Individuals with histrionic personality disorder features categorize disliked persons as negative following intimacy induction: A state–trait interaction analysis

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ABSTRACT

Espousing a Cognitive-Affective Processing System (CAPS, Mischel & Shoda, 1995) perspective, the authors examined a state–trait interaction pertaining to automatic categorization in individuals with histrionic personality disorder (HPD) features. An experience of intimacy was induced via event recall, and automatic processing of dislike information was evaluated by a tailored task switching paradigm. In Experiment 1, participants switched between classifying names of acquaintances according to Gender and classifying adjectives according to Valence. In Experiment 2, participants reacted to names of acquaintances and switched between Gender and Valence rules. HPD levels were evaluated by the Personality Disorder Questionnaire-4 and Axis I symptoms were controlled for using the brief symptoms inventory. In both experiments, the results showed an increased automatic processing of task-irrelevant, dislike and hate information with increasing HPD score only in the intimacy induction group but not in the control group. However, only in Experiment 2, which was designed to induce higher automaticity, was the difference between the two groups significant. Findings are consistent with an activation of a maladaptive, intimacy-related, schema underlying HPD.

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1. Introduction

One of the central issues in personality disorder (PD) research is the trait vs. state one (Lenzenweger & Clarkin, 2005). Most studies rely on the trait approach (Lenzenweger, Clarkin, Fertuck, & Kernberg, 2004; Posner et al., 2002; Widiger & Costa, 2002) while ignoring the state in which certain behavior patterns exhibit. Conversely, the Cognitive-Affective Processing System (CAPS) theory emphasizes the way in which behavioral dispositions are expressed differently across different situations (Mischel & Shoda, 1995). These state–trait interactions are linked to the way in which PDs are conceptualized (Eaton, South, & Krueger, 2009). Accordingly, schema therapy (Van Asselt et al., 2008; Young, Klosko, & Weishaar, 2003) focuses on situational factors triggering maladaptive schemas and behaviors. This approach has been indirectly applied to research Borderline PD (BPD; Napolitano & McKay, 2007; Veen & Arntz, 2000). Morf and Rhodewalt (2001) applied this approach to the study of Narcissistic PD. However, to our best knowledge, no study has been successful in identifying specific state–trait interaction distinguishing PDs within cluster B, and no study had so far utilized the state–trait interaction approach to study Histrionic PD (HPD).

1.1. The present study

We examined the situational triggers responsible for activating PD-related maladaptive schemas, focusing on HPD. We argue that specific interpersonal situations, which might be experienced as neutral, tolerable, or even pleasant, by healthy individuals, are experienced as problematic by individuals with specific PDs.

Blagov and Westen (2008) identified that HPD is associated with premature perception of relationships as intimate. Their data suggests that “patients for whom inappropriate sexualization… and exaggeration of intimacy of relationship are likely to have HPD. However, these characteristics are not the most central ones for most HPD patients” (p. 790). They concluded that individuals with HPD could be described as variants of BPD or Dependant PD with histrionic features. We argue that examining the role of intimacy from a state–trait interaction approach might reveal the centrality of this feature to individuals with HPD.

Premature perception of relationships as intimate presumably reflects the difficulty that HPD individuals have in achieving...
emotional intimacy in romantic or sexual relationships, and their tendency to consider relationships to be more intimate than they actually are (DSM IV-TR, 2000). Thus, some of the difficulties in HPD revolve around the increasing and deepening of intimacy in close relationships (McWilliams, 1994). These difficulties are speculated to originate from problematic relationships with parental figures (Benjamin, 1996).

Therefore, we hypothesized that interpersonal situations involving intimacy with parental figures would serve as situational triggers activating maladaptive schemas in HPD. The activation of a maladaptive schema is associated with strong negative emotions (Young et al., 2003). These negative feelings can then activate a mood congruency process (Pretzer & Beck, 2005), leading to heightened automatic processing of negative emotional information.

In two experiments, we used an event recall procedure to induce a subjective experience of intimate exchange with parental figures, and then measured automatic processing by a specific effect found in the task switching paradigm (Meiran, 2010; Monsell, 2003 for reviews), as explained below.

