freely chosen) and chosen groups (Study 2). Study 3 examined real motives for defusion in the past. An additional exploratory study with members of a hooligan group (Riazor Blues) in Spain explored hypothetical causes of defusion (Study 4), and a final exploratory study with former Liberation Tigers of Tamil Eelam members examined real reasons for defusion (Study 5).

Results: Studies 1 and 2 revealed that degrading relational ties was the main reason for hypothetical defusion in the future, no matter whether the group was local or extended, and ascribed or chosen. Degrading relational ties, together with external factors, emerged as the main real motive for defusion in the past (Study 3). The exploratory study with members of Riazor Blues replicated the main role of degrading relational ties as a hypothetical cause of defusion, although the results indicated that, for a quarter of them, defusion was unfeasible (Study 4). The study with former Liberation Tigers of Tamil Eelam members revealed that external factors were their primary real reason for defusion (Study 5).

Discussion: Apparently, while degrading relational ties seems to be the most relevant hypothetical reason for defusion, external factors play a more relevant role for the real reasons for defusion, in particular for those who were involved in collective violence.

KEYWORDS

collective ties, collective violence, defusion, identity fusion, relational ties

1 Introduction

Among the theories developed to disentangle the underlying mechanisms that explain extreme behaviors, identity fusion—a synergistic union of the personal and social selves—has emerged as the best predictor of radical intentions (see Vaarmann et al., 2023, and Wolfowicz et al., 2021, for meta-analyses).

While research has addressed the role of fusion in joining violent groups (Gómez et al., 2021b), investigations examining the factors driving defusion among the general population are scarce (see Gómez et al., 2019, for an exception). In addition, few studies explore defusion among members of violent groups, and the potential similarities and differences between the reasons for defusion among the general population remain underexplored. This line of research is fundamental because identity fusion has been recognized as an underappreciated cause of many forms of criminal behavior (Newson et al., 2025). This investigation's main goal is to examine the hypothetical and real reasons that could cause, or that caused, defusion observed in social relationships and other group contexts and explore whether these mechanisms extend to other groups, such as hooligans and an insurgent militant organization, that have employed different types of collective violence.

To illustrate the relevance of disentangling the reasons for defusion, we begin by introducing the nature of identity fusion, the links between identity fusion and distinct types of collective violence, the causes of fusion, and the scarce research conducted about defusion to date.

1.1 The nature of identity fusion

When experienced in relation to a group, identity fusion consists of a visceral feeling of oneness in which individuals perceive their personal and their social identities as synergistically merged into a single identity (Gómez et al., 2020; Swann et al., 2012, 2024). The strength of this connection is so formidable that one's personal identity remains chronically active and interacts with the group identity, fostering a perception of reciprocal strength in which individuals support the group while also drawing strength from it (e.g., Gómez et al., 2011a,b). This alignment provides a powerful sense of meaning, coherence, belonging, and security (Kavanagh et al., 2019; Rokeach, 1960). Strongly fused individuals also develop powerful relational bonds with other group members, such as familial ties, fostering feelings of mutual connection, and responsibility. Therefore, individuals may be willing to act for other group members as they would do for themselves or their biological family—even to the point of fighting, killing, and dying if necessary (Gómez et al., 2022a).

The nature of this relationship between the self and the group allows strongly fused individuals to maintain feelings of personal agency—the capacity to initiate and control intentional behavior—while selectively channeling that agency to promote the group's interests, reinforcing the perception that their behavior can have a direct impact on group goals (e.g., Gómez et al., 2011a; Swann et al., 2010).

According to this interconnected nature of the self and the group, extreme behaviors arise because the self and the target are

experienced as ontologically indivisible, such that threats to the target are perceived as threats to the self, and the target is defended with the same intensity as one's own survival (Gómez et al., 2011b; Swann et al., 2009).

1.2 Identity fusion and collective violence

Controlled laboratory studies conducted by multidisciplinary researchers on five continents have shown identity fusion's predictive capacity for extreme behavior (e.g., see Gómez et al., 2020; Henríquez et al., 2020; Swann and Buhrmester, 2015; Vaarmann et al., 2023).

Furthermore, empirical examples involving identity fusion with individuals belonging to different groups that have exercised distinct types of collective violence, for example, terrorism, organized crime, and at different levels of radicalization, that is, individuals at risk, have been found. For instance, individuals at risk of radicalization in Morocco fused with their kin-like group of friends displayed higher levels of willingness to make costly sacrifices for the implementation of Sharia, including going to jail, using violence, or even dying (Sheikh et al., 2016). In addition, several neuroimaging studies indicated that Pakistanis supporting the Kashmiri cause and fused with Pakistan were willing to fight and die for the cause, which was associated with certain brain areas related to subjective value and not with utilitarian or pragmatic considerations (Pretus et al., 2019).

Identity fusion with a specific group and an important value (often defended by the group) has been also consistently tested as a predictor of the will to fight among jihadist Islamists in prison (Gómez et al., 2022a, 2021a, 2023a), and among former Euskadi Ta Askatasuna inmates (Rodríguez-Gómez et al., 2026). Fusion with the group has also been shown to predict the will to fight for the group among organized crime and street gang members incarcerated in different countries (Gómez et al., 2022a, 2024; Rodríguez-Gómez et al., 2026). Ethnographic content analyses of manifestos expressing varied levels of extremism have identified linguistic proxies for identity fusion (Blanco et al., 2026; Ebner et al., 2022).

Finally, evidence has shown that fusion plays an important role among the reasons that motivated former insurgents to join the radical group. For example, research has indicated that identity-related mechanisms, such as relational identity, that is, connections with significant others, and collective identity, that is, cognitions, emotions, and values strongly linked to group membership, are pathways that motivated former Liberation Tigers of Tamil Eelam (LTTE) and Islamist radical group members to join the group (Gómez et al., 2021b).

This important role of identity fusion in malevolent groups' extreme behavior has motivated researchers to investigate the potential causes of fusion to find ways to prevent collective violence.

1.3 Causes of fusion and defusion

Scientists have identified several mechanisms that cause or increase fusion (for an exhaustive review, see Gómez et al., 2025). In the case of fusion with groups, four causes have been

found: sharing intense negative or positive experiences with fellow group members (e.g., [Bautista et al., 2026](#); [Jong et al., 2015](#); [Kavanagh et al., 2019](#); [Whitehouse et al., 2017](#)); sharing important values or biological characteristics, that is the perception of common genes ([Swann et al., 2014](#)); displaying positive emotions toward the group, such as admiration ([Gómez et al., 2021a](#)); and feeling self-verified by group members ([Gómez et al., 2024](#); [Rousis et al., 2024](#)). A common thread that explains why these mechanisms originate or amplify fusion is that they all foster relational ties. However, motives that could lead individuals to defuse from a group have received much less attention.

Attention to the defusion process, when fusion is associated with potentially harmful or dangerous forms of aggression, emerged a decade ago ([Fredman et al., 2015](#)). However, research focused on defusion and its relationship with leaving groups is extraordinarily scarce for several theoretical and methodological reasons. First, defusion implies a significant restructuring of one's personal identity. For strongly fused individuals, because their personal and group identities are one, renouncing one fraction of this unique identity is an emotionally challenging process ([Swann et al., 2024](#)). Second, as relational ties with other group members are a pillar for identity fusion, abandoning the deep feeling of connection with the group implies breaking relations with each individual within it. Third, identity fusion is so resilient that even when strongly fused individuals are ostracized and rejected by their peers, instead of abandoning the group, they increase their willingness to self-sacrifice for the group ([Gómez et al., 2011b](#)). Finally, research with individuals at risk of radicalization, actual and former radicals, or those belonging to any other group exercising collective violence is extremely difficult to conduct for several reasons. Among other challenges, such individuals could be particularly reluctant to provide reasons that could motivate them to defuse from a group for which they are willing to self-sacrifice ([Gómez et al., 2023a,b](#)). High-risk groups, such as terrorist or insurgent organizations or other groups involved in collective violence, employ coercion and surveillance and impose substantial exit costs, meaning that individuals cannot recognize that they defuse from these groups in the same way as members of non-violent groups. Merely recognizing the possibility of defusion from such groups carries risk, including the possibility of retaliation.

The first empirical evidence of defusion was found in the reactions of Spanish participants to three negative historic events: a corruption scandal involving the royal family and two separatist efforts by a prosperous region of Spain ([Vázquez et al., 2017](#)). Although the fusion average decreased following these events, the declines were limited to sentiments toward the group category—collective ties—but they did not reduce sentiments toward individual group members—relational ties. Moreover, strongly fused persons continued committing to remaining with, fighting for, and dying for the group. These findings demonstrate that negative events weaken some aspects of alignment with the group, including collective ties, but not other aspects, such as relational ties and endorsement of pro-group behaviors.

Later, a series of laboratory experiments showed that degrading either relational or collective ties reduced fusion and, consequently, extreme pro-group actions ([Gómez et al., 2019](#)). Interestingly, while degrading collective ties also reduced other kinds of group

alignment, such as group identification, degrading relational ties did not affect group identification levels. Finally, a study conducted with female jihadists in prison revealed that, compared to their feelings toward the group before entering prison, they now expressed personal disillusionment toward other group members and low cohesion, which are proxies related to the degradation of both ties ([Gómez et al., 2022b](#)).

Although this preliminary research suggests that degrading collective and relational ties can lead to defusion, the extent to which these mechanisms for defusion operate similarly in ordinary and violent groups remains unclear.

In the case of ordinary groups, the group's nature could create some more common reasons for defusion than others. For instance, individuals can fuse with small groups, as friends, where people develop strong relational ties, that is, local groups, or with collectives composed of many individuals toward whom they project relational ties, as the citizens of a country, that is, extended groups ([Swann et al., 2012](#)). In addition, people can fuse with groups they have chosen voluntarily, for example, followers of a sports team, that is, chosen, or with groups they belong to by nature, for example, their family, that is, ascribed. This investigation advances our understanding of defusion processes in ordinary groups by offering novel insights into how the dynamics of defusion depend on the group's nature: local vs. extended and chosen vs. ascribed.

