Effect of identity fusion on decision to make extreme sacrifices in romantic relationships: The moderating role of impulsiveness

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The present research investigated the roles of identity fusion and impulsiveness in extreme sacrifices for romantic partners. After completing questionnaires assessing identity fusion, inclusion of other in the self, passionate love, and communal orientation, participants responded to the trolley dilemma in which they could save their partner by sacrificing themselves. Participants in the time-pressure condition were given eight-seconds to respond to the dilemma; the other group had no time constraints. Identity fusion was the only variable that significantly predicted ultimate sacrifice. Hurrying participants’ response to the dilemma (i.e., inducing impulsive decision-making) increased self-sacrifice in highly fused but not in weakly fused individuals.

Love is a fascinating phenomenon. It takes only saying goodbye for two lovers, who were once crazy about each other, to become total strangers and live a life without the other. When deeply in love, however, they are willing to die for their lover. Sacrificing oneself for a lover is a repetitive theme in famous love stories, such as Titanic. Moreover, there have been real-life cases in which lovers have taken bullets for their beloved partner, as shown in the Aurora shooting on 20 July 2012.

Sacrifice in romantic relationships is quite common, and it even works as a relationship strategy. Previous studies have documented positive relations between sacrifice and various relational benefits, such as longer relationship duration and higher satisfaction (Impett, Gable, & Peplau, 2005; Van Lange, Agnew, Harinck, & Steemers, 1997). However, not every sacrifice can function as an effective relationship strategy. In the case of ultimate sacrifice, which is saving a partner at the cost of one’s own life, sacrifice does not end with any benefit to the one making the sacrifice. The purpose of this study was to examine the psychological mechanisms behind ultimate sacrifice for a lover, particularly focusing on identity fusion and impulsiveness.

Identity fusion and sacrifice

Identity fusion is defined as ‘a visceral feeling of oneness with a group’ (Swann & Buhrmester, 2015, p. 52). Although most previous research has focused on fusion with a...
group, the current research extends it to interpersonal identity fusion. Previous studies have consistently demonstrated a connection between identity fusion with a group and pro-group behaviours, including ultimate sacrifices (Swann, Gómez, Huici, Morales, & Hixon, 2010; Swann et al., 2014). For instance, when Spaniards who were highly fused with their nation were given the chance to contribute some money to fellow Spaniards in a financial crisis, they donated more funds than did weakly fused ones (Swann et al., 2010). In another study, highly fused individuals were more willing to engage in fighting and dying for members of their group (Gómez et al., 2011). Moreover, fused people were willing to sacrifice their own lives to save the lives of group members in various versions of the trolley dilemma (Gómez et al., 2011; Swann et al., 2010).

It should be noted that group identification, another form of identity merger, was outperformed by identity fusion in predicting pro-group behaviours, especially for extreme forms of sacrifice (for a review, see Swann & Buhrmester, 2015). Unlike with group identification where individuals fade into the shadow of group identity, fused individuals can maintain their personal self and sense of control and actively work as agents. This sense of agency, according to Swann et al. (2010), is responsible for the decision to make the ultimate sacrifice for group members.

As mentioned earlier, the role of identity fusion has been examined mainly in the group context. However, recent studies have extended the investigation of identity fusion into relationships between two individuals. For instance, it has been found that identity fusion with a sibling is positively associated with the willingness to fight and die to protect the sibling (Vázquez, Gómez, Ordoñana, & Paredes, 2015). In another study, identity fusion between monozygotic twins was stronger than that of dizygotic twins, which in turn predicted more sacrifice (Vázquez, Gómez, Ordoñana, Swann, & Whitehouse, 2017). Moreover, Whitehouse et al. (2017) demonstrated that identity fusion can occur in individuals who are not genetically related if they share (dysphoric) experiences. However, none of these studies examined identity fusion between lovers. The introduction of identity fusion to romantic relationships is particularly interesting because it raises the intriguing question of whether it predicts ultimate sacrifice for a lover better than other variables germane to romantic relationships, such as love or the inclusion of other in the self (IOS). Thus, we included various variables in this study that are often used in research into romantic relationships.