2. Experiment 1

Participants reacted to names of liked and disliked acquaintances, as well as to positive and negative adjectives, and rapidly switched between two classification rules: a Gender rule (is it a name of a female or a male?) and a Valence rule (is it a positive or negative adjective?). When switching between two tasks, participants need to maintain readiness to perform both tasks despite the fact that only one task is relevant in any given trial. Thus, while explicitly the participants are asked to categorize the names only by their Gender, implicitly they will be judged also by their Valence (disliked as Negative, and liked as Positive). These implicit Valence responses will influence Gender responses depending on the congruency of the two responses ( incompatible slower than compatible).

The response time advantage of congruent trials, called Task Rule Congruency Effect (TRCE; Meiran & Kessler, 2008, for review) reflects the automatic processing of the currently irrelevant dimension, according to Bargh’s (1989) and Tzelgov’s (1997) definition of automaticity. Specifically, the TRCE in the Gender task reflects the automatic processing of Valence.

We used the TRCE measure in order to evaluate participant’s automatic processing while they performed a switching task between a Gender rule and a Valence rule. Our hypothesis was that higher levels of HPD features would be associated with heightened automatic processing of negative stimuli in the intimacy induced group compared to control induction. This should be reflected in difficulties to refrain from classification of dislike/hate persons as negative when the Valence dimension is irrelevant to the current task demands, as should be observed in increased TRCE for the negative stimuli in the Gender Task.

2.1. Method

2.1.1. Participants and procedure

Forty-two undergraduates participated in return for partial course credit. Participants were randomly assigned to control vs. experimental group then they were asked to choose names of acquaintances: four men and four women. For each gender they were asked to choose a name of someone they love, one they like, one they dislike and one they hate. Additionally they were asked to choose four positive adjectives (e.g., “pretty”) and four negative adjectives (e.g., “arrogant”). These names and adjectives were later used in the computerized task as target stimuli. After the stimuli were selected, each participant went through a control or intimacy induction, then performed the computerized task, and lastly completed the Personality Disorder Questionnaire-4 (PDQ4), the brief symptoms inventory (BSI) and a debriefing concerning manipulation check.

2.1.2. Intimacy and control inductions

Participants were instructed to vividly recall an event in their lives in which they were given a warm hug from their parents and were told they are loved (intimacy induction), or an event in which they were traveling the bus and someone sat so close to them that there was physical contact with that person (control induction). We chose this control condition because, like the parents’ hug, it involves physical contact but this time without the associated intimacy. Participants were instructed to try and make their recollection as vivid as possible by recalling as many details about the specified event as they can (smells, touch, voices, etc.).

2.1.3. Procedure for the computerized task

Participants were asked to switch between categorizing the names they chose by a Gender rule (Male vs. Female) and categorizing the adjectives they chose by a Valence rule (Negative vs. Positive). The same response keys were used for the two rules (the keyboard’s keys “L” on the right and “A” on the left), allowing TRCE to occur. This resulted in two possible C-R mappings: first “female” and “positive” can share one response key while “male” and “negative” share the other one (M1); second, “female” and “negative” share the same response key while “male” and “positive” share the other key (M2) (see Table 1).

Each participant was asked to complete four dual task blocks, two of each mapping, in a “sandwich-like” design (see Rubin & Meiran, 2005): M1, M2, M2, M1, in order to enable the control of potentially confounding practice effect. There were 128 trials per block preceded by 12 training trials which were not analyzed. In each trial, only one task rule was relevant (either Gender or Valence). The relevant task rule for each trial was randomly chosen. The C-R mapping for the Gender task and the mappings’ order (M1, M2, M2, M1 vs. M2, M1, M1, M2) were counterbalanced between participants.

The sequence of events within each trial was as follows: a central fixation point (+) was presented for 500 ms, followed by a target stimulus that was presented until a response was made. The target stimuli were eight Hebrew names and eight Hebrew adjectives drawn in white on black background, bolded, size 18 in “Courier New” font, presented in the center of the display in the same position of the fixation point. The next trial began immediately after a response was made.