In the context of groups exercising collective violence, determining whether defusion is possible is critical, given its profound social implications. This represents a gap in the literature, as no research has explored whether the mechanisms of defusion observed in social relationships and other group contexts extend to groups that have exercised different types of collective violence.

To that end, this investigation includes two exploratory studies involving individuals who belong to a violent group, actual members of a Spanish soccer team's hooligan group, or who belonged to an insurgent group in Sri Lanka, the LTTE.

Finally, one main limitation of previous research on defusion is that, due to theoretical assumptions, the studies only include the degradation of relational and collective ties as potential defusion motives ([Gómez et al., 2019](#); [Vázquez et al., 2017](#)). The design of both investigations prevents us from determining whether other potential reasons for defusion might be feasible. By using a qualitative methodology rooted in interpretative phenomenology, which allows researchers to draw on existing theoretical frameworks while remaining open to the emergence of novel categories grounded in participants' lived experiences, and asking for real, rather than hypothetical, reasons for defusion, this investigation might reveal alternatives not found to date, representing an important theoretical contribution to the field.

1.4 Overview of the current research

The study's objectives were to examine the reasons that could cause, that is, hypothetical, or that caused, that is, real, defusion from a group and if the reasons for defusion differ depending on the group's nature and assess whether these mechanisms are applied to group members who, as hooligans and former members of an

TABLE 1 Overview of the five studies included in the research.

Study	Population sample	Type of reason	Temporal frame	Group
Study 1	General population	Hypothetical	Future	Local vs. extended
Study 2	General population	Hypothetical	Future	Ascribed vs. chosen
Study 3	General population	Real	Past	Freely chosen
Study 4	Extremist group	Hypothetical	Future	Riazor Blues
Study 5	Violent group	Real	Past	Tamil Tigers (LTTE)

Note: LTTE, Liberation Tigers of Tamil Eelam.

insurgent organization, the LTTE, have exercised different types of collective violence.

We conducted three studies that examined hypothetical motives for defusion (Studies 1 and 2) vs. real reasons (Study 3). We also explored the causes for defusing when groups are local vs. extended (Study 1) or ascribed vs. chosen (Study 2).

Studies 4 and 5 represent exploratory extensions and included individuals who currently belong to a violent group—the Spanish Riazor Blues hooligans—or belonged to a violent group in the past—former members of an insurgent group, the LTTE from Sri Lanka, and asked for hypothetical causes for defusion in Study 4 and the motivation behind leaving the extremist organization in Study 5 as a proxy for defusion (see Table 1).

The participants in Studies 1–3 belonged to the general Spanish population. They were recruited using a convenience snowball sampling technique. Undergraduate psychology students asked their acquaintances to participate voluntarily.

Study 4 included actual members of a hooligan group, and Study 5 included former members of the LTTE, an ethno-nationalist separatist group.

We used three different methodological approaches: online questionnaires (Studies 1–3), paper-and-pencil questionnaires (Study 4), and face-to-face interviews (Study 5).

Regarding the analytical strategy, the design of Study 1 aimed for each participant to write three reasons for defusion in one of three designated boxes so that each reason constituted a single unit of analysis (in Studies 2–4, we followed a similar procedure, as described later). In Study 5, participants were asked to report only one reason. After categorizing the reasons the participants provided, only each category’s presence or absence was considered.

Based on a qualitative strategy grounded in an interpretative phenomenology framework (Lim, 2025), a content analysis was conducted using a three-cycle coding approach (see Saldaña, 2013). In the first cycle, two independent judges, members of the research team (the second and third authors), carried out a fully inductive coding cycle, which revealed emergent reasons for defusion. These initial codes were then clustered into three major categories informed by earlier literature on identity fusion (Gómez et al., 2019) and deradicalization (e.g., Bjørgo, 2011; Horgan, 2008): *degrading relational ties* (i.e., the deterioration of the sentiments toward individual group members), *degrading collective ties* (i.e., the deterioration of the sentiments toward the group as a whole), and *external factors* (factors beyond individuals’ control).

In the second cycle, this three-category framework was revised by the first and fourth authors, both of whom specialize in identity fusion. The analyses revealed a fourth category that was not initially

TABLE 2 (Sub)categories framework for content analysis (thematic indicators) and illustrative examples.

Degrading relational ties. A rupture of the relational ties that unify group members due to difficulties in interpersonal relationships within the group.	
Among group members. Uneasy and problematic interpersonal relationships within the group, a lack of unity or cohesion among ingroup members.	Between the individual and the group. Feelings of betrayal and lack of trust in the group due to insincerity or disloyalty toward the individual. Personal identity devalued, not recognized, or threatened.
<i>“Bad atmosphere within the group”</i> <i>“Lack of commitment of the members”</i>	<i>“Betrayal by someone in the group”</i> <i>“That they did not consider my opinions about aspects that affected the group”</i>
Degrading collective ties. Rupture with the group due to discrepancies with the ideas that it represents. Not feeling like a team or perceiving irrevocable differences or disagreements with group values, norms, rules, objectives.	
<i>“Discrepancies of criteria when acting”</i> <i>“Different basic principles”</i>	<i>“Differences of opinions or points of view”</i>
External factors. Uncontrollable reasons not related to the group dynamics.	
<i>“The circumstances of my life may radically change”</i> <i>“Lack of time to dedicate to each of the group members”</i>	
Unfeasibility of defusion. Impossibility of feeling less attached or bonded to the group.	
<i>“I can’t imagine any reason why I could distance myself from my group”</i> <i>“Nothing”</i>	

anticipated and that, in fact, is not a category of defusion: the *unfeasibility of defusion* (e.g., denying that complete detachment from the group is possible). A final category named *other* captured responses that did not fit any rationale and about which the judges could not agree.

In the third cycle (conducted by the second and fourth authors), subcategories within the broader category of degrading relational ties were identified (i.e., among group members and between the individual and the group; see Table 2). The subcategory of *among group members* refers to uneasy and problematic interpersonal

relationships within the group or a lack of unity or cohesion among in-group members, without explicit reference to the personal self. The subcategory *between the individual and the group* expressed feelings of betrayal and the participant's lack of trust toward the group due to insincerity or disloyalty, as well as feeling that their personal identity is devalued, not recognized, or threatened by the group.

Once the qualitative analyses were completed, quantitative methods were employed to identify significant differences between groups and among categories within each group, as discussed in the Results section for each study.

Although the coding scheme was generated using the reasons provided by participants in Study 1, we want to note that we conducted a content analysis by iteratively constructing the categories, meaning that the categories could be revised and that new ones could be included if the frequency of new reasons was considerable, which would imply the development of new categories and new cycles of codification. However, this was not the case in Studies 2–5, as the categories obtained in Study 1 remained consistent over the investigation.

Regarding the reasons for defusion, we expected that the degradation of both relational and collective ties would be identified as potential and real reasons. In addition, given the resilient nature of fusion (Gómez et al., 2020; Swann et al., 2024), we also expected to find arguments supporting the difficulty, or even the impossibility, of defusing from the group. Finally, supported by our initial content analysis, we anticipated that other factors not directly related to group belonging and relationships within the individual's control, or the connectedness between the individual and the group, as external factors, would be expressed as motives for defusion.

When considering the group's nature, we predicted that degrading relational ties would be a more common reason for defusion in local groups because, in local groups, the people know each other and an intense interaction among them is a necessary condition to form the group (Lewin, 1948) and because they are crucial for maintaining healthy group relationships (Forsyth, 2006). In contrast, we expected that degrading collective ties would be cited more as a reason for defusion in extended groups because sharing core characteristics, rather than personal relationships, is important for alignment when most in-group members are unknown. Regarding chosen vs. ascribed groups, as supported by group dynamics research (Collins and Read, 1990; Holmes and Rempel, 1989; Whitton and Kuryluk, 2012), it was expected that participants would consider defusing from ascribed groups more unfeasible than defusing from chosen groups.

Regarding participants involved in groups that engage in collective violence, that is, hooligans, we expected that because sharing intense interpersonal experiences with other group members reinforces their feelings of fusion (e.g., Whitehouse et al., 2017), degrading relational ties would be a more common reason for defusion. In addition, recognizing that a hypothetical reason for defusion could carry severe risks, including retaliation, the unfeasibility of defusion would be more preeminent for those who exercised violence but that left the group than in studies with general population members.

Finally, based on previous research indicating that the factors associated with joining violent groups among jihadists and former members of the insurgent group LTTE are related to the causes of fusion, because connections with significant others that encompasses a person's role in close relationships, that is, relational identity, and cognitions, emotions, and values are strongly linked to group membership, that is, collective identity (Gómez et al., 2021b), we expected to find defusion motives among the reasons given by former insurgents. However, we could not establish *a priori* assumptions about which would be the most common factor of defusion because insurgent groups consistently respond to states' counterinsurgency and terrorism tactics and members of the group have little control.

1.4.1 Transparency and openness

Although the studies' designs and analyses were not preregistered, for each study, we report all data exclusions (if any) and all measures. Data were analyzed using SPSS, version 27.0.

All data, materials, and analysis codes have been made publicly available at OSF (2025). Approval for Studies 1–4 was obtained from the first author's university (UNED Human Subjects Approvals) and, for Study 5, from ARTIS International (IRB 00007516).

