#13 PAPER 17 -
THE RELATION BETWEEN TRAIT DISSOCIATION AND FALSE MEMORIES. THE MODERATING ROLE OF AFFECTIVITY

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Abstract
In this study, we aimed to investigate the role of trait dissociation, as well as of positive and negative affect in evocation false memory. A sample of 124 participants completed the study. Two videos were used to induce false memories. The participants completed scales for measuring trait dissociation, positive and negative affect, and also a recognition task. The results showed that trait dissociation lead to a high tendency to report false memory for both positive and negative event. Moreover, the interaction between the trait dissociation and negative affect is significant in predicting false memories for positive event.

Keywords: trait dissociation; positive affective state; negative affective state; false memory

1. INTRODUCTION

A false memory appears when a person recalls details of events that did not actually happen to him or her. Remembering something that did not happen can be a problem in different context, like in legal or in clinical field, when a person needs to relate past events (Jou & Flores, 2013). In legal field, the memories that people report for different life situations are evidences in determining someone’s guilty (Otgaar, Howe, Peters, Sauerland, & Raymaekers, 2013; Zhu et al., 2010). In clinical settings, false reports of past events may affect the effective of the treatment (Lindsay & Read, 1994). For these reasons, the reliability of memories is of particular importance. Previous studies showed that some people have a higher tendency to report false memories. Therefore, researchers begin to study the role of individual differences in reporting false memories for different life events (see French, 2003, for a review).

Trait dissociation, defined as a stable personality trait, was often related to the development of false memories (Hauschildt, Peters, Jelinek, & Moritz, 2012; Merckelbach, Zeles, Van Bergen, & Giesbrecht, 2007). It involves symptoms such as derealization, depersonalization, identity confusion, alteration of time identity, and memory disturbances (Merckelbach, Muris, Rassin, & Horсенelenberg, 2000). However, studies analyzing the relation between dissociation and the tendency to report false memories are inconsistent. Although some studies report positive correlation between trait dissociation and false memories (Dehon, Bastin, & Laroi, 2008), others did not confirmed this relation (e.g., Zhu et al., 2010). The mixed results may suggest that the relation between the presence of dissociative manifestations and the probability to report false memories is moderated by other variables. In addition to personality dimensions, many other factors may explain the development of false memories. One such variable is a person’s affective state when she recalls past experiences. Affective state represent an experience occurring at a given moment in time, positive and negative. While negative affective state includes symptoms of irritability, fear, distress, or guilty, positive state involves manifestation like excitement, enthusiasm, inspiration or determination (Tellegen, Walson, & Clark, 1999). Several authors sustain that negative and positive affective state are independent and can co-occur in the same moment in time within an individual (Larsen, McGraw, & Cacioppo, 2001).

Some studies showed that affective state can impair and enhance memory performance. Specifically, some research shown that negative affective state lead to a lower susceptibility to false memories, because it increase item-specific processing (Storbeck & Clore, 2011). This relation may be particularly specific to stimuli congruent with current affective state (Leppanen, 2006). For example, people with a negative affective state may report false memories for materials with a negative valence, compared with people with a positive affective state. For this reason, the first aim of the present study is to assess the relation between trait dissociation and false memories.
memories for both positive and negative materials. Moreover, the second aim of this study is to explore the role of positive and negative affective state as a moderator in the relation between trait dissociation and false memories. In order to conduct the study, we used a video false memory paradigm that includes universally familiar and easy to identify themes (Otgaar et al., 2013). Based on previous research, we propose the following hypotheses: a) trait dissociation will be positively related with false memories for both positive and negative materials; b) the relation between trait dissociation and false memories will be moderated by affective state.

2. METHOD

2.1. Participants

The final sample consisted in 124 participants (103 women and 21 men), students aged between 18 and 27 (mean age of 21.49 years, SD = 3.66). They completed the study in exchange for course credits.