Identity fusion and related concepts

Some may wonder if identity fusion between two lovers is conceptually and practically distinguishable from other related concepts, such as IOS or passionate love. IOS refers to the perceived overlap between self and other (Aron, Aron, & Smollan, 1992) and concerns the degree to which the identities of two partners overlap. Identity fusion, on the other hand, takes into account how two identities are merged (Kwang, 2012). Their difference can be better understood by comparing identity fusion with group identification. Group identification assumes that there is a unidirectional influence from the group to the individual member in which social identity overrides personal identity. In contrast, identity fusion accentuates retaining personal identity through the bidirectional influence of personal and social identities on each other, resulting in the synergic merging of two identities. IOS cannot distinguish group identification from identity fusion as long as there is an overlap because it focuses solely on the degree of overlap. Thus, while low IOS between two lovers essentially entails low identity fusion, the opposite may not be true.
For instance, unidirectionally mixed identities (e.g., taking on the characteristics of the romantic partner indiscriminately) can be considered low in fusion but high in IOS.

Passionate love and communal orientation are also intellectual cousins of identity fusion as both constructs are related to the bond between romantic partners. Passionate love is similar to identity fusion in terms of the intensity of relational ties. Both assume strong emotional reactions towards the target. Communal orientation indicates the extent to which individuals put others’ needs before their own (Clark, Oullette, Powell, & Milberg, 1987). Previous studies found that communal orientation is an important predictor of daily sacrifices in romantic relationships (Kogan et al., 2010; Righetti, Finkenauer, & Finkel, 2013).

Despite some commonalities, identity fusion is distinct from the other aforementioned concepts in that it is a specific form of relational tie that enables individuals to maintain their personal self in the newly developed fused identity (Swann & Buhrmester, 2015). Instead of being submerged in a relationship, fused individuals can retain a strong sense of agency and control, which we expected would lead to the active decision to make the ultimate sacrifice.

As discussed before, ultimate sacrifice should be distinguished from the sacrifices that couples make on a daily basis. Whereas daily sacrifices can bring about a long-term benefit, ultimate sacrifice cannot be linked to any potential benefit for the self-sacrificer. As reviewed below, impulsiveness plays a role in sacrifice in general, but its role seems particularly important in ultimate sacrifice. Thus, in this study, we examined whether identity fusion is unique in predicting ultimate sacrifice in romantic relationships, and what the role of impulsiveness is in that process.

**Role of impulsiveness in self-sacrifice**

When people are impulsive, whether dispositionally or under time pressure, they tend to make decisions without giving much thought to the results of their actions (Hofmann, Friese, & Strack, 2009). That is, the automatic system is likely to dominate the decision-making, increasing the tendency to ‘go with their gut’ (Swann et al., 2014, p. 722). Previous research suggests that ultimate sacrifice tends to be based on impulsive decision-making (Hofmann et al., 2009). For instance, Rand and Epstein (2014) examined the testimonies of Carnegie hero medal recipients and found that the decision to risk one’s life to help others was overwhelmingly dominated by intuition rather than deliberate decision-making.

Moreover, in the aforementioned study by Swann et al. (2014), impulsiveness accentuated the decision to make the ultimate sacrifice for one’s group members. Participants made their decisions in the trolley dilemma either under time pressure or under no time pressure. Identity fusion was associated with the decision to make an ultimate sacrifice, yet time pressure moderated the influence of identity fusion on the ultimate sacrifice. When induced to make an impulsive decision, highly fused individuals were more likely to sacrifice themselves than were weakly fused ones.

Impulsiveness also affects sacrifice for one’s lover. Individuals with low trait self-control, cognitively depleted, or under time pressure were more willing to make small sacrifices for their partner, such as spending time with their partner’s boring friends (Righetti et al., 2013). In this study, we suggest that impulsive decision-making would also influence the ultimate sacrifice for a lover. The impulsive inclination of individuals would differ depending on the degree of identity fusion with their partner. For highly fused people, their instant reaction would be to act as an agent and sacrifice themselves to save
their lover; however, for weakly fused people, their first response would be to save themselves.