2 Study 1. Hypothetical reasons for defusion from local vs. extended groups

Groups can vary in terms of size and member interaction levels (Cooley, 1909; Hyman, 1942; Sherif and Sherif, 1969; Turner, 1982; Turner and Reynolds, 2003). We can have direct contact with members of primary, small face-to-face groups, such as our colleagues at work or our family (which can be defined as social networks with high interdependence; Granovetter, 1973), but we cannot interact with most members of secondary and extended groups, such as our preferred political party or our country (which can be defined as social categories; White, 1992). Group size and interaction level could affect the motives that individuals would give for defusing from such groups. Study 1 explores the reasons that might lead people to cease feeling fused with a group and whether such reasons differ depending on whether the group is local (e.g., family, friends) or extended (e.g., country, gender).

Based on previous findings (Forsyth, 2006; Gómez et al., 2019; Lewin, 1948), it was expected that participants would indicate the degradation of relational ties and collective ties as potential motives for defusion. We also predicted that, for defusion, relational ties degradation would be a more common reason than collective ties degradation. Finally, we expected that the group's nature would affect the importance of the reasons for defusion and that, while degrading relational ties would be more common for defusing from local groups, degrading collective ties would be more relevant for defusing from extended groups.

2.1 Method

2.1.1 Participants

In total, 223 individuals (60.1% women; $M_{age} = 36.01$ years, $SD = 11.18$; 91.9% Spaniards) participated in this study.

2.1.2 Measures and procedure

Participants were introduced to the pictorial measure of identity fusion (Swann et al., 2009), which includes five vignettes. Each vignette showed a varying distance between a small circle representing the self and a big circle representing the group, from A to E. Participants were randomly assigned to think about a local or an extended group with which they felt such unity and commitment that they could choose option E.

Participants who chose a local group ($N = 116$) were instructed to think about a group in which they knew all its members. Most participants reported being fused with their family (49.1%) or their friends/colleagues (43.1%). Participants who chose an extended group ($N = 107$) were instructed to think about a group in which they did not know all its members. The groups more commonly cited were the city/region (26.2%) or the country (16.8%).

As a kind of manipulation check, participants also reported their level of identity fusion with the group they chose by responding to the Verbal Identity Fusion Scale by Gómez et al. (2011a), which includes seven items (e.g., “My group is me” or “I am strong because of my group”; $\alpha = 0.74$), ranging from 0 (*totally disagreed*) to 6 (*totally agreed*). After that, participants were asked to think about and write three reasons or circumstances that could break that feeling of connection to the group.

Based on the 668¹ reasons, inter-judge reliability (assessed using Cohen’s kappa) was quite respectable for all the categories (see Table 3).

2.2 Results

2.2.1 t-test from the midpoint

The results confirmed that, as expected, when participants responded to the Verbal Identity Fusion Scale, they were strongly fused with their chosen group, with the mean significantly higher than the scale’s midpoint (3), $M = 4.56$; $SD = 1.09$, $t_{(222)} = 21.23$, $p < 0.001$, $d = 1.09$. However, there were differences depending on the group’s nature: Participants who thought about a local group displayed higher levels of fusion than those who thought about an extended group, $M = 4.78$, $SD = 1.05$, vs. $M = 4.31$, $SD = 1.09$, $F_{(221)} = 12.34$, $p < 0.001$, $\eta^2 = 0.046$, respectively.

When participants reported their reasons for defusion, examples of relational tie degradation involved, among other things, a loss of trust in other members of the group: “everyone lied to me at a certain point” (P/L141),² “I noticed insincerity” (P/L21), or “I perceived selfishness” (P/E67). Examples of collective tie degradation included a rupture with the principles, values, or objectives of the group: “if our core principles were different” (P/L143) or “that the group’s ideals changed over time while mine remained the same” (P/L263). Examples of external factors included a “lack of time to stay in the group” (P/L101) or an “impossibility for living in another city” (P/E248). Examples of the unfeasibility for defusion included “I can’t imagine any reason why I might distance myself from my group” (P/E244) and “my dead” (P/L119).

2.2.2 McNemar’s test for all samples

For the analyses, we considered whether each participant named the category at least once or did not name it across all studies (effect code: 1 = presence, 0 = absence).

The frequency analysis showed that a greater number of participants referred to the *degradation of relational ties* as the reason that would make them defuse from their group (50.87%), followed by *external factors* (26.77%), the *degradation of collective ties* (19.77%), and *unfeasibility of defusion* (2.65%; see Figure 1).

A McNemar’s test indicated that relational ties were cited significantly more as a reason for defusion than collective ties, $\chi^2(1) = 70.67$, $p < 0.001$; external factors, $\chi^2(1) = 51.41$, $p < 0.001$; and unfeasibility of defusion, $\chi^2(1) = 154.47$, $p < 0.001$.

Collective ties were cited significantly more than external factors, $\chi^2(1) = 3.94$, $p = 0.047$, and the unfeasibility of defusion, $\chi^2(1) = 42.75$, $p < 0.001$.

External factors were cited significantly more than the unfeasibility of defusion, $\chi^2(1) = 74.30$, $p < 0.001$.

2.2.3 McNemar’s test for those who thought about local groups

When considering participants who reported reasons for defusing from local groups, the frequency analyses showed that relational ties were cited significantly more than collective ties, $\chi^2(1) = 67.37$, $p < 0.001$; external factors, $\chi^2(1) = 29.79$, $p < 0.001$; and the unfeasibility of defusion, $\chi^2(1) = 90.09$, $p < 0.001$.

Collective ties were cited significantly less than external factors, $\chi^2(1) = 20.90$, $p < 0.001$, and cited more than the unfeasibility of defusion, $\chi^2(1) = 8.04$, $p < 0.001$.

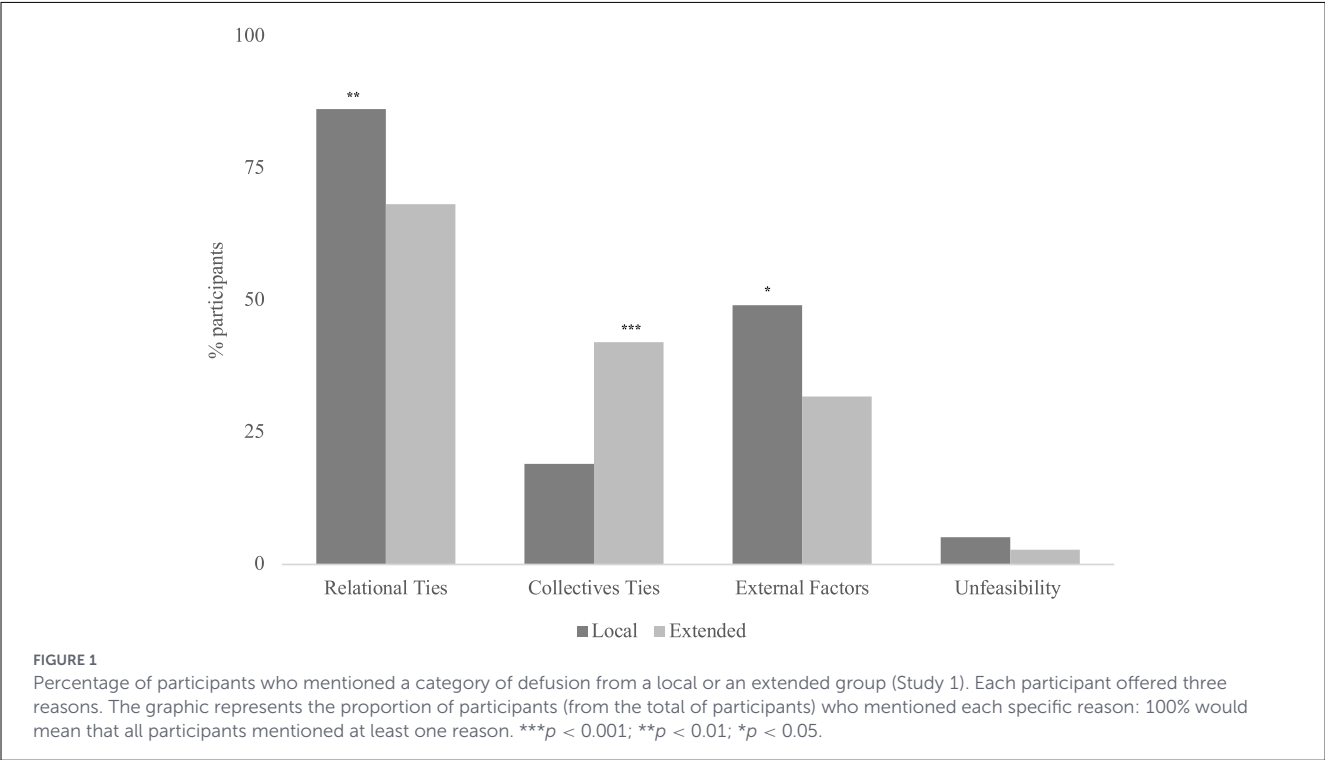
External factors were cited significantly more than the unfeasibility of defusion, $\chi^2(1) = 43.47$, $p < 0.001$.

¹ The total of the responses should be 669; however, one participant did not write one reason.

² P/L refers to participants in the local-group condition; P/E refers to the extended-group condition.

TABLE 3 Overview of the inter-judge reliability.

Study	Relational ties		Collective ties	External factors	Unfeasibility of defusion
	Among	Between			
Study 1	0.98	0.96	0.95	0.95	1
Study 2	0.98	0.97	0.95	0.98	1
Study 3	0.96	0.97	0.98	0.98	–
Study 4	0.97	0.98	0.90	0.92	1
Study 5	1	1	1	1	1



2.2.4 McNemar’s test for those who thought about extended groups

When considering participants who reported reasons for defusing from extended groups, the frequency analyses showed that relational ties were cited significantly more than collective ties, $\chi^2(1) = 10.72$, $p < 0.001$; external factors, $\chi^2(1) = 20.93$, $p < 0.001$; and the unfeasibility of defusion, $\chi^2(1) = 62.65$, $p < 0.001$.