2.2. Materials and measures

A video false memory paradigm was used in this study. Two videos presenting a negative and a positive life event were shown for approximatively 6 minutes (3 minutes for each video). The films were selected based on a pilot study were the participants were exposed to six videos, three about a negative event and three about a positive event. We chose the films that best enhanced the participants’ negative mood, respectively positive mood. The films presents scenes about the consequences of a flood (negative condition) and about a child’s anniversary (positive condition).

The recognition task was composed of 20 presented items with a corresponding contextual cue from each video. Furthermore, 20 non-presented items were included. Of the latter items, ten were unrelated items and ten were critical, related items. The participants were asked to respond with True, False or I am not sure/ I don’t remember to each statement. These items were presented in a random order.

Positive Affect Negative Affect Schedule (PANAS; Watson et al., 1988) consist of 10 items for measuring positive affect (PA) and 10 items for negative affect (NA). The participants rated all the items on a 5-point scale (1 - slightly or not at all, and 5 - very much) with that momentary time frame. Two average scores were computed; higher scores indicated a higher level of positive (PA) and negative (NA) affectivity, respectively. The Cronbach Alphas coefficients were .82 for PA and .88 for NA, respectively.

The Dissociative Experiences Scale, revised (DES-II; Bernstein & Putnam, 1986) was used to measure trait dissociation. The scale contains 28 items and the participants have to rate the probability (from 0 to 100%) that specific dissociative symptoms occur to them in comparison to others. The Cronbach Alpha for this scale in our sample is .89.

The items of the four scales were translated into Romanian, using the back-translation method. There were no major dissimilarities between the translated versions and the original scales.

2.3. Procedure

Participants signed the informed consent and they were informed that they will participate in a memory study. The true purpose of the study was concealed. The participants filled in the DES-II and then the films were shown. After the films, they completed the scales for measuring affective state and the recognition task. Finally, participants were debriefed and the experimenter thanked them for their involvement.
3. RESULTS

3.1. Preliminary analysis

Table 1. Pearson correlations, means, and standard deviations (SDs) of study variables.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td>TD</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PA</td>
<td>.12</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NA</td>
<td>.15</td>
<td>-.15</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FMN</td>
<td>.28*</td>
<td>.10</td>
<td>-.11</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>FMP</td>
<td>.20*</td>
<td>.16*</td>
<td>.09</td>
<td>.30**</td>
<td>1</td>
</tr>
<tr>
<td>Mean</td>
<td>106.27</td>
<td>27.39</td>
<td>15.37</td>
<td>1.12</td>
<td>1.31</td>
</tr>
<tr>
<td>SD</td>
<td>76.45</td>
<td>7.39</td>
<td>5.14</td>
<td>1.22</td>
<td>1.12</td>
</tr>
</tbody>
</table>

Note. TD – trait dissociation; PA – positive affect; NA – negative affect; FMN – false memories for negative event; FMP – false memories for positive event; ** p < .001; * p < .05; N = 124.

Table 1 presents descriptive statistics and correlations of all study variables. Preliminary analyses, using Pearson correlation, showed that trait dissociation positively correlated with false memories both for negative event ($r = .28$, $p < .001$), and positive event ($r = .20$, $p = .029$). Also, positive affect positively correlated with false memories for positive event ($r = .16$, $p = .042$), but did not correlate with false memories for negative event ($r = .10$, $p = .303$). Moreover, negative affective state did not correlate nor with false memories for negative event ($r = -.11$, $p = .207$), neither with false memories for positive event ($r = .09$, $p = .453$).

3.2. Testing for moderation

We conducted hierarchical regression models for outcomes with false memories for positive event and negative event. Trait dissociation, positive and negative affect as the main effects were entered in step one and interaction between trait dissociation, positive and negative affect in step two. The main interaction effects were centered to minimize multicollinearity. Trait dissociation was a significant positive predictor of false memories for both negative ($β = 0.28; p = 0.002$) and positive event ($β = 0.19; p = 0.023$). Therefore, when the participants present a high level of trait dissociation, they also report a high level of false memories. These results are depicted in Table 2. Although positive and negative affective states were not significant predictors of false memories, the interactions between trait dissociation and negative affect is significant in predicting only false memories for positive event. The interaction between variables is presented in Figure 1.