2.1.4. Questionnaires

2.1.4.1. Personality Disorder Questionnaire-4. The PDQ4 (Hyler, 1994) consists of 99 self-administered true/false items. It yields a separate scale for each of the 12 PDs of the DSM IV and two validity scales: a “Too Good” and a “Suspect Questionnaire” in order to identify underreporting and random responses. The calculation of a specific scale score is done by counting the number of “true” responses to items that correspond to the specific scale. It had been argued that the PDQ4, within its limitations (Fossati et al., 1998; Yang et al., 2000), is a suitable instrument for screening purposes and for assessing PDs as dimensions (Chabrol, Rousseau, Callahan, & Hyler, 2007) as we intended to do in our study.

2.1.4.2. Brief symptoms inventory. The BSI (Derogatis & Spencer, 1982) is a 53 items self report questionnaire, in which participants are asked to grade the frequency of a particular symptom during the past month on a 0–5 Likert scale. We used the BSI average score (z in the present study was: 86) in order to control for Axis I symptoms in our analysis.

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Table 1 Examples of congruent and incongruent trials for a specific participant.

<table>
<thead>
<tr>
<th>Type</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>Alison</td>
<td>John</td>
<td>Pretty</td>
<td>Clumsy</td>
</tr>
<tr>
<td></td>
<td>Congruent trial</td>
<td>Incongruent trial</td>
<td>Excluded</td>
<td>Excluded</td>
</tr>
</tbody>
</table>

For C-R mapping 1: Female and Positive share the same response key:
Type A trials in which the target stimulus (Alison) was defined as a woman and love (positive), were congruent trials.
Type B trials in which the target stimulus (John) was defined as a man and love were incongruent trials.
Type CD trials in Experiment 1 could not be defined as congruent or incongruent because the target stimulus, an adjective (Pretty), could not be categorized by its Gender. In Experiment 2 trials of type C were congruent trials while trials of type D were incongruent trials.

2.2. Data analysis

Data analysis was conducted by Statistica™ 8 using the GLM module. In computing TRCE scores, we excluded trials with RT < 100 ms (premature responses) or RT > 3000 ms (outliers) as well as trials with errors. TRCE in trials in which the relevant task was Gender was calculated separately for loved and liked names (TRCE Positive) and for hated and disliked names (TRCE Negative). This allowed us to test heightened automaticity which is restricted to negative emotional information. We ran a regression analysis for each of the dependant variables (TRCE Positive and TRCE Negative) separately, with Induction Type and the participant’s Gender as categorical independent variables, and HPD score and BSI average score as continuous independent variables. We also included the interaction term between the HPD score and the Induction Type as an independent variable.

2.3. Results

2.3.1. Preliminary results

The average HPD and BSI scores were 2.17 (SD = 1.58) and 0.89 (SD = 0.44) in the intimacy group, and 2.25 (SD = 1.48) and 0.82 (SD = 0.40) in the control group, respectively. These group differences were not statistically significant. t-test for single means were conducted in order to test if the TRCE was significantly greater than zero, as required for the main (regression) analysis. The TRCE was significant for the Gender task (M = 14 ms, SD = 49.67, t(41) = 1.82, p < .05, one tailed).

2.3.2. Main analysis

For TRCE-Negative, the Histrionic regression parameter was significant for the intimacy group (slope = 23.9 ms per HPD scale unit, Beta = .48, p < .05), but not for the control group (slope = 10.2 ms per HPD scale unit, Beta = .20, p = .31). However the interaction between Induction Type and Histrionic was not significant (slope = 3.87 ms per HPD scale unit, Beta = .27, p = .35) indicating that the difference between the intimacy and control groups for the Histrionic slope was not significant. For TRCE Positive the HPD slope was not significant both in the intimacy group (slope = 5.35 ms per HPD scale unit, Beta = .11, p = .62) and in the control group (slope = −14.10 ms per HPD scale unit, Beta = −.30, p = .18). Additionally, the interaction parameter for TRCE Positive was not significant, (slope = 19.46 ms per HPD scale unit, Beta = .41, p = .2). We ran a series of similar analyses on the other cluster B PDs (BPD, Antisocial PD, Narcissistic PD), in none of these analyses did we find a significant PD parameter.