Collective ties were not cited significantly more than external factors, $\chi^2(1) = 1.59$, $p = 0.208$, but they were cited more than the unfeasibility of defusion, $\chi^2(1) = 35.02$, $p < 0.001$.

External factors were cited significantly more than the unfeasibility of defusion, $\chi^2(1) = 29.03$, $p < 0.001$.

2.2.5 McNemar’s test within subcategories of degradation of relational ties

Within subcategories of relational tie degradation, more examples were provided related to problems *among group members* than *between the individual and the group* for local groups, $\chi^2(1) = 19.5$, $p < 0.001$, and for extended groups, $\chi^2(1) = 8.82$, $p = 0.003$.

2.2.6 Binary logistic regressions

Finally, when considering the differences between participants who reported reasons for defusing from local vs. extended groups in each category, a series of binary logistic regressions was conducted. The predictor variable was the group (effect coded: –1 extended, 1 local). Those who thought of a local group reported significantly

TABLE 4 Frequency and percentage of participants who mentioned each (sub)category and comparisons between local-group vs. extended-group conditions (Study 1).

Category	Local <i>n</i> = 116	Extended <i>n</i> = 107	Total (<i>f</i>)	<i>b</i>	<i>SE</i>	Wald χ^2	<i>p</i>	Exp (<i>b</i>)	95% CI	
Relational ties ^a	100 (86.2)	73 (68.2)	173 (50.87)	1.07	0.34	9.87	0.002	2.91	1.49	5.66
Among	81 (69.8)	55 (51.4)	136 (78.61)	0.78	0.28	7.82	0.005	2.18	1.26	3.78
Between	41 (35.3)	31 (29.0)	72 (21.39)	0.29	0.29	1.03	0.310	1.34	0.76	2.36
Collective ties	22 (19.0)	45 (42.1)	67 (19.71)	−1.13	0.31	13.56	0.001	0.32	1.17	0.59
External factors	55 (47.4)	34 (31.8)	89 (26.77)	0.63	0.28	5.12	0.024	1.87	1.08	3.24
Unfeasibility	6 (5.2)	3 (2.8)	9 (2.65)	0.64	0.72	0.79	0.376	1.89	0.46	7.75

In the Local and Extended columns are the frequency and percentage (in brackets) of participants of each group who cited at least one reason related to each category. The rest of the columns show the comparisons between local and extended groups who cited at least one reason related to each category.

^aThe sum of frequencies of the subcategories is higher than the frequency of relational ties category because of the level of inclusiveness. That is, a participant could mention different reasons related to both subcategories, but these reasons were only quantified as one reason for the more inclusive category of degradation of relational ties.

more examples of the degradation of relational ties than those who thought of an extended group, $b = 1.07$, $p = 0.002$. In contrast, participants who thought of an extended group reported significantly more examples of degradation of collective ties than those who thought of a local group, $b = -1.13$, $p < 0.001$. Those who thought of a local group also reported significantly more examples of external factors than those who thought of an extended group, $b = 0.63$, $p = 0.024$. No significant differences were found for the unfeasibility of defusion, $p = 0.38$; see Table 4.

2.3 Discussion

This study aimed to disentangle the hypothetical reasons that would motivate individuals to defuse from a group and examine whether these reasons differ depending on the nature of the group, local, that is, small groups in which individuals know all its members, vs. extended, that is, big groups in which individuals do not know most group members. After reporting a group, local or extended, to which participants were fused, they were asked to offer spontaneous reasons for defusing from that group.

A content analysis revealed three potential reasons for defusion: degrading relational ties, degrading collective ties, and external factors, as well as the impossibility of finding arguments for defusion, which we labeled an additional category: the unfeasibility of defusion. In addition, we also identified subcategories for degrading relational ties, depending on whether such degradation emerged among group members or between the individual and the group.

The content analysis revealed that, independent of the group’s nature, local or extended, participants mainly reported reasons that implied the degradation of relational ties, that is, interpersonal relationship difficulties within the group, such as a lack of unity or problematic communication. This finding is not surprising because establishing relational ties is crucial for fused individuals who can project the relational ties typical of local groups to extended groups (Swann et al., 2012). Our results are also consistent with previous findings indicating that degrading relational ties has a stronger effect than degrading collective ties for reducing fusion and its consequences (Gómez et al., 2019).

Less common reasons for defusion were the degradation of collective ties and external factors.

When comparing the potential reasons for defusing from local and extended groups, relational ties and external factors were cited more often for local groups, whereas collective ties were cited more often for extended groups.

The results of Study 1 offer insights into the potential reasons for defusion, in general, and depend on the group’s nature, local vs. extended. However, another important characteristic of groups is the cause or reason the individual belongs to such a group. For example, when considering local groups, such as family or friends, in the first case, the individual belongs to the group by nature, while in the second, the person freely chooses the group. The same occurs for extended groups: We do not choose our original nationality or ethnicity, but we can choose our political party or football team.

In the next study, we explored the reasons for defusing from both ascribed groups (those into which people are born or assigned) and chosen groups (those selected freely by individuals).

3 Study 2. Hypothetical reasons for defusion from ascribed vs. chosen groups

In Study 2, we explored the hypothetical reasons that members of ascribed vs. chosen groups offered when facing the possibility of defusing from their groups.

3.1 Method

3.1.1 Participants

In all, 568 individuals (60.9% women; $M_{age} = 36.02$ years, $SD = 12.72$, 97.7% Spaniards) participated in Study 2. Data collection followed the same procedure as Study 1.

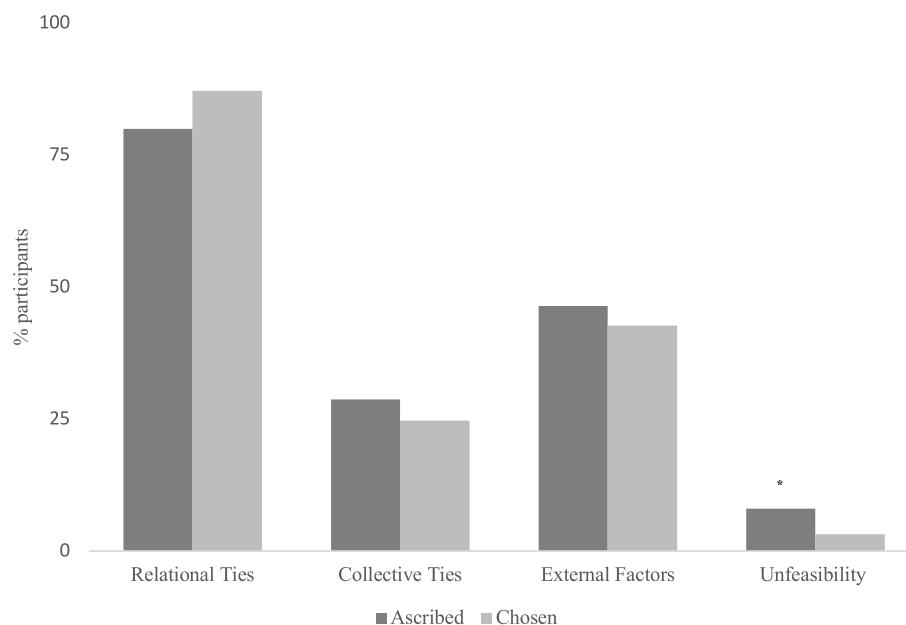


FIGURE 2

Percentage of participants who mentioned a category of defusion from an ascribed or a chosen group (Study 2). Each participant offered three reasons. The graphic represents the proportion of participants (from the total of participants) who mentioned each specific reason: 100% would mean that all participants mentioned at least one reason. * $p < 0.05$.

3.1.2 Measures and procedure

In Study 2, participants had to choose a group they were fused to according to the pictorial measure of identity fusion (Swann et al., 2009). They were randomly assigned to think about an ascribed (i.e., a group to which they belong by birth) or a chosen group (i.e., a group they had freely chosen to belong to). Participants who had to select a chosen group ($N = 279$, 49.1%) indicated mainly friends/colleagues (64.9%) or a club/team (11.5%). Participants who had to select an ascribed group ($N = 289$, 50.9%) mostly chose family (75.1%), country (6.9%), or gender (6.6%). After that, participants reported their level of fusion using the 7-item Verbal Identity Fusion Scale (Gómez et al., 2011a; $\alpha = 0.76$) with the indicated group and the reasons that could lead them to break that feeling for the group, resulting in 1,703 motives (one participant only provided two reasons). Two independent judges, the second and third authors, read and categorized the information using the same framework generated in Study 1 (see Table 3 for inter-judge reliability).

3.2 Results

3.2.1 t-test from the midpoint

As happened in Study 1, results confirmed that when participants responded to the Verbal Identity Fusion Scale, they were strongly fused with the group they had chosen, with the mean significantly higher than the scale's midpoint (3), $M = 4.74$, $SD = 1.10$, $t_{(567)} = 37.65$, $p < 0.001$, $d = 1.10$. However, there were differences depending on the nature of the group: Participants who thought about an ascribed group displayed higher levels of fusion

than those who thought about a chosen group, $M = 4.98$, $SD = 1.07$, vs. $M = 4.51$, $SD = 1.06$, $F_{(566)} = 19.41$, $p < 0.001$, $\eta^2 = 0.033$, respectively.

When participants reported reasons for defusion, examples invoking the degradation of relational ties included “I felt lack of respect” (P/C10),³ “I experience betrayal” (P/A393), “I would feel rejection from the group to me” (P/A453), or “they went to holidays without me” (P/A463). Examples of collective ties degradation included “politics and philosophy changes” (P/C212) or “there would be radical opinions” (P/A493). Arguments for external factors included circumstances such as “we [she and their friends] did not meet frequently” (P/C277). Examples of the unfeasibility of defusion included “I can't think of any reason” (P/A565) or “my own death” (P/A558).

