People often displace their aggression against innocent targets. Notwithstanding the merits of previous research on displaced aggression, critical gaps remain. First, it is unclear whether and how situational and dispositional factors interact to influence displaced aggression. Moreover, it is unclear whether engaging in direct aggression increases or decreases displaced aggression. To address these gaps, the present experiment investigated how situational factors (provocateur availability, provocation intensity) and dispositional factors (callousness, trait aggressiveness) jointly influence displaced and direct aggression in male adolescents. Participants (\(N = 110\), \(M_{age} = 13.1\) years) completed a personal profile that was allegedly evaluated by peer judges. After randomly receiving mild or strong negative feedback, participants could aggress against these peer judges as well as against other innocent peers (direct and displaced aggression) or against innocent peers only (displaced aggression). Results showed that displaced aggression occurred only when the negative feedback was strong and participants could not retaliate directly. Higher levels of callousness specifically predicted more displaced (but not direct) aggression. However, the potentiating effects of callousness emerged only when the negative feedback was strong. This finding highlights the importance of examining disposition by situation interactions in displaced aggression research.

Keywords: displaced aggression, direct aggression, callous-unemotional traits, trait aggressiveness, youth
Situational Factors Influencing Displaced Aggression

Although it is often assumed that displaced aggression is less likely to occur when the provoked individual retaliates against the original provocateur (Denson, Pedersen, & Miller, 2006), this assumption has yet to be tested empirically. However, a feasible alternative hypothesis is that direct aggression increases rather than decreases displaced aggression. For instance, in many school shootings the perpetrators targeted both those who had bullied or rejected them as well as innocent bystanders. Direct aggression may trigger displaced aggression by activating components of the aggression associative network in semantic memory, thereby increasing the risk of displaced aggression (Miller, Pedersen, Earleywine, & Pollock, 2003).

In addition to provocateur availability (i.e., the possibility to engage in direct aggression), provocation intensity may influence displaced aggression. However, the effects of provocation intensity on displaced aggression have never been stringently tested, nor have the possible interactive effects of provocateur availability and provocation intensity—issues that are addressed in the present research.

Dispositional Factors Influencing Displaced Aggression

In addition to situational factors, dispositional factors likely influence displaced aggression, either directly or through their moderating effects of situational factors. Presumably, individual differences in displaced and direct aggression coincide to some extent. For instance, given that trait aggressiveness predicts hostile behavior in many domains (Bushman & Wells, 1998), this dispositional factor may be associated with both types of aggression. However, one important distinguishing feature of displaced aggression is that innocent people are harmed. Due to empathic concerns and normative beliefs about the inappropriateness of wrongdoing.

There are good theoretical and empirical reasons to believe that callousness may be implicated in the propensity to harm innocent others. Callousness is a dispositional trait characterized by a proneness to make use of others coldheartedly and a relative lack of guilt and empathy (Frick & Marsee, 2006). Consequently, calloused youth will be less bothered about letting innocent people “pay” when treated badly. Indeed, a naturalistic study of criminal offenders found a positive link between callousness and displaced aggression (Kruh, Frick, & Clements, 2005). Given that callousness is particularly related to goal-directed and “cold-blooded” proactive (not reactive) forms of aggression (Cornell et al., 1996; Porter & Woodworth, 2006), we did not expect a link between callousness and direct aggression.

Overview of the Present Study

The present research investigated the independent and joint effects of situational (i.e., provocation intensity, availability of provocateurs) and dispositional (i.e., callousness, trait aggressiveness) factors on displaced and direct aggression in youth. Both two-level situational factors were crossed, yielding four conditions. Negative peer feedback was used as the provocation stimulus because aggression often results from interpersonal events that connote negative evaluation or rejection (Leary, Twenge, & Quin-livin, 2006). An unprovoked (no feedback) control condition was also included to test whether the level of displaced aggression following provocation exceeded unprovoked aggression. Participants were randomly assigned to one of these five conditions.

Three research questions were examined in this study. First, does engaging in direct aggression increase or decrease displaced aggression? Second, does provocateur availability interact with provocation intensity to influence displaced aggression? Third, are the effects of provocateur availability and provocation intensity on direct and displaced aggression moderated by callousness or trait aggressiveness? We predicted that even after controlling for the effects of trait aggressiveness, callousness would magnify the effects of negative peer feedback on displaced but not direct aggression.

Method

Participants

Because most severely aggressive youth are male (Zahn-Waxler et al., 2008), the present sample was restricted to male participants. Participants (N = 175) were young adolescent boys (Mage = 13.1, SD = 1.0; 90% Caucasian; predominantly middle class) from public schools in the Netherlands. Participants obtained parental consent (consent rate = 73%) and gave their own assent (assent rate = 100%).

