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The Effects of Memory Conformity as a Function of Co-Witness Familiarity.

Dara Mojtahedi | Dr. Maria Ioannou | Dr. Laura Hammond

Abstract

The present study examined the effects of co-witness familiarity on statement similarity. The study aimed to determine whether eyewitnesses were at a higher risk of conforming to co-witnesses that they were familiar with, than to unfamiliar co-witnesses. The study utilized a novel experimental paradigm in which participants viewed footage of a crime before participating in a post-event discussion with their group. A three-way between-subjects design was used (control, existing relationship with co-witnesses, had no previous relations with their co-witnesses, or were not permitted to discuss the event with their co-witnesses (control)). Participants (N=420) were placed into groups of five and viewed a CCTV footage of a crime. Shortly after, participants then took part in a post-event discussion with group members in their groups to determine whether or not they knew the other eyewitness had viewed the footage. Results indicated that a pre-existing relationship with co-witnesses had a significant effect on statement similarity. The results also suggested that uncertain eyewitnesses were most susceptible to co-witness influence. The results indicate that eyewitnesses are more likely to accept contradicting information from peers than from strangers. Explanations for the findings, along with implications for police investigations, are discussed.

Introduction

A large body of research indicates that a post-event discussion between co-witnesses can cause some eyewitnesses to incorporate the misinformation of others into their own memory reports, a process referred to as memory conformity (Carlucci, Kiechlaera, Schwartz, Villaia, & Wright, 2010; Davis & Meade, 2013; Garry, French, Kirsic, & Mori, 2008). Memory conformity is predominately caused by informational influence (Banks, 2002; Gabbert, Memon, & Allan, 2003; Wright et al., 2008), the process of conforming to others to obtain the correct answer (Wright, London, & Waechter, 2009). Normative influence, the pressure to conform as a means for gaining approval and acceptance from others, can also influence individuals to conform to the memory reports of others, in non-forensic settings (Wright, London, & Waechter, 2009). However, police investigators are trained to collect statements privately (Williamson, Weber, & Robertson, 2013), suggesting that within an eyewitness setting, the level of normative influence would be reduced (Deutsch and Gerard, 1955).

Despite the previous literature concordantly stating that co-witness discussions can influence individual statements, most of these studies incorporated experimental designs where the participant co-witnesses were strangers to each other (e.g. Gabbert, Memon, & Allan, 2003; Gabbert et al., 2004; Meade & Roediger, 2002). Yet in reality, reports indicate that 77% of eyewitnesses are likely to have a pre-existing relationship with their co-witnesses (Paterson, Chapman, & Kemp, 2007). Furthermore, research on informational influence suggest that individuals would be significantly more likely to accept information from a familiar person than from a stranger (Echterhoff, Higgins, & Groll, 2005; Sorrentino & Yamaguchi, 2008). Thus, there is a need for research to identify the mediating effects of co-witness familiarity on statement similarity.

The main aim of the present study was to observe the effects of a post-event discussion between groups of co-witnesses. Specifically, the researchers were focused on identifying whether the relationship between co-witnesses would have an impact on the similarity of their statements. To achieve these aims, the study comprised of three main objectives. The first objective was to establish if a post-event discussion between co-witnesses could increase the level of similarity between their statements. The second objective was to determine whether a pre-existing relationship between co-witnesses would significantly affect the level of similarity between their statements, after a post-event discussion. The final objective was to determine there was a significant difference in blame attribution accuracy between the experimental conditions.

Methodology

Sample: The study recruited 420 participants (203 males; 212 females; 5 undisclosed) of mixed ages (18–83 years; M = 33.04, SD = 15.62), through opportunity sampling. Design: A one-way between-subjects design was employed, with three different conditions. Within all three conditions, participants were placed into groups of five, to represent a group of co-witnesses, leaving a total of 84 groups. Within the first condition, the participants viewed the footage with strangers, however no group discussion was permitted throughout the experiment (Control condition, N=32 groups). Within the second condition, participants discussed the witnessed event with unfamiliar co-witnesses ( Stranger condition, N= 16 groups). Within the final condition, participants discussed the witnessed event with individuals that they had a pre-existing relationship with (relationship condition, N=36 groups).