3.2.2 McNemar's test for all samples

The frequency analysis showed that a greater number of participants referred to the *degradation of relational ties* as the reason that would make them defuse from their group (52.03%), followed by *external factors* (27.77%), the *degradation of collective ties* (16.67%), and the *unfeasibility of defusion* (3.51%; see Figure 2).

A McNemar's test showed that relational ties were cited significantly more as a reason for defusion than collective ties, $\chi^2(1) = 257.60$, $p < 0.001$; external factors, $\chi^2(1) = 153.65$, $p < 0.001$; and the unfeasibility of defusion, $\chi^2(1) = 415.56$, $p < 0.001$.

³ P/C refers to participants in the chosen-group condition; P/A refers to ascribed-group condition.

Collective ties were cited significantly more than external factors, $\chi^2(1) = 23.82$, $p < 0.001$, and unfeasibility of defusion, $\chi^2(1) = 80.46$, $p < 0.001$.

External factors were cited significantly more than the unfeasibility of defusion, $\chi^2(1) = 163.64$, $p < 0.001$.

3.2.3 McNemar's test for those who thought about local groups

When considering participants who reported reasons for defusion from ascribed groups, relational ties were cited significantly more than collective ties, $\chi^2(1) = 105.93$, $p < 0.001$; external factors, $\chi^2(1) = 67.08$, $p < 0.001$; and the unfeasibility of defusion, $\chi^2(1) = 186.30$, $p < 0.001$.

Collective ties were cited significantly less than external factors, $\chi^2(1) = 9.10$, $p < 0.001$, and cited more than unfeasibility of defusion, $\chi^2(1) = 34.13$, $p < 0.001$.

External factors were cited significantly more than the unfeasibility of defusion, $\chi^2(1) = 69.58$, $p < 0.001$.

3.2.4 McNemar's test for those who thought about extended groups

When considering participants who reported reasons for defusing from chosen groups, relational ties were cited significantly more than collective ties, $\chi^2(1) = 152.70$, $p < 0.001$; external factors, $\chi^2(1) = 85.78$, $p < 0.001$; and the unfeasibility of defusion, $\chi^2(1) = 228.11$, $p < 0.001$.

Collective ties were cited significantly more than external factors, $\chi^2(1) = 14.34$, $p < 0.001$, and the unfeasibility of defusion, $\chi^2(1) = 47.04$, $p < 0.001$.

External factors were cited significantly more than the unfeasibility of defusion, $\chi^2(1) = 94.05$, $p < 0.001$.

3.2.5 McNemar's test within subcategories of relational ties degradation

In the subcategories of relational ties degradation, more examples were provided relating to problems *among group members* than *between the individual and the group* for ascribed groups, $\chi^2(1) = 20.63$, $p < 0.001$, and chosen groups, $\chi^2(1) = 19.71$, $p < 0.001$.

3.2.6 Binary logistic regressions

Finally, to consider differences between participants who reported reasons for defusion from ascribed vs. chosen groups on each category, a series of binary logistic regressions was run. The predictor variable was the group (effect coded: -1 chosen, 1 ascribed). The frequency analyses showed that those who thought of ascribed groups reported significantly more reasons related to the unfeasibility of defusion than those who thought of chosen groups, $b = 0.95$, $p = 0.018$; no other differences

between groups were found in any category, $ps > 0.23$; see Table 5.

3.3 Discussion

The aim of Study 2 was to disentangle the hypothetical reasons that would motivate individuals to defuse from an ascribed, that is, based on birth or involuntarily, vs. a chosen, that is, non-biologically related and voluntarily selected, group. After participants reported a group, ascribed or chosen, to which they were fused, they were asked to offer spontaneous reasons for defusion.

A content analysis revealed that, independent of the group's nature, chosen or ascribed, participants mainly reported reasons that implied relational ties degradation as a reason for defusion. Approximately half of the participants referred to external factors, that is, beyond the control and responsibility of the participants and the group, as a reason for defusion, and a quarter referred to collective ties.

These results indicate the importance of relational ties as a social glue for in-group members for fused individuals regardless of the nature of the group. Of particular interest is that, within each category of defusion, no differences were found between chosen and ascribed groups.

In sum, the results from Studies 1 and 2 revealed three main hypothetical reasons for defusion and an additional category related to neglecting the possibility of defusion and supporting the characteristic resilience of fusion (Gómez et al., 2020; Swann et al., 2024). These studies have also revealed that the group's nature matters for the impact of the reasons for defusion. While the impact of some reasons for defusion can depend on whether the group is local or extended, it seems that there are no differences regarding whether the group is ascribed or chosen.

Taken together, the main limitation of these studies is that participants were asked to imagine hypothetical reasons for defusion. However, we cannot establish whether these motives will really lead a person to defuse from the group. The next study was designed to solve this limitation, and participants were asked to report real reasons that motivated feelings of defusion from a group in the past.

4 Study 3. Real reasons for defusion

Study 3 aimed to analyze the real reasons that have led participants to defuse from a group in the past.

4.1 Method

4.1.1 Participants

For this study, 432 participants volunteered to participate (62.7% women; $M_{\text{age}} = 36.90$ years, $SD = 12.43$). Data collection followed the same procedure as Studies 1 and 2.

TABLE 5 Percentage of participants who mention each (sub)category and comparisons between ascribed vs. chosen group conditions (Study 2).

Category	Ascribed <i>n</i> = 289	Chosen <i>n</i> = 279	Total (<i>f</i>)	<i>b</i>	<i>se</i>	Wald χ^2	<i>p</i>	Exp (<i>b</i>)	95% CI	
Relational ties	231 (79.9)	243 (87.1)	474 (52.03)	−0.53	0.23	5.21	0.230	0.59	0.38	0.92
Among	179 (61.9)	177 (63.4)	356 (75.11)	0.06	0.17	0.13	0.711	0.94	0.67	1.32
Between	120 (41.5)	114 (40.9)	234 (49.37)	0.27	0.17	0.03	0.873	1.02	0.73	1.43
Collective ties	83 (28.7)	69 (24.7)	152 (16.67)	0.21	0.19	1.15	0.283	1.22	0.85	1.78
External factors	118 (40.8)	114 (40.9)	253 (27.77)	0.01	0.17	0.01	0.994	0.99	0.71	1.39
Unfeasibility	23 (8.0)	9(3.2)	32 (3.51)	0.95	0.40	5.61	0.018	2.59	1.17	5.71

In Ascribed and Chosen columns are the frequency and percentage (in brackets) of participants of each group that cited at least one reason related to each category. The rest of the columns show the comparisons between ascribed and chosen groups who cited at least one reason related to each category.

4.1.2 Measures and procedure

Study 3 followed a similar procedure to that in Studies 1 and 2. However, this time, participants were asked for a group with which they had been fused in the past (represented with the E option on the pictorial identity fusion scale; Swann et al., 2009) but did not feel that way in the present. Among participants, 58% were not able to think of a group from which they had defused, further supporting the resilient nature of fusion (Gómez et al., 2020; Swann et al., 2024). These individuals were debriefed and thanked.

The remaining participants (*N* = 181; 67.4% women; *M*_{age} = 36.66 years, *SD* = 11.85, 93.4% Spaniards) reported that the group they defused from fell mainly into one of the following categories, all of them local groups: friends (46.4%), family (28.7%), work and colleagues (13.3%), or leisure group (6.1%). Only a minority (7.7%) mentioned an extended group, such as nationality or gender. After that, they reported the three main reasons that undermined their connection with that group and their current level of identity fusion. In this case, we used the state version of the 7-item verbal scale adapted from Gómez et al. (2011a; α = 0.89; e.g., “Right now, I feel that my group and I are one”).

Following the same procedure used in Studies 1 and 2, two independent judges, members of the research team, read and categorized the responses based on the framework specified in Table 1 (see Table 3 for inter-judge reliability).

4.2 Results

4.2.1 t-test from the midpoint

Participants showed low fusion levels with their chosen group, with the mean significantly below the scale’s midpoint (3), *M* = 2.34; *SD* = 1.66; *t*₍₁₈₀₎ = −5.29, *p* < 0.001, *d* = 1.66.

When participants reported reasons for defusion, examples of relational ties degradation involved a “lack of trust” toward their coworkers (P10), feeling “falsehood” from their friends (P136), “betrayal” (P104), or “infidelity toward me” by their family (P299). Examples of external factors included “because the work ended” (P27), “because of geographical distance” from their friends (P130), or “due to lack of time,” as a girl indicated about the rest of her friends (P07). Examples of collective ties degradation included “we had different values” (P72) or “radicalization of some female

members of the group,” said a woman (P140) when talking about the parent support group she belonged to. In the present study, the unfeasibility-of-defusion category was not considered, as it was not conceptually applicable.

As in Studies 1 and 2, the frequency analysis (see Figure 3) showed that 66.3% of participants referred to the degradation of relational ties and 65.2% argued external factors as the main reasons for defusing from their groups. The degradation of collective ties was a cause for defusion for 26.5% of participants.

4.2.2 McNemar’s test

A McNemar’s test indicated that participants mentioned relational ties degradation and external factors significantly more than collective ties degradation, $\chi^2(1) = 40.6$, *p* < 0.001, and $\chi^2(1) = 45.78$, *p* < 0.001, respectively.

No significant differences were found between relational ties and external factors, $\chi^2(1) = 0.13$, *p* = 0.71.

Within degrading relational ties, difficulties among group members (*n* = 103, 56.9%) were mentioned significantly more than difficulties between the individual and the group (*n* = 39, 21.5%), $\chi^2(1) = 40.50$, *p* < 0.001.

The other category was named by 27 participants (14.9%).

4.3 Discussion

In Study 3, participants reported the reasons that motivated real experiences of defusion in the past. The same categories found in Studies 1 and 2 were applicable, and no other new category emerged. The results replicated the findings from Studies 1 and 2 and previous research (Gómez et al., 2019), indicating that degrading relational ties is a key element in defusion.