3. Experiment 2

In Experiment 1 we found that Individuals with elevated HPD features exhibited increased automatic processing of hate/dislike information following recalled intimacy. However, Experiment 1 had a few limitations: First, although the aforementioned association between HPD levels and automatic processing did not appear following the control induction, we cannot conclude that it is specific for the intimacy induction because the interaction between Induction Type and HPD score was not significant. Second, while TRCE met a one sided significance criterion, it was rather modest in size, limiting the ability to find variables that correlate with it. Finally, TRCE could not be measured when the relevant task rule was Valence, because the adjective stimuli had no Gender dimension, a fact which did not permit us to completely rule out the possibility that the intimacy induction led to generally higher automaticity.

Two changes were made in order to gain better assessment of automatic processing. First, in order to increase the TRCE, we asked the participants to categorize the names according to the Gender dimension (as in Experiment 1) but also according to the Valence dimension (hate and dislike as Negative, love and like as Positive). Second, in order to control for potential participant’s gender variance, we included only females in our sample. The hypothesis was the same as that in Experiment 1.

3.1. Method

3.1.1. Participants and procedure

Forty female undergraduates participated in return for partial course credit. The procedure was identical to that in Experiment
1 with the exception that the participants were asked to choose only names and not adjectives. This change required the use of task cues in order to indicate the relevant task in a given trial. The task cues were yellow colored words: the equivalent Hebrew words for “female” and “male” for the gender decision and for “positive” and “negative” for the valence decision. These were presented below the fixation point (+), on both sides of it, according to the relevant task and Category to Response (C-R) mappings (see Table 1).

The sequence of events within each trial was as follows: The task cue was presented together with a central fixation point (+) for 500 ms, followed by the centrally presented target name stimulus along with the task cue until a response was made. The next trial began immediately after a response was made.

3.2. Data analysis

The data analysis was identical to that in Experiment 1 with the exception that we added an analysis of the valence responses in order to evaluate automatic processing of Gender information.

3.3. Results

3.3.1. Preliminary analyses

The average HPD and BSI scores were 2.60 (SD = 2.10) and 0.78 (SD = .48) in the intimacy group, and 2.20 (SD = 1.80), 0.85 (SD = .65) in the control group, respectively. These group differences were not statistically significant. t-tests for single means were conducted in order to test if the TRCE was significantly greater than zero. The TRCE was significant for both the Gender task (M = 39 ms, SD = 54, t[35] = 4.64, p < .05) and the Valence task (M = 41 SD = 49 ms, t[39] = 5.32, p < .05) indicating that our task stimulated automatic processing both for gender and valence information.

3.3.2. Main analysis

The results of Experiment 1 were replicated for the Gender task: For TRCE Negative the HPD slope in the intimacy group was significant (slope = 21.52 ms per HPD scale unit, Beta = .58, t[35] = 3.02, p < .05), while the equivalent slope in the control group was not significant (slope = –6.79 ms per HPD scale unit, Beta = -.18, t[35] = -.7, p = .47). Furthermore, a significant interaction parameter for TRCE Negative (slope = 28.31 ms per HPD scale unit, Beta = .79, t[35] = 2.52, p < .05) was found indicating that the differences between the intimacy and control groups for the Histrionic slope were significant. For TRCE Positive the HPD slope was not significant both in the control group (slope = 11.24 ms per HPD scale unit, Beta = .28, t[35] = .95, p = .34) and in the intimacy group (slope = 2.04 ms per HPD scale unit, Beta =.05, t[35] = .23, p = .82). Additionally, the interaction parameter for TRCE Positive was not significant, (slope = –9.2 ms per HPD scale unit, Beta = –23, t[35] = .66; see Fig. 1). We ran a series of similar analyses on the other cluster B PDs, in none of these analyses did we find a significant PD parameter. Similar analyses in which the TRCE in the Valence task was dependent variable did not yield any significant regression parameters.

4. Discussion

In two experiments, we found that participants with elevated HPD features exhibited increased automatic processing of hate/dislike information following recalled intimacy. Specifically, these individuals had difficulties refraining from classification of dislike/hate persons as negative. This pattern was present when the Gender rule was relevant but not when the Valence rule was relevant, and was not found for TRCE for positive stimuli. Such specificity rules out two alternative explanations of our results. The first is that HPD, intimacy or their combination result in increased automaticity (poorer attentional control) in general, and the second is that they result in a difficulty in speeded classification. The specificity of the effect to TRCE-Negative was confirmed in both experiments. Intimacy induction moderated this correlation between TRCE-Negative and Histrionic in both experiments. The fact that this was only a trend in Experiment 1 can be explained by the small size of the TRCE in this experiment (because of using adjectives for the Valence task). However, when the same stimuli were used in both tasks, TRCE was substantially enlarged, and as a result, the moderating effect of the intimacy induction became significant.