Table 2. Hierarchical regression models of trait dissociation, positive, and negative affect on false memories

<table>
<thead>
<tr>
<th></th>
<th>False memories for negative event</th>
<th>False memories for positive event</th>
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<tbody>
<tr>
<td>** Step 1 **</td>
<td>** β</td>
<td>t</td>
</tr>
<tr>
<td>TD</td>
<td>.28**</td>
<td>3.24**</td>
</tr>
<tr>
<td>PA</td>
<td>.05</td>
<td>.57</td>
</tr>
<tr>
<td>NA</td>
<td>-.11</td>
<td>1.22</td>
</tr>
<tr>
<td>∆R²</td>
<td>.31**</td>
<td></td>
</tr>
<tr>
<td>∆F</td>
<td>4.34</td>
<td></td>
</tr>
<tr>
<td>** Step 2 **</td>
<td>** β</td>
<td>t</td>
</tr>
<tr>
<td>TD x PA</td>
<td>.14</td>
<td>0.39</td>
</tr>
<tr>
<td>TD x NA</td>
<td>.44</td>
<td>1.37</td>
</tr>
<tr>
<td>∆R²</td>
<td>.33*</td>
<td></td>
</tr>
<tr>
<td>∆F</td>
<td>.95</td>
<td></td>
</tr>
</tbody>
</table>

Note: TD – trait dissociation, PA – positive affect, NA – negative affect; N = 124; *p < .05; **p < .01; ***p < .001.
4. DISCUSSIONS

The first aim of this study is to assess if trait dissociation predicted false memories for positive and negative life events. The results showed that trait dissociation is a positive predictor of false memories. These findings are consistent with one possible mode of the association between trait dissociation and false memories, that is, the higher the dissociation, the higher is the tendency to report false memories for both positive and negative events (Hauschildt et al., 2012; Merckelbach et al., 2007).

Moreover, we wanted to test if the relation between trait dissociation and false memories is moderated by positive and negative affect. An important result showed that a high tendency to report false memories appears when the participants present a high level of trait dissociation and also present a high level of negative affect. When the level of negative affect is low, the level of false memories reported by the participants with a high trait dissociation is comparable with the level of false memories reported by the participants with a low level of trait dissociation. For the participants with a low level of trait dissociation, the tendency to report false memories is lower when the participants report a high level of negative affective state. According to our results, negative affective state lead to a lower susceptibility to false memories (Storbeck & Clore, 2011), only for the participants with a low level of trait dissociation. On the contrary, high dissociation interact with negative affect in predicting false memories. It should be noted that this interaction is significant only in predicting false memories for the positive event. It is possible that only the positive event to have a personal significance for the participants from our study. A previous study showed that false memories increased when the target material had personal significance for individuals with a negative disposition (Moritz, Voight, Arzola, & Otte, 2008). There are reasons to believe that a child anniversary is more familiar for psychology student than a flood (the negative event).

Studying how trait dissociation and affective state interact to influence memory can help understanding the factors that contribute to eyewitness testimony and to veracity of past event reports in clinical practice. Professional should be aware of the individual particularities that amplify the tendency to report false details when remembering past events, in order to make the best decision. In summary, this study expanded the literature on personal characteristic involved in false memory development. The generalizability of our results is limited because the young females represent the majority of our sample. Moreover, future studies should assess whether a tendency towards dissociative experiences is associated to a higher susceptibility to false memories using different moderators. In addition, the differential role of state dissociation and trait dissociation in predicting false memories should be examined. Future studies with large samples, openly addressed to both men and women, are needed in order to confirm these results.
5. ACKNOWLEDGEMENTS

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6. REFERENCES


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