However, when reporting real, rather than hypothesized, reasons for defusion, as happened in Studies 1 and 2, external factors were mentioned as a reason for defusion by a similar number of participants who mentioned relational ties degradation. This finding merits particular attention because, although the groups participants chose to be fused to are very similar to those participants reported in Studies 1 and 2, the results revealed that events under the participants’ control that produce defusion are more common than might be expected.

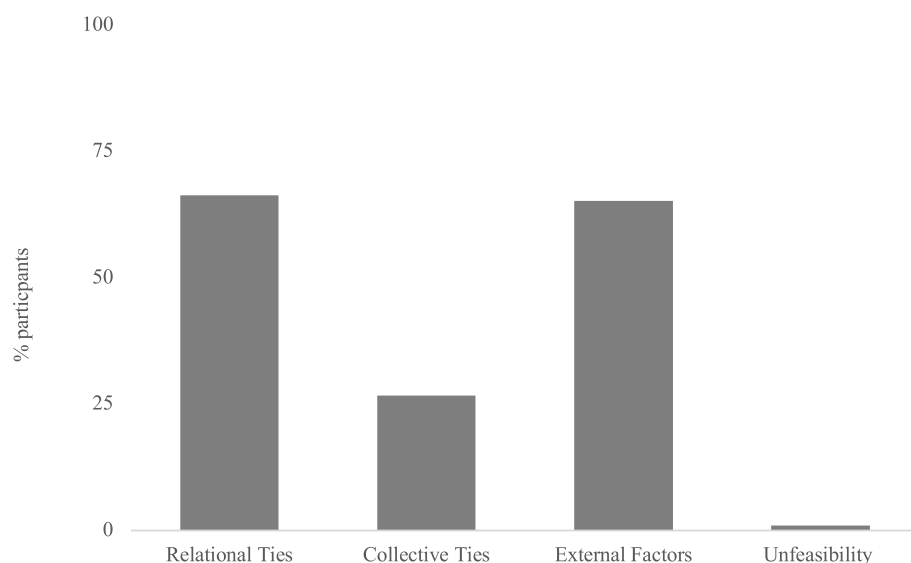


FIGURE 3
Percentage of total participants who mentioned a category as a real reason for defusion in the past (Study 3).

Taken together, Studies 1, 2, and 3 show that, independent of the group's nature and whether participants predict hypothetical reasons for defusion or describe real reasons for why they defused, degrading relational and collective ties are motives for defusion. In addition, other uncontrolled factors unrelated to intragroup relations, labeled as external factors, can also cause defusion and, in fact, are more prominent as real causes than as hypothetical causes. A non-negligible proportion of participants reported that defusion was unfeasible (3.5%), particularly those asked to report real reasons for defusion, neglected the possibility of abandoning such a state of commitment to a group once fused.

However, noting that the main interest in identity fusion is its strong capacity to predict radical intentions and extreme behaviors (see Vaarmann et al., 2023; Wolfowicz et al., 2021 for meta-analyses), the previous studies have one main limitation: They do not involve individuals who support or supported collective violence.

We wanted to go one step further by offering some initial insights about this topic. To that end, Studies 4 and 5 were designed as exploratory extensions to offer preliminary information that helps solve, at least in part, the limitation of Studies 1–3.

5 Study 4. Hypothetical reasons for defusion from a hooligan group

In Study 4, we examined the hypothetical reasons that could motivate defusion among members of a group that has used collective violence, that is, hooligans. To that end, we interviewed members of the Riazor Blues, one of the best-known hooligan groups in Spain. This group was founded as a sports club in 1987 and has been appointed as an ultra deport club, involved in different violent acts (see Lowe, 2014).

5.1 Method

5.1.1 Participants

In all, 30 volunteers (40% 18–25 years old; 13.33% 31–35 years old; 6.7% 36–40 years old; 50% women) participated in this study.

5.1.2 Measures and procedure

As part of a broader investigation, a research assistant contacted a member of this hooligan group, who distributed paper-and-pencil questionnaires among the soccer fans. They responded to the pictorial measure of identity fusion (Swann et al., 2009), with the Riazor Blues group as the target. After that, participants reported their level of fusion with the group using the 7-item Verbal Identity Fusion Scale (Gómez et al., 2011a; $\alpha = 0.90$). Finally, in addition to the questions included for the other investigations, they were asked to think about three hypothetical reasons why they might stop feeling that sentiment of unity with the Riazor Blues.

Two independent judges, members of the research team, read and categorized the reasons participants gave for potentially defusing from the group (see Table 3 for inter-judge reliability).

5.2 Results

5.2.1 t-test from the midpoint

When asked about their fusion level with the Riazor Blues using the pictorial index (Swann et al., 2009), all participants were fused. Responses to the verbal scale of fusion indicated that the mean was significantly higher than the scale's midpoint (3), $M = 4.77$, $SD = 1.08$, $t_{(29)} = 8.95$, $p < 0.001$, $d = 1.08$.

When participants reported reasons for defusion, examples for relational ties degradation included arguments such as “if there were personal problems among us” (P8), “if there is no brotherhood or lack of respect” (P21), “des-unity” (P1), or “fights inside the group” (P12). Examples of collective ties degradation included “soccer isn’t what it used to be” (P20), “disagreements” within the group (P5), or “aggressiveness” as the only way (P1). Examples of external factors involved “the schedules do not allow us to share” (P10), “stop going to the stands of the game for the schedules of the matches” (P15), or “to evolve and change” (P20). Finally, regarding unfeasibility, participants simply reported that they had no reason for defusion or left the response field blank.

5.2.2 McNemar’s test

The frequency analysis showed that a greater number of participants referenced relational ties degradation as a potential reason for defusion (53.3%), followed by the unfeasibility of defusion (33.3%), collective ties (26.7%), and external factors (13.3%). Two participants mentioned reasons that did not fit into a category and were categorized as “other.” Within the category of degrading relational ties, most participants argued for reasons related to difficulties among group members (53.3%). The degradation of relational ties between the individual and the group subcategory was mentioned by only 6.7% of participants. Regarding hypothetical reasons for defusing from the group, nine participants did not give a reason, leaving the spaces blank.

According to McNemar’s tests, the degradation of relational ties was significantly mentioned by more participants than collective ties degradation, $\chi^2(1) = 5.11$, $p = 0.021$; external factors, $\chi^2(1) = 5.28$, $p = 0.022$, and the unfeasibility of defusion, $\chi^2(1) = 17.14$, $p < 0.001$.

However, collective ties degradation was cited by fewer participants than external factors, $p = 0.94$, and was mentioned less than the unfeasibility of defusion, $\chi^2(1) = 5.46$, $p = 0.020$.

Relational ties degradation was more due to difficulties among group members than to difficulties between the individual and the group, $\chi^2(1) = 16.07$, $p < 0.001$; see Figure 4.

5.3 Discussion

The main goal of this exploratory study was to disentangle the hypothetical reasons that members of an actually violent group argue as motives for defusion while still belonging to the group.

In line with previous research (Gómez et al., 2019) and replicating the results of Studies 1–3, degrading relational ties were again the most mentioned reason for defusion, followed by degradation of collective ties and, finally, external factors.

Importantly, hooligans found giving reasons for defusing from the group difficult; in fact, they expressed more reasons against defusion than reasons for defusion related to degradation of collective ties or external factors.

The unfeasibility category was also more prominent than in Studies 1–2. This finding might indicate that, when belonging to a group that exercises or that has exercised collective violence,

such as the Riazor Blues, imagining reasons for defusing would be especially difficult, painful, or even impossible to digest (Gómez et al., 2021b; Swann et al., 2012). In addition, individuals who belong to violent groups cannot disengage from the collective in the same way that members of non-violent groups can, as is the case of the groups considered in Studies 1–3, confirming our expectations.

Although this study has included members of a group that supported collective violence, taken together, the previous studies share a series of limitations. First, as happened in Studies 1 and 2, the members of the Riazor Blues gave hypothetical reasons that could move them to defuse from the group by imagining the future, but these were not related to real experiences of defusion. Second, violent hooligan groups, while capable of collective violence, lack the organizational features, ideological commitments, coercive control, and exit costs that characterize other kinds of groups, such as organizations. Hence, we cannot assume that the reasons for defusing from this group will be similar to the motives that members of violent groups with different natures and goals would argue for defusion.

The last study in this package, also exploratory, was designed to give some insights to solve these limitations. Participants included former members of an insurgent group, the LTTE. As individuals could be reluctant to provide the reasons that motivated them to defuse from a group for which they are willing to self-sacrifice (Gómez et al., 2023b), they were asked for the motives that led them to abandon the collective.

6 Study 5. Real reasons for defusion from an insurgent group: the case of the LTTE

In Study 5, we explored the reasons for defusion among former members of an insurgent group, the Tamil Tigers. The LTTE was a militant insurgent organization in Sri Lanka that operated from 1976 to 2009 to achieve an independent homeland for Hindu Tamils in northeastern Sri Lanka. They caused thousands of civil war-related deaths, with many tens of thousands more displaced by the fighting (see Crenshaw and Robinson, 2015).

The LTTE had extensive control over its members, intense indoctrination to retain them, and severe punishments as a deterrent for leaving the group. Those who left were not fully accepted either by the community at the time (due to their history with the LTTE) or by the group (which viewed them as traitors). Despite this, some left the group for the various reasons they provided in these interviews.