The present study
We examined the roles of identity fusion between romantic couples and impulsiveness in ultimate sacrifice. Participants completed a set of questionnaires assessing identity fusion, IOS, passionate love, and communal orientation. Next, they decided whether they would sacrifice their own lives to save their partner’s using the trolley dilemma. Half of the participants made the decision under time pressure; the other half had no time constraints. We hypothesized that only identity fusion would be related to ultimate sacrifice, particularly when the decision was made under time pressure.

Method

Participants and procedure
The minimum number of participants required was determined by an a priori power analysis ($\beta = .80$, $OR = 2.18$). Numbers were based on previous research (Swann et al., 2014). The recommended sample size was 91. We recruited 92 Korean undergraduate students at a private university in Korea who were involved in romantic relationships. No couple attended the same session. One participant was excluded from the analyses because the responses seemed insincere. The remaining 91 participants ranged in age from 18 to 34 years (50 women; $M_{age} = 23.16$, $SD = 2.61$). The average relationship duration was 14.37 months, ranging from half a month to 7 years. No one was married. They were paid about $3 for their participation.

Each participant was seated in an individual cubicle and completed questionnaires using a computer. They were randomly assigned to the time-pressure or control conditions and listened to the dilemma scenario. In the time-pressure condition, participants were instructed to make a choice within eight-seconds. A countdown animation displaying the remaining time appeared on the screen while the participants made a decision. In the control condition, participants were told to take as much time as they needed.

Measures

Identity fusion
Participants completed the 7-item measure of identity fusion adapted from Gómez et al. (2011) to assess feeling of oneness with a romantic partner. All items were altered to reflect the dynamic of romantic relationships. Specifically, references to ‘my group’ were substituted with ‘my lover’. Responses ranged from 1 (strongly disagree) to 7 (strongly agree). Example items are ‘I am one with my lover’ and ‘I am strong because of my lover’. Scores were averaged ($\alpha = .86$).

Inclusion of other in the self
Participants responded to the Inclusion of Other in the Self Scale (Aron et al., 1992), which is composed of seven pairs of circles overlapping in varying degrees from not at all overlapping (1) to almost completely overlapping (7). One circle represents the
participant, and the other represents the partner. Participants were asked to select the picture that best reflected their relationships with their lover.

**Passionate love**
Participants responded to the 15-item Passionate Love Scale (Hatfield & Sprecher, 1986). They were instructed to think about their lover and indicate how they felt about them on a scale from 1 (strongly disagree) to 7 (strongly agree). Scores were averaged ($\alpha = .86$). An example item is ‘No one else could love my lover like I do’.

**Communal orientation**
Participants completed the Communal Orientation Scale (Clark et al., 1987) which consists of 14 items. Responses were made using a 7-point scale and were averaged ($\alpha = .68$). An example item is ‘When making a decision, I take other people’s needs and feelings into account’.

**Ultimate sacrifice**
The trolley dilemma (Foot, 1967) is the most recognizable sacrificial dilemma frequently used in scientific research. In the current research, we revised the dilemma from previous work (Gómez et al., 2011; Swann et al., 2010, 2014) such that the dilemma represents a decision about saving one’s own life or his/her lover’s. Participants listened to the audiotaped scenario below in which they had to either sacrifice themselves to save their lover or let their lover die. After listening to the scenario, each decided whether he or she would save his or her lover’s life or not.

‘There is a railway track that is splitting up into two tracks. Your lover is tied to the railway track on the right while you are tied to the left track. A runaway trolley is barreling down the railway tracks and is about to kill your lover. Meanwhile, you have a button that can switch the direction of the trolley. If you push the button so that the trolley changes its direction, you can save your lover, but it will crush and kill you. If you do not push the button, the trolley will kill your lover, but you will be left unharmed. What will you do?’