This pattern of results indicates content specific automatic processing that can be understood within the CAPS framework (Mischel & Shoda, 1995). CAPS allows to conceptualized the symptomatology of PDs as a result of specific if . . . then rules which are created by the way that the features of the situation interact with the Cognitive Affective Units (CAUs) organization. For HPD organization if the situation involves intimacy then alertness to negative stimuli is one of the results.

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Young et al.’s (2003) PDs theorization is compatible both with CAPS approach and our findings. According to Young et al. (2003), different early maladaptive schemas underlie different PDs, and these schemas are activated in the presence of specific events. The added value of this approach for this study is that it argues that schema activation evokes negative affect. As schemas are considered to be dimensional in nature (Young et al., 2003), higher scores on the HPD scale may reflect stronger schema activation in the presence of the situational trigger and hence evokes higher negative affect. This results through a mood congruency process, in greater TRCE for negative stimuli.

A more refined interpretation regarding the nature of the aforementioned negative emotion is that interpersonal situations involving intimacy activate a maladaptive schema that signals interpersonal threat. This reaction stimulates the need to quickly evaluate elements in the environment for their potential danger. It therefore results in sensitivity to disliked/hated persons, in turn intensifying the need to categorize these people as negative stimuli. Because early traumatic experiences are argued to underlie the development of maladaptive schema (Young et al., 2003), it is likely that reactivation of these schemas will evoke feelings of threat.

Consistent with action models of psychopathology (e.g., Shahar, 2006), the hyper vigilance to negative stimuli associated with intimate interpersonal situations may bring about difficulties in creating and experiencing intimate relationships. Sensitivity to negative stimuli can lead to higher reactivity to negative stimuli. In the context of interpersonal relationships, these can be directed to the partner, reducing his motivation to increase intimacy and in that way sabotages the creation of an intimate relationship. Additionally, it may propel individuals with HPD features to avoid real intimacy in interpersonal relationships in order to avoid these stimuli and the negative feeling associated with them.

If indeed our finding is mediated through a feeling of threat then the identification of specific situational triggers should have therapeutic significance. Emotional processing theory (Foa & Kozak, 1986) emphasizes that in order to effectively change a pathological fear structure one first needs to expose the individual to relevant information that will activate the structure. Only after activation, incongruent elements of presented information can be integrated with the existent fear structure – allowing emotional change to occur. Thus, the identification of intimacy as a specific trigger which is related to HPD features may later be used to trigger the pathological structure underlying this disorder and enable the first step towards a therapeutic change.

The importance of state–trait interactions suggested by the CAPS theory and supported by our findings may point to implications regarding diagnosis of PDs. When state–trait interactions are allowed to enter diagnosis of PDs, differential diagnosis is considerably enhanced. To illustrate, a patient exhibiting with emotional instability might be diagnosed, all other things being equal, with either BPD or HPD. However, knowing that such emotional instability is aroused in this patient only in the face of increased intimacy might tilt the diagnosis in favor of HPD. In contrast, identification of a pattern whereby emotional instability is activated in the face of rejection or separation will similarly encourage a diagnosis of BPD. It should be noted the current DSM-IV view on PDs as well as the proposed revision for the DSM-V (DSM-V development site, retrieved online, July, 2010) reflects a trait approach, and does not address these key state–trait interactions.

Limitations of our study should be noted. First, it is possible that the use of idiosyncratic stimuli decreases the internal validity of the study. Namely, it is conceivable that individuals who were higher in the histrionic scale chose more negative names and therefore exhibit higher TRCE. Second, we do not have direct empirical evidence that either feeling of threat or mood congruency effect mediate the connection between the state–trait interaction and the observed behavioral impairment. Third, the fact that HPD features were assessed with non-clinical undergraduates limits the generalizability of our findings. Nevertheless, our findings are the first, to the best of our knowledge, to demonstrate that specific state–trait interaction can bring about processing biases in individuals with HPD features, thereby encouraging future application of this powerful theoretical approach.

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References


**Web references**