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## Abstract

A burgeoning literature has established that exposure to atrocities committed by in-group members triggers moral-disengagement strategies. There is little research, however, on how such moral disengagement affects the degree to which conversations shape people's memories of the atrocities and subsequent justifications for those atrocities. We built on the finding that a speaker's selective recounting of past events can result in retrieval-induced forgetting of related, unretrieved memories for both the speaker and the listener. In the present study, we investigated whether American participants listening to the selective remembering of atrocities committed by American soldiers (in-group condition) or Afghan soldiers (out-group condition) resulted in the retrieval-induced forgetting of unmentioned justifications. Consistent with a motivated-recall account, results showed that the way people's memories are shaped by selective discussions of atrocities depends on group-membership status.

## Keywords

moral disengagement, socially shared retrieval-induced forgetting, collective memory, social identity

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Whether in the media or face to face, discussions about atrocities often involve more than the facts. As the moral-disengagement literature indicates, people often seek justifications for atrocities (Bandura, 1999; Castano & Giner-Sorolla, 2006). In the present study, we investigated instances in which the discussion changes over time and people remain silent about previously discussed justifications. Consider the public discourse around the My Lai affair, which involved the killing of hundreds of Vietnamese civilians by U.S. soldiers during the Vietnam War. Initially, the killings were treated as justifiable consequences of guerilla warfare, but they were eventually viewed as a massacre, without any consideration of possible justifications (Oliver, 2006). Such selective reworking can arise because of memory decay (Wixted, 2005), attempts to abbreviate discussions as an audience loses interest (Pasupathi & Rich, 2005), or the desire to play down the justifications (Kunda, 1990). Does such selective reworking lead to changes in

memory? More specifically, does listening to truncated accounts of atrocities alter the memories people have of the justifications for those atrocities?

In this study, we connected the extensive literature on moral disengagement and intergroup violence (Castano, 2011) with the recent, and growing, literature on conversational effects on memory, specifically the relevant work on *retrieval-induced forgetting* (Hirst & Echterhoff, 2012; Rajaram & Pereira-Pasarin, 2010). We focused on memory for justifications because their recollection might influence attitudes and beliefs, the willingness to pay reparations, and the level of aggression toward out-groups (Leidner, Castano, Zaiser, & Giner-Sorolla, 2010). Listening to a speaker recall a justification no doubt reinforces a

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listener's memory for the justification (Zaromb & Roediger, 2010). But what happens when a previously mentioned justification subsequently goes unmentioned?

Work on retrieval-induced forgetting would appear to predict that the failure to recollect previously mentioned justifications while discussing a related atrocity should induce people to forget these justifications. This prediction is based on the principle of retrieval-induced forgetting: that people are more likely to forget unmentioned memories related to the recalled ones than to forget unmentioned, unrelated memories (Anderson, Bjork, & Bjork, 1994). This pattern of forgetting extends to listeners as well as speakers, as retrieval-induced forgetting can be found both for those recalling the material, which produces *within-individual retrieval-induced forgetting*, and for those attending to the recall, which yields *socially shared retrieval-induced forgetting* (Hirst & Echterhoff, 2012; Stone, Coman, Brown, Koppel, & Hirst, 2012). Cuc, Koppel, and Hirst (2007) argued that when listeners concurrently, albeit covertly, retrieve memories along with the speaker, they are, in effect, selectively retrieving those memories in the same manner as the speaker and hence should experience similar retrieval-induced forgetting.

According to the moral-disengagement literature, people are strongly motivated to offer justifications for atrocities when the perpetrator is an in-group member (Castano & Giner-Sorolla, 2006). As a result, listeners from the same social group as the perpetrator may do more than concurrently retrieve memories with speakers as atrocities are mentioned. Listeners might be motivated to recall unmentioned justifications. Such covert recall might arise because participants are motivated to search their memory as broadly as possible. In such cases, we would expect retrieval-induced forgetting to be eliminated (Chan, McDermott, & Roediger, 2006).

Thus, whereas the standard account of socially shared retrieval-induced forgetting would predict that selective recounting of atrocities and their justifications should lead to socially shared retrieval-induced forgetting for unmentioned justifications, a *motivated-recall account* would predict that listeners should not forget unmentioned justifications when perpetrators are in-group members, only when they are out-group members. To test this conjecture, we asked American participants to read stories about perpetrators of war atrocities who were either American soldiers (in-group condition) or Afghan soldiers (out-group condition).