**Results**

**Preliminary analyses**
The average response time (seconds) for the dilemma for the time-pressure ($M = 5.78$, $SD = 1.78$) and control conditions ($M = 23.16$ $SD = 3.14$) indicated that the experimental manipulation was successful. There were no significant differences between conditions in identity fusion, IOS, passionate love, or communal orientation, $ts < 0.49$, $ps > .63$, indicating that participants were well-distributed. As shown in Table 1, the four predictors were all positively correlated, except for the link between identity fusion and communal orientation. Relationship length was significantly related to IOS, but not to any other predictors. Finally, none of the four predictors were significantly related to the time taken to make a decision in both conditions.

**Decision to sacrifice**
Overall, 40.7% of participants sacrificed themselves for their lover. The decision to sacrifice did not differ across the conditions, $\chi^2 = 1.33$, $p = .25$. A series of regression
analyses were conducted to test the hypotheses. First, we produced the interaction term by multiplying mean-centred identity fusion and the condition (time pressure = 1, control = -1). Next, we entered identity fusion, condition, and the interaction term into a binary logistic regression with the decision to make the ultimate sacrifice (no sacrifice = 0, sacrifice = 1) as the criterion variable.

The main effect of condition was not significant, $B = 0.26$, $SE = 0.23$, OR = 1.30, $p = .26$, whereas that of identity fusion was significant, $B = 0.51$, $SE = 0.23$, OR = 1.66, $p = .03$, indicating that strongly fused individuals were more likely to sacrifice themselves than were weakly fused ones. However, the main effect of identity fusion was qualified by the identity fusion × condition interaction, $B = 0.47$, $SE = 0.25$, OR = 1.59, $p = .05$.

To probe the nature of the interaction, we performed simple slope tests (Figure 1). The positive association between identity fusion and self-sacrifice was significant in the time-pressure condition, $B = 0.97$, $SE = 0.36$, OR = 2.65, $p = .008$, but not in the control condition, $B = 0.04$, $SE = 0.29$, OR = 1.04, $p = .88$. The identity fusion × condition interaction remained significant when IOS, passionate love, communal orientation, age, gender, and relationship duration were included as covariates, $B = 0.57$, $SE = 0.25$, OR = 1.77, $p = .02$.

Table 1. Descriptive statistics and correlations among predictor variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>M (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identity fusion</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>4.68</td>
<td>1.08</td>
</tr>
<tr>
<td>2. Inclusion of other in the self</td>
<td>.68***</td>
<td>–</td>
<td>–</td>
<td>4.14</td>
<td>1.34</td>
</tr>
<tr>
<td>3. Passionate love</td>
<td>.72***</td>
<td>.58**</td>
<td>–</td>
<td>5.23</td>
<td>0.78</td>
</tr>
<tr>
<td>4. Communal orientation</td>
<td>.19</td>
<td>.22*</td>
<td>.20*</td>
<td>4.75</td>
<td>0.58</td>
</tr>
<tr>
<td>5. Relationship length</td>
<td>-.03</td>
<td>.24*</td>
<td>-.13</td>
<td>.10</td>
<td>14.37</td>
</tr>
</tbody>
</table>

Note. *p < .05; **p < .01; ***p < .001.

Figure 1. Probability of engaging in ultimate sacrifice. Note. Values for strongly versus weakly fused participants were ±1 SD from the mean ($M = 4.68, SD = 1.08$). The graph was computed with the data acquired from the PROCESS macro for SPSS (Hayes, 2013).
Finally, we repeated the same analyses with IOS, passionate love, and communal orientation as predictors. However, no significant results were observed.

Discussion
We investigated how identity fusion and impulsiveness are related to ultimate sacrifice in the context of romantic relationships. Identity fusion predicted the decision of ultimate sacrifice to save one’s lover at the cost of one’s own life only when the decision was made under time pressure (i.e., impulsive decision-making). Other relevant concepts such as IOS, passionate love, and communal orientation did not predict self-sacrifice. Among the many concepts that try to capture the phenomenon of ‘two becoming one’ between lovers, our results suggest that identity fusion is unique in predicting extreme sacrifice for one’s lover.