Two dependent variables were measured. The first dependent variable measured was the collective statement similarity score, in blame attribution, for each co-witness group. For this variable, the data was clustered with each eyewitness group representing an individual data set. Each group was scored on the percentage of the most common answers within the group. For instance, if four out of five group members blamed the suspect in the yellow t-shirt for starting the fight, the group would have a similarity score of 80% etc. Secondly, the blame attribution accuracy (correct, incorrect, or uncertain) for each individual participant was measured to determine whether co-witness discussions had an effect on blame attribution accuracy.

Material: The study used a real-life closed circuit television (CCTV) footage of a bar fight occurring between two individuals. The footage lasted approximately one minute and thirty seconds. The footage depicts two men in distinctively different clothing (one man is wearing a yellow t-shirt whilst the other is wearing a dark green t-shirt) engaging in a conversation before one of the men (in the dark green t-shirt) attacks the other (in the light yellow t-shirt); shortly after, a fight erupts between the two men before they are separated.

Procedure: Participants watched the footage simultaneously in their groups on a monitor screen. After the footage had finished the second phase, the group discussion, began. With the exception of the stranger group, participants were permitted to discuss their groups, who they believed had thrown the first hit. The final phase was the eyewitness statement process. Participants were then taken into a private room individually and asked to identify who they believed had thrown the first hit. Additionally, the participants were given the option to state that they were uncertain, if they were unable to answer the question.

Results

A one-way between groups analysis of variance (ANOVA) was conducted to explore the impact of the group condition on statement similarity. There was a statistically significant difference in statement similarity for the three experimental conditions F (2, 39.49) = 3.3, p < .05.

• Post-hoc comparisons were made using the Tuckey HSD test
• Significant difference in mean scores of statement similarity between co-witnesses with pre-existing relationships and co-witnesses in the control group.
• The effect size, calculated using Cohen’s d, was d = .62 (medium).
• No significant differences between co-witnesses with pre-existing relationships and co-witnesses with no pre-existing relationships.
• No significant differences between co-witnesses with pre-existing relationships and co-witnesses with no pre-existing relationships.

Table 1. Percentage of participant’s blame attribution accuracy between conditions

<table>
<thead>
<tr>
<th>Conditions</th>
<th>N</th>
<th>Blame Attribution</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stranger</td>
<td>16</td>
<td>Correct</td>
<td>70.0%</td>
</tr>
<tr>
<td>Stranger</td>
<td>16</td>
<td>Incorrect</td>
<td>12.5%</td>
</tr>
<tr>
<td>Stranger</td>
<td>16</td>
<td>Uncertain</td>
<td>17.5%</td>
</tr>
<tr>
<td>Relationship</td>
<td>36</td>
<td>Correct</td>
<td>80.0%</td>
</tr>
<tr>
<td>Relationship</td>
<td>36</td>
<td>Incorrect</td>
<td>7.2%</td>
</tr>
<tr>
<td>Relationship</td>
<td>36</td>
<td>Uncertain</td>
<td>12.5%</td>
</tr>
<tr>
<td>Control</td>
<td>32</td>
<td>Correct</td>
<td>96.9%</td>
</tr>
<tr>
<td>Control</td>
<td>32</td>
<td>Incorrect</td>
<td>0.0%</td>
</tr>
<tr>
<td>Control</td>
<td>32</td>
<td>Uncertain</td>
<td>3.1%</td>
</tr>
</tbody>
</table>

Discussion

The findings suggested that a post-event discussion between familiar co-witnesses could increase the risk of statement similarity. This is because individuals will have more information about their peers to gauge the accuracy of their judgment’s (Gabbert, Memon, & Allan, 2003; Wright et al., 2008). This would suggest that within an eyewitness setting, an eyewitness would be more likely to believe that a co-witness was correct if they had a pre-existing knowledge of their cognitive skills. Hence, the findings suggest that eyewitnesses who are more uncertain about an event will be significantly more susceptible to co-witness influence. The results indicate that eyewitnesses are more likely to accept contradicting information from peers than from strangers.

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