## Method

### Participants

On the basis of a statistical power analysis, we determined the ideal number of participants necessary for the

study. We therefore recruited 72 participants through posters displayed around the New School for Social Research campus and postings on craigslist.org. Participants were native English speakers and American citizens. They received \$15 or research credit for participation. Fifty-six percent were female, and 44% were male; their mean age was 32.71 years ( $SD = 12.04$ ). To control for minority status, we selected only European American participants.

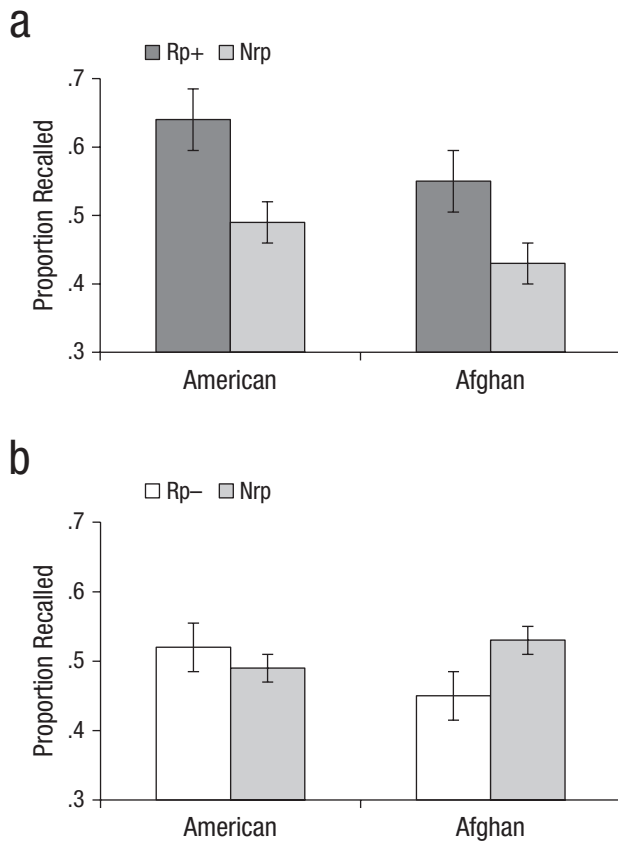
### Stimulus materials

We created a list of 12 fictitious atrocities committed by soldiers in Afghanistan and 12 associated justifications, all of which were drawn from or constructed to resemble actual media reports. We then wrote four stories based on these items. In each story, a male soldier committed three atrocities against an insurgent (e.g., submerged the insurgent's head in cold water). Each atrocity was associated with a justifying action (e.g., the insurgent withheld information about an upcoming attack). The stories contained no evaluative statements. To increase a story's distinctiveness, we presented each separately on a computer screen, along with a descriptive title, the name of the soldier, and a photo of the soldier with his facial features obscured. Stories averaged 159 words (ranging from 141 to 180).

For the study phase, we created two versions of each story, one in which the perpetrators were American soldiers (in-group condition) and one in which the perpetrators were Afghan soldiers (out-group condition). The stories in the two conditions were identical except for the name of the soldier (e.g., Jim Green for the in-group condition; Jawid Gawri for the out-group condition) and the uniform of the soldier in the picture that accompanied the story. For the practice phase, we constructed four redactions, one for each story. For each redaction, we eliminated the justifications but kept all three atrocities and the filler material. A male and a female confederate actor were videotaped "remembering" each of the redactions. Because we designed the experiment to specifically test for a motivated-recall account as applied to justifications, the atrocities mentioned in the practice phase by the actors were coded as retrieval-practiced items (Rp+ items), the unmentioned justifications in the practiced story as retrieval-unpracticed items (Rp- items), and the atrocities and justifications in the unpracticed stories as unpracticed unrelated items (Nrp items).

### Design and procedure

To make participants' American identity salient, we started by asking them to individually complete the National Attachment and Glorification Scale (NAGS), adapted for the American sample (Roccas, Klar, &



**Fig. 1.** Mean proportion of correctly recalled items as a function of condition and item type. In (a), the proportions of atrocities recalled from stories that were recounted (Rp+) and not recounted (Nrp) by a confederate are compared. In (b), the proportions of justifications recalled from stories of atrocities that a confederate recounted without mentioning justifications (Rp-) and from stories that the confederate did not recount (Nrp) are compared. Error bars represent standard errors.

Liviatan, 2006). Participants were then split evenly into the in-group and out-group conditions. In the study phase that immediately followed, participants were told that they would complete a memory test after reading the stories. The four stories were then presented consecutively for 90 s each, after which all were presented a second time. After the second presentation, participants evaluated, on a scale from 1 to 9, the emotionality of the case and their sympathy for the soldier and the victim to ensure engagement with the task. We counterbalanced the order in which the four stories were presented.