We want to note that the link between identity fusion and ultimate sacrifice was pronounced under time pressure. This implies that impulsiveness boosts the influence of identity fusion on the decision to sacrifice one’s life for one’s partner. When induced to make an impulsive decision, individuals tend to engage in automatic responses. For strongly fused individuals, the automatic response is to become agents to act on behalf of their partner when they learn that their lover is in danger. Their deliberate thoughts, such as the consideration of their own benefit, work instead as an opponent of ultimate sacrifice. For weakly fused individuals, the automatic response is to seek out their own safety whether making an impulsive or deliberate decision.

These findings are consistent with Swann et al. (2014) in which identity fusion with a group (i.e., one’s country) predicted ultimate sacrifice for group members when impulsiveness was induced. However, unlike our study, Swann et al. found a significant role of identity fusion in predicting sacrifice when there were no time constraints. This difference may be explained by the ease with which individuals sever the relational tie with the target of identity fusion. Whereas most people stay as a member of a country for a lifetime, it is relatively easy to end a romantic relationship. Accordingly, when given enough time to contemplate their decision, even highly fused individuals may have thought about the possibility of breakup, which in turn deterred them from making sacrifice for the partner. This speculation can be examined in future research by asking participants to write down the spontaneous thoughts that come to them while making the decision. Alternatively, researchers can examine whether married individuals for whom relationship termination is quite difficult differ from dating couples in their sacrificing tendencies.

One potential contribution of our study to the literature is that we explicitly distinguished identity fusion from IOS. In previous studies (Gómez et al., 2011), IOS was considered a pictorial measure of identity fusion that was outperformed by the verbal measure. In the present study, we conceptually clarified and empirically demonstrated the difference between identity fusion and IOS. It will be a meaningful future research avenue to investigate where the two constructs diverge from each other.

It warrants mentioning why only identity fusion and not other concepts predicted ultimate sacrifice. The distinct characteristic of identity fusion is that it maintains the potent personal identity. One’s identity can greatly overlap with one’s partner’s identity only because one’s identity was submerged in the partner’s. One can be passionately in love but at the same time completely swayed by the partner, or one can put one’s partner’s needs before one’s own not because one wants to but because one is forced to. It is
probably the potent personal identity alive in fused identity that motivates sacrifice for the partner by channelling personal agency into sacrificial behaviour (Swann & Buhrmester, 2015). Thus, agency generated through a potent personal self can be the key psychological mechanism behind identity fusion and extreme sacrifice for the romantic partner. Future research needs to explicitly examine this possibility.

One of the limitations of our study is that we utilized a hypothetical dilemma scenario to measure ultimate sacrifice for a lover. In fact, researchers criticize it for lack of external validity (Bauman, McGraw, Bartels, & Warren, 2014). Yet, moral dilemma scenarios have been used widely in the decision-making literature because there is no ethical way of testing actual self-sacrifice in an experimental setting. To our relief, other research investigating identity fusion and ultimate sacrifice using alternative methodology suggests a strong relation between the two variables (for a review, see Swann, Jetten, Gómez, Whitehouse, & Bastian, 2012). However, there should be much more research to establish the relation between the decision regarding the dilemma and actual behaviour. One of the possible alternatives would be to interview people who actually engaged in self-sacrifice for their lover to discover the psychological mechanism behind it.

In addition, it is worth noting that something different can be said about the causal direction of identity fusion and sacrifice in romantic relationships. Although we posited that identity fusion would precede the decision of ultimate sacrifice, the opposite could be true. More willingness to make a sacrifice for a romantic partner could lead to higher fusion, possibly due to cognitive dissonance. That is, once people make sacrifices, they are more likely to feel more fused to their partner and align their cognition accordingly to their self-sacrificing behaviour.

References


Received 24 January 2017; revised version received 23 August 2017