6.1 Method

6.1.1 Participants

In this study, 66 former members of the LTTE (17 men, 13 women, 36 did not report their sex) were interviewed. All were of

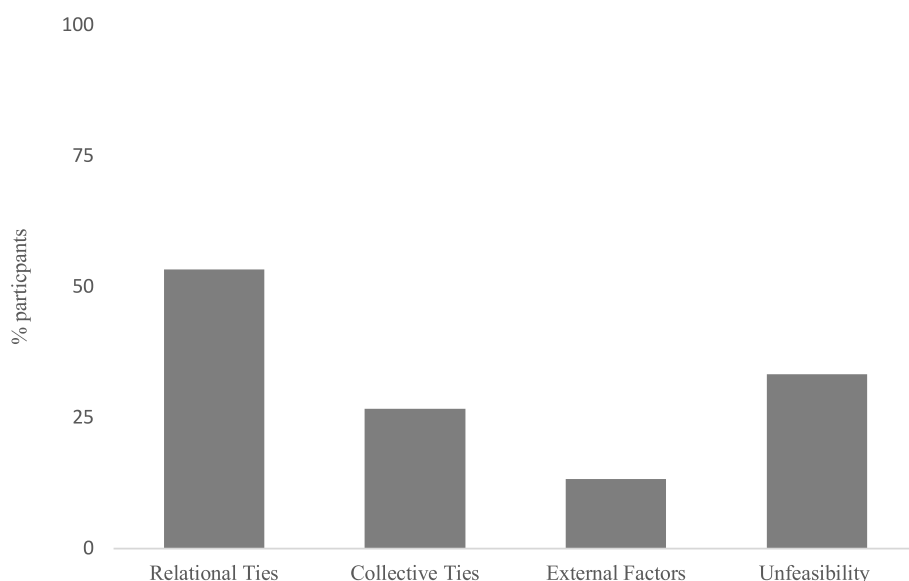


FIGURE 4

Percentage of total participants who mentioned hypothetical reasons for defusion from a hooligan group as real reason for defusion in the past (Study 4).

Sri Lankan Tamil ethnicity, with an age range of 26–56 ($M_{\text{age}} = 34.80$, $SD = 7.82$).

6.1.2 Procedure

Interviews were conducted in Kilinochchi and Viswamadu community centers, two places where former LTTE members were reintegrated. The sample was randomly selected from a group of former LTTE members during community follow-up visits by the last author of this research. Community leaders gathered all the former insurgents available to participate in the study during the community visits. The data were collected using a structured questionnaire that also included additional questions not directly related to the aims of the present study.

To avoid discomfort to the participants, they were asked their reason for leaving, as a proxy for their reason for defusion because asking about their motive for breaking their connection to the group could raise questions about whether a connection existed in the first place. To diminish social desirability bias, the interviewer used third-person language. Respondents were asked, “Which was the key reason that encouraged other members of the group to abandon the LTTE?”

After the interview, following the same procedure used in previous studies, two independent judges, members of the research team, read all the reasons provided by the participants and categorized the responses based on the framework specified in Table 2 for reasons for defusion. They could discuss preliminary disagreements as needed. The reasons that did not fit in with any of the pathways were classified as *other*. Disagreements were solved by a third judge. The inter-judge agreement was perfect: kappa = 1 (see Table 3).

6.2 Results

Results showed that a great number of participants referred to external factors (54%), followed by relational ties degradation (24.2%) and, finally, degradation of collective ties degradation (21.2%; see Figure 5).

As external factors represented a considerable percentage of the reasons given, the responses were distributed into three categories. The first was *the end of war* (25.72%). Examples of this subcategory include “the war is over” (P111, P81, P50) or “the army operations in the area finished” (P55). The second was *family issues* (16.62%). Examples include “there were home problems, and people died in the family” (P30) or “when I heard the news of my relative’s losses” (P17). The third was *the unsustainability of the situation* (12.15%). Examples include “fighting was enough” (P16) or “I could not accept that situation” (P27).

Examples of degrading relational ties included “when there are internal problems between LTTE members then they left the group” (P92) and “when they feel they are not trusted by other members of the group” (P104).

Examples of degrading collective ties were “some disagree with the group at some point—like killing” (P19) or “this is not the organisation I thought I worked for” (P37).

6.2.1 McNemar’s test

The McNemar’s test showed significant differences between relational ties degradation and external factors, $\chi^2(1) = 6.94$, $p = 0.008$, and between collective ties degradation and external factors, $\chi^2(1) = 8.82$, $p = 0.003$.

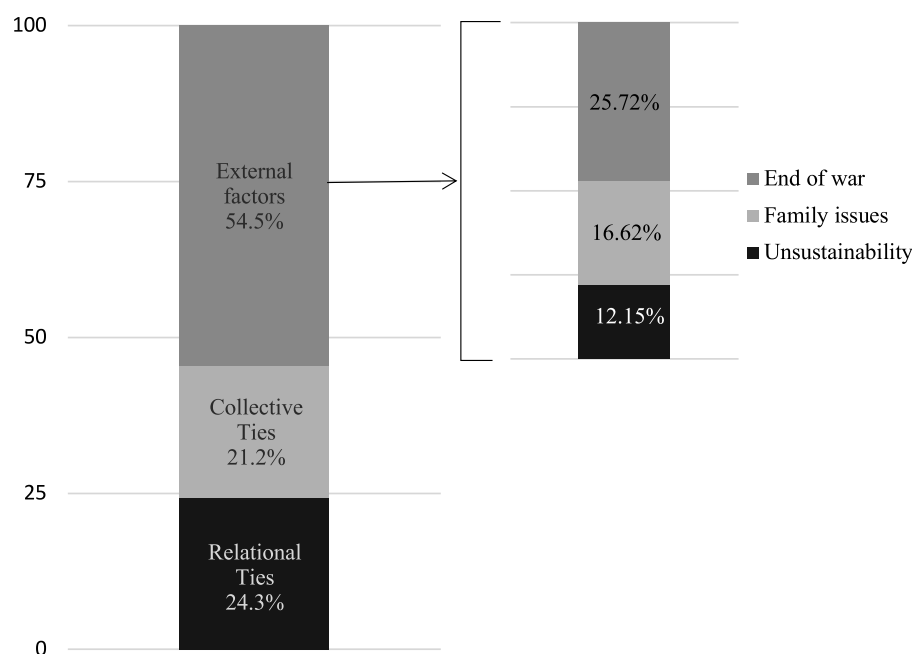


FIGURE 5

Percentage of participants who mentioned a category in Study 5 (Liberation Tigers of Tamil Eelam). In the subplots on the right, we can find the subcategories of external factors.

No significant differences emerged between relational ties degradation and collective ties degradation, $\chi^2(1) = 0.03$, $p = 0.86$.

Within degrading relational ties, significant differences emerged between the subcategories of degradation of ties among members and between the individual and group, $\chi^2(1) = 5.64$, $p = 0.017$.

No participant referred to reasons related to the unfeasibility of defusion, and no reason was categorized as other.

organization's dynamics. The LTTE used prepared professional soldiers using extreme training practices and harsh punishments to prepare professional soldiers (Hopgood, 2005), which could create problems between former members and the organization.

The fact that the reasons for leaving the group were sensitive to classification as motives for defusion indicates that, apparently, defusion could play a role as a factor motivating one's abandonment of violent extremist groups.

6.3 Discussion

Study 5 was designed as an exploratory study to examine the real reasons for defusion among former insurgent group members. The reasons reported were classified and analyzed following the categories considered defusion motivations in Studies 1–4.

The results suggest that external factors, which are not in the individual's or group's control, were the most important motive for defusion, a reason indicated by approximately half of the participants. This finding could be explained because the Sri Lankan military forces defeated the Tamil Tigers in a large-scale offensive, so the end of the war was the most highly cited reason. Also, this category included subcategories related to conflict and family problems external to the group.

In a different vein, participants referred to the degradation of relational ties and collective ties. Regarding relational ties, significant differences between subcategories emerged. Problems between the individual and the group were more common than general problems among group members. This result differed from the results obtained for non-extremist and/or non-violent groups in our previous studies, but it is in line with the

7 General discussion

The current research focused on identity fusion, a psychosocial process that entails a synergistic union between the personal and social identities. This investigation provides empirical evidence regarding why people defuse from a group. Specifically, in three studies involving a general population, participants were asked to select groups of different nature: local, that is, small groups involving direct contact with all group members, or extended, that is, collectives composed of many individuals with lack of personal or direct relationships (Study 1); ascribed, that is, a group to which one's belonging is determined by birth and is involuntary, or chosen, a group to which one has freely chosen to belong, with whom they are actually fused to (Study 2); and report three reasons that would hypothetically make them defuse (Studies 1 and 2) or that certainly motivated defusion in the past (Study 3).

Two additional exploratory studies included participants who belong to a violent group (i.e., hooligans, Study 4) or belonged to an insurgent group (i.e., the LTTE, Study 5).

A content analysis revealed three main reasons for defusion: degrading relational ties, that is, sentiments toward individual group members; degrading collective ties, that is, sentiments toward the group as a whole; and external factors, that is, factors beyond individuals' control.

The qualitative analyses also indicated a significant number of responses that neglected the impossibility of defusion, that is, the unfeasibility of defusion. These responses are in line with the potential resilience of fusion (Swann et al., 2012, 2024). This category's emergence is particularly important because it indicates that some individuals remain strongly attached to their groups even when relationships or shared values weaken, preventing the possibility of defusing from or even abandoning the group, as the results of Study 4 with hooligans indicate.

The results revealed that degrading relational ties was the most frequent reason for defusion in Studies 1–4, replicating the results of previous laboratory studies (Gómez et al., 2019). However, the results of Study 5, indicating that external factors were the most cited real reason for defusion among former insurgents, did not replicate previous findings and provide a jumping-off point for future research about defusion. Therefore, the results regarding defusion need to be framed cautiously to avoid overgeneralization. For example, the reasons that make defusion difficult can vary between the general population and members of violent groups. While the barrier for defusion among the general population can be the strong emotional attachment to other group members and the group as a whole, in the case of violent groups, the obstacle can be the risk of retaliation.