After a 10-min distractor task, a selective-practice phase commenced. In this phase, the participants were presented with the video recording of the confederate remembering only the atrocities from two of the four stories. They were asked to pay attention to the information recounted by the rememberer. The remaining two stories went unrecalled by the rememberer. We counterbalanced which stories were or were not recalled during the selective-practice phase, as well as the gender of the rememberer.

A recall test followed after another 10-min distractor task. Participants were asked to recall, individually and in isolation, all they could about the four initially studied stories, after being cued with the stories' descriptive titles and the soldier's name. The recall order was the same as the study order.

## Results

Inasmuch as the speakers (the rememberers) were confederates, we had recall data only for listeners. One coder analyzed all the data. A second coder then analyzed 10% of the data, with an agreement of  $k = .94$ . Discrepancies were resolved. To probe for a practice effect of atrocities, we compared the proportion of atrocities correctly recalled for Rp+ and Nrp items. The proportion of justifications recalled for Rp- and Nrp items was compared to probe for socially shared retrieval-induced forgetting for justifications, our main interest (see Fig. 1).

We ran separate repeated measures analyses of variance for atrocities and justifications, with retrieval type (Rp+ vs. Nrp for atrocities; Rp- vs. Nrp for justifications) as a within-subjects factor and condition (American vs. Afghan) as a between-subjects factor. For atrocities, we found a main effect of retrieval type,  $F(1, 70) = 28.20$ ,  $p < .001$ ,  $\eta_p^2 = .29$ , but no significant main effect of condition,  $F(1, 70) = 1.55$ ,  $p = .22$ ,  $\eta_p^2 = .02$ , or for the interaction,  $F(1, 70) = 0.20$ ,  $p = .65$ ,  $\eta_p^2 = .00$ . In other words, when compared with baseline Nrp atrocities, atrocities mentioned by the confederate were more likely to be remembered by the participants, regardless of whether they were committed by in-group members or out-group members.

For justifications, we found no main effects of retrieval type,  $F(1, 70) = 0.73$ ,  $p = .39$ ,  $\eta_p^2 = .01$ , or condition,  $F(1, 70) = 0.07$ ,  $p < .79$ ,  $\eta_p^2 = .00$ , but we did find a significant interaction,  $F(1, 70) = 4.34$ ,  $p < .04$ ,  $\eta_p^2 = .06$ . Socially shared retrieval-induced forgetting emerged in the Afghan condition,  $t(35) = 2.08$ ,  $p < .05$ ,  $d = 0.36$ , with Rp- justification items less likely to be remembered than Nrp justification items. No socially shared retrieval-induced forgetting was found in the American condition,  $t(35) = 0.86$ ,  $p = .39$ ,  $d = 0.13$ . Indeed, the difference was in the opposite direction. There was no significant difference between the recall of Nrp justification items in the American and the Afghan conditions,  $t(70) = 0.68$ ,  $p = .50$ ,  $d = 0.16$ , which suggests that the findings are not due to differential engagement of participants in the two conditions.

Could this pattern of results be explained by a motivated-encoding rather than a motivated-retrieval mechanism? According to the motivated-encoding account, American participants would be more likely to integrate, at encoding, atrocities with their justifications when the perpetrator is an American than when the perpetrator is an Afghan. Previous research established that

integration among category items diminishes retrieval-induced forgetting (Anderson & McCulloch, 1999).

The integration between atrocities and justifications should be reflected in how participants remember the Nrp items. A motivated-encoding account would predict that the atrocities and justifications in the Nrp stories would be more integrated in the American condition than in the Afghan condition, inasmuch as integration occurs during encoding. We therefore undertook two complementary analyses of the recall of the Nrp stories. First, we examined whether justifications tended to be recalled immediately after atrocities, which should be the case if they are well integrated. For the recall of the Nrp stories, we divided, for each participant, the number of times a recall of a justification immediately followed the recall of an atrocity by the total number of possible atrocity-justification alternations. This alternation score was not significantly different between the American ( $M = .73$ ,  $SD = .24$ ) and the Afghan ( $M = .72$ ,  $SD = .31$ ) conditions,  $t(61) = 0.10$ ,  $p = .92$ ,  $d = 0.04$ .

For the second analysis, for the recall of each Nrp story, we computed the likelihood that a justification would be remembered if its associated atrocity was remembered, regardless of their location in the recall protocol. For every Nrp story, we divided the number of recalled atrocity-justification pairs by the total number of recalled atrocities. This mnemonic-integration score was again similar for the American ( $M = .63$ ,  $SD = .26$ ) and the Afghan ( $M = .63$ ,  $SD = .37$ ) conditions,  $t(60) = 0.008$ ,  $p = .99$ ,  $d = 0.00$ . In other words, although the high alternation and mnemonic-integration scores suggest that justifications are likely to be remembered if their associated atrocities are remembered (they are larger than .50), this linkage was as strong when the perpetrator was Afghan as when he was American. This pattern disconfirmed the motivated-encoding hypothesis.

To assess whether output interference could account for our results, we followed the procedure developed by Macrae and Roseveare (2002). For each participant, we calculated the average serial position of the Rp+ and Rp- items that were recalled in the memory test. We then categorized participants either as "early Rp+ recall" or "early Rp- recall" on the basis of a median split. If our results were due to output interference, then retrieval-induced forgetting should be greater for participants in the early Rp+ group than in the early Rp- group. We compared the degree of socially shared retrieval-induced forgetting between the early Rp+ recall group and the early Rp- recall group in separate independent  $t$  tests. We found no evidence that our results were due to output interference. That is, we found no differences between the two groups in the degree of socially shared retrieval-induced forgetting, either for the American condition (early Rp+:  $M = -.03$ ,  $SD = .23$ ; early Rp-:  $M = -.08$ ,  $SD = .20$ ),  $t(30) = 0.61$ ,  $p = .55$ ,  $d = 0.25$ , or the Afghan

condition (early Rp+:  $M = .10$ ,  $SD = .21$ ; early Rp-:  $M = .05$ ,  $SD = .23$ ),  $t(30) = 0.78$ ,  $p = .44$ ,  $d = 0.23$ . Finally, even though the primary purpose of the NAGS was to prime national identity, we also investigated whether the attachment and glorification subscales correlated with the magnitude of retrieval-induced forgetting. None of the correlations were significant ( $ps > .15$ ).

## Discussion

The extent to which silences in discussions of atrocities affect memory depends on social-group membership. Selective retrieval (and selective silence) of a speaker can induce forgetting of justifications when the listener and perpetrator belong to different social groups, but not when they belong to the same group.

These results are consistent with our motivated-retrieval account. Following Hirst and his colleagues, we assumed that socially shared retrieval-induced forgetting occurs when (a) the listener concurrently, albeit covertly, retrieves memories with the speaker, and (b) the listener does not covertly retrieve related, unmentioned memories. When listeners and perpetrator belong to different social groups, listeners fulfill both of these conditions, and socially shared retrieval-induced forgetting follows without any further intent on the listener's part. In contrast, when listeners and perpetrator are in-group members, listeners may concurrently retrieve memories, but, as suggested by the moral-disengagement literature (Castano, 2011), may now be motivated to covertly recall unmentioned justifications. In these circumstances, we found that socially shared retrieval-induced forgetting disappears. We probably did not find a significant correlation between measures of attachment and glorification and memory measures because the relation may be complicated by myriad factors. For instance, the stimulus material in the experiment may itself trigger attachment and glorification.

The silence of a speaker about justifications could be viewed as a means of persuading listeners of the unjustifiable nature of the atrocities. If so, our results should be consistent with the elaboration-likelihood model of persuasion (Petty & Cacioppo, 1986). If the level of effort associated with motivated retrieval is likened to high levels of elaboration, then we should, and did, find what the elaboration-likelihood model predicts: Speakers were less effective in reshaping their listeners' memories when listeners were motivated to remember the unmentioned material, compared with when they were not motivated.

The results are also consistent with those of our previous research (Coman & Hirst, 2012), in which we found that socially shared retrieval-induced forgetting for counter-attitudinal information disappeared when listeners' contrary views were extreme. Presumably, people are motivated to recall unmentioned material not only when

discussing an in-group member's atrocities, but also when they strongly disagree with what the speaker is saying.

The present research speaks to the dynamic processes involved when communities come to remember and forget justifications they learn about publicized atrocities. As the evolving accounts of My Lai underscore, the extent to which people justify atrocities can change over time. The effect of such selective recounting on memory can be understood only by considering the motivations elicited by moral disengagement and the microprocesses underlying the effects of communication on memory. When these factors are taken into account, it becomes clear why selective discussions of atrocities can affect people from different social groups in different ways.

### Author Contributions

All authors contributed to the study concept and design. Testing and data collection were performed by C. B. Stone and A. Coman. A. Coman and E. Castano analyzed and interpreted the data. A. Coman and W. Hirst drafted the manuscript, and C. B. Stone and E. Castano provided critical revisions. All authors approved the final version of the manuscript for submission.

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### Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

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