The fact that some categories of reasons for defusion are mentioned more frequently for some groups could be motivated by distinct groups' tendencies to cover diverse personal needs at different levels (Correll and Park, 2005; Maslow, 1968; Ryan and Deci, 2000; Yzerbyt and Demoulin, 2010). For instance, and as expected, degrading relational ties is a more frequent motive for defusing from local groups. Other research indicating that people need healthy relationships, good and efficient communication, cohesion, or friendship within the group (Cohen and Wills, 1985) supports the idea that degrading relational ties might jeopardize the relationship with the group.

However, degrading collective ties is a more common reason for defusion from extended groups than from local groups. Presumably, for extended groups, personal relationships with members seem less important, but the ideas, values, and norms the group represents seem crucial. This is understandable, as sharing principles, values, or norms are intrinsically satisfying and a key factor in forming social groups (Byrne et al., 1971; Rokeach, 1960; Turner, 1982).

Compared to participants who thought about chosen groups, those who thought about ascribed groups were more likely to report reasons related to the unfeasibility of defusion, a reasonable result given the material and psychological difficulty of defusing from ascribed groups.

When evoking real defusion experiences in Studies 3 and 5, external factors gained prominence, such as no longer feeling a deep connection with the group. Relationships among in-group members were also important, but uncontrollable reasons, such as changes in work, immigrating to another country, or a lack of free

time for daily life obligations, were mainly offered by participants. This finding is especially relevant as it highlights how motives that are out of one's control or beyond group dynamics tend to be overlooked or underestimated and appear consistently in both the general population and violent groups, even though they may ultimately be more powerful than participants initially assume.

The hypothetical reasons for defusion offered by members belonging to an existing group, such as the Riazor Blues, show once more that problems in relational ties are important reasons for defusion, specifically problems among group members. Again, the group covers basic needs, especially when participants openly expressed that other Riazor Blues members were like their family (Whitehouse et al., 2017). Unsurprisingly, these participants were especially reluctant to write hypothetical reasons for defusion, as they may have found them difficult to conceive of or they might even expect retaliation for merely thinking about the possibility of breaking their strong commitment to the group.

In the study with former insurgents from the LTTE, a little more than half of the participants expressed that external factors were the main cause for defusion. When considering external factors, the war's end was the most prominent reason for defusion. The fact that this motive was not under the control of group members prevents determining whether, in addition, they also experienced some kind of de-attachment (Ebaugh and Ebaugh, 1988). However, considering that many members of the Tamil Tiger organization were forced to join (Becker, 2010), it is possible that they never felt fully fused with the group in the first place (Gómez et al., 2021b). In addition, among external factors, family issues were the second-strongest motive for leaving the group. This result is in line with previous literature indicating that the family can act as a protective factor against radicalization (e.g., Lösel et al., 2018; Zych and Nasaescu, 2022), although it is important to note the double role of the family that can also act as a risk factor of radicalization (e.g., Wolfowicz et al., 2021). In this group, unsustainability was also a relevant reason for defusion. In the context of the Tamil Tiger organization, the extreme practices used when training cadres or the harsh punishment people suffered could have endangered their physical and mental integrity (Hopgood, 2005), which may have led to these feelings of disconnection.

In addition to external factors, participants reported degrading relational and collective ties to the same extent as reasons for defusion.

7.1 Practical implications

The present studies introduce a series of theoretical and empirical contributions to previous research regarding the reasons for defusion.

First, although the same categories of reasons for defusion were identified across all groups, a different pattern of results emerged depending on the group's nature. Groups cover different needs; consequently, the defusion process would not be the same for all groups and organizations (see Gómez et al., 2021b).

Second, when participants were asked for hypothetical reasons for defusion, we not only replicated but also extended previous laboratory findings regarding the nature of defusion by showing that individuals spontaneously refer to the degradation of relational and collective ties as a motive for reducing the feelings of a synergistic union with the group, indicating that degrading relational ties is a more potent reason for defusion than degrading collective ties. Among the general population, this prominence occurs no matter the group's nature, and the preliminary findings show that individuals belonging to violent groups, such as hooligans, also had these reasons for defusion. In contrast, when participants were asked for real reasons for defusion, external factors emerged as an important motive, as important as relational ties for the general population but much more prominent among participants who belonged to an insurgent group, the LTTE.

7.2 Limitations and future lines of research

The present research is not exempt from methodological and theoretical limitations.

Regarding *methodological constraints*, first, the use of open-ended questions allowed us to access people's natural conceptions; however, despite its benefits, freewriting yielded a wide variety of responses, ranging from a single word (e.g., "distrust") to lengthy sentences, which posed interpretative challenges. Future studies should combine qualitative and quantitative data, which would allow participant responses to be homogenized while also including other potential, theoretically justified reasons for defusion that might not emerge spontaneously.

Second, our findings provide important insights about what could lead, that is, hypothetical reasons for, or what motivated, that is, real causes for, defusion, but the design of the studies does not allow us to infer causality. Previous experimental investigations have shown that relational and collective ties degradation effectively decreases fusion sentiments (Gómez et al., 2019). However, causal evidence regarding the different effects that reasons of defusion can have depending on the nature of the group, local vs. extended or ascribed vs. chosen, and the consequences of other potential motives for defusion, such as external factors, has not been identified. New studies should delve into the differential effects of defusion strategies that depend on the group's nature. For instance, in highly cohesive local groups, where members maintain strong interpersonal ties (e.g., tightly knit youth gangs), interventions might focus on questioning the relational dynamics between participants and other group members. In contrast, in more ideologically structured groups (e.g., high-control or destructive religious groups), strategies could be more effective if they target the questioning of shared values and belief systems. Importantly, these findings also have relevant educational implications, as they provide valuable insights that social educators, school counselors, or educational psychologists can use to design interventions aimed at increasing the likelihood that minors disengage from groups that may be both socially and personally harmful.

Third, an important limitation of this study concerns the interpretation of response frequencies. The number of times a reason is mentioned does not necessarily reflect its actual frequency

or psychological importance. Some reasons may be salient, or consciously accessible and verbalizable, for a variety of reasons. Studies investigating past reasons may also be subject to recall biases. Furthermore, frequencies may vary depending on the specific group under study. For example, in a strongly ideologized local group, collective ties might emerge as a more common reason for defusion than relational ties, even though our findings suggest the opposite.

Fourth, although other research has indicated the important role of relational ties as a glue in the nature of defusion (e.g., Gómez et al., 2019, 2024; Vázquez et al., 2017), four of the five studies included participants from the same country, which might reflect shared cultural, social, or identity structures rather than a generalizable psychological mechanism. Further studies should include samples from different countries.

Consequently, the results should not be generalized beyond the groups and contexts studied, highlighting the limited generalizability inherent in this methodological approach.

Regarding the *theoretical limitations*, on one hand, our investigation provides insights into the hypothetical and real reasons for defusing from groups, but we do not know the motives that could produce defusion from other targets, such as individuals or values. In these cases, extending the obtained results to other targets would not be valid. For instance, for those fused with other individuals or values, degrading relational ties makes no sense, nor does degrading collective ties. Future research should explore the motives to defuse with distinct targets.

On the other hand, although we have provided insights into the reasons for defusion among the general population were also found to be reasons for defusion for members of a violent group, that is, hooligans, and former insurgent group members, that is, the LTTE, we cannot generalize these findings because violent collectives differ in their structures and functions, and the defusion mechanisms might be structurally different. Therefore, additional research with different groups of this nature is necessary.

Readers could interpret some other factors as limitations of our investigation, such as our not revealing which factors motivate a person to leave a group. However, it might be possible to reduce the feeling of connection characteristics of fusion, but this does not necessarily imply abandoning the group. It is also plausible that some motives for leaving the group resemble some causes of defusion, but other reasons for leaving could be unrelated to defusion.

7.3 Conclusion

Considering that identity fusion—a synergistic union between the personal self and a social self—is a consistently tested predictor of extreme behavior and the strongest associated with radical intentions among dozens of competitors, searching for strategies able to erode this feeling of connection is fundamental.

We reported on three studies that used participants from the general population that replicated previous experimental findings (Gómez et al., 2019) and offered empirical evidence that degrading relational and collective ties are not only hypothetical but also real reasons that would motivate or justify defusion.

Two final exploratory field studies with individuals actually belonging to a violent collective, that is, hooligans of a soccer club, or who belonged to an insurgent group, former members of the LTTE, were conducted. The investigation with hooligans not only replicated the key role of degrading relational ties as a motive for defusion but also revealed that, for an important percentage of the group's members, defusion is unfeasible. The study with former LTTE members revealed that external factors were the most cited reason for defusion.

Finally, while degrading relational ties was the most common hypothetical motive for defusion, external factors were very important when participants reported real reasons for defusion, particularly for former LTTE members.

All in all, and despite the durable nature of fusion, our findings show that defusion and its associated reasons depend on group type. Studies 4 and 5 provide a new line of work for researchers interested in understanding the nature of collective violence, especially those able to gain access to members belonging to violent groups of a different nature.

Data availability statement

The datasets presented in this study can be found in online repositories. The names of the repository/repositories and accession number(s) can be found below: <https://osf.io/q7crs/overview>.

Ethics statement

The studies involving humans were approved by Universidad Nacional de Educación a Distancia. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

AG: Methodology, Writing – original draft, Investigation, Project administration, Funding acquisition, Validation, Writing – review & editing, Conceptualization, Supervision. MM: Writing – review & editing, Conceptualization, Investigation, Methodology, Formal analysis, Writing – original draft, Data curation. LL-R: Investigation, Methodology, Conceptualization, Writing – review & editing. AV: Investigation, Writing – review & editing.

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Methodology, Conceptualization. MH: Data curation, Writing – review & editing.

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Conflict of interest

The author(s) declared that this work was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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