Procedure

Measures of callousness and trait aggressiveness. Two weeks before the experiment, participants completed the psychometrically sound 15-item Calloused-Unemotional Traits subscale of the Youth Psychopathic Trait Inventory (Andershed, Kerr, Stattin, & Levander, 2002). Items are rated on a 4-point scale (1 = does not apply at all to 4 = applies very well; Cronbach α = .75). Peer nominated trait aggressiveness was measured using a 3-item scale assessing physical (“Who kicks, pushes, or hits other students at school?”), verbal (“Who calls other students names, or says mean things to other students at school?”), and relational aggression (“Who spreads rumors or lies about other students, or excludes other students from the group at school?”; see Thomaes, Bushman, de Castro, Cohen, & Denissen, 2009). A roster of male classmates, in randomized order and excluding the participant’s own name, was used to collect nominations. Students could nominate as many peers as they wanted. For each aggression item, all nominations received for each participant were divided by the number of nominators. The three item scores were summed, yielding the trait aggressiveness score (Cronbach α = .73).

Negative feedback manipulation. Participants were told they would compete in the Internet contest “Survivor” in which players are allegedly evaluated by eight same-age male judges from different schools (Reijnjte et al., 2010). First, the participant’s photo was taken digitally to post on the (bogus) Survivor Internet site for the judges to see. Next, participants completed a personal profile (e.g., favorite hobbies, personality traits). They were then given 3 min to look over the judges’ feedback. By
clicking on a judge’s photo, they could read the comments of that particular judge. Each judge wrote four statements. Participants randomly received strong negative feedback, mild negative feedback, or no feedback. Strong negative feedback consisted of three negative statements (e.g., “I would not like to be friends with this person”; “He is unattractive”; “He seems sneaky”) and one neutral statement (e.g., “He resembles my brother”) from each judge. Mild negative feedback consisted of three neutral and one negative statement from each judge. Participants in the control condition did not receive any feedback. As a manipulation check, participants rated two statements: (a) “The judges mostly said positive things about you,” and (b) “Most judges did not seem to like you very much” (1 = completely agree to 5 = completely disagree).

Aggression measure. Participants could aggress against the peer judges and/or innocent peers by deciding how much money they should receive for participating in the study. This measure is modeled after the widely used Point Subtraction Aggression Paradigm (Cherek, 1981). The default fee was 2€. Participants could leave this amount unchanged, subtract 1€ or 2€, or add 1€ or 2€. Half the participants who had received negative feedback, either strong or mild, could aggress against four of the judges who had evaluated them and also against four other innocent peers (direct and displaced aggression; provocateurs present), whereas the other half could aggress only against other innocent peers (displaced aggression; provocateurs absent). In the two conditions in which participants could engage in both direct and displaced aggression, provocateurs and innocent targets were alternated (individually, not as a block). The order of direct and displaced aggression targets was randomized. When the judges appeared on screen, participants could read their prior negative feedback and a short profile (e.g., age, number of siblings); the innocent targets were uninvolved peers who were introduced via a short profile.

Debriefing. Finally, participants were thoroughly debriefed (see Reijntjes, Dekovic, & Telch, 2007, for a detailed description).

Table 1

Means and Standard Deviations of Callousness, Trait Aggressiveness, Age, Displaced Aggression, and Direct Aggression, by Condition

<table>
<thead>
<tr>
<th>Measure</th>
<th>Strongly negative, provocateurs absent (n = 36)</th>
<th>Mildly negative, provocateurs absent (n = 36)</th>
<th>Strongly negative, provocateurs present (n = 33)</th>
<th>Mildly negative, provocateurs present (n = 35)</th>
<th>Control (n = 35)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Callousness M</td>
<td>30.78</td>
<td>31.73</td>
<td>31.49</td>
<td>31.91</td>
<td>31.69</td>
</tr>
<tr>
<td>SD</td>
<td>4.39</td>
<td>5.65</td>
<td>6.54</td>
<td>6.57</td>
<td>5.99</td>
</tr>
<tr>
<td>Trait aggressiveness M</td>
<td>0.40</td>
<td>0.29</td>
<td>0.29</td>
<td>0.32</td>
<td>0.29</td>
</tr>
<tr>
<td>SD</td>
<td>0.59</td>
<td>0.33</td>
<td>0.34</td>
<td>0.43</td>
<td>0.45</td>
</tr>
<tr>
<td>Age (years) M</td>
<td>13.13</td>
<td>13.01</td>
<td>12.96</td>
<td>13.13</td>
<td>13.14</td>
</tr>
<tr>
<td>SD</td>
<td>0.97</td>
<td>1.00</td>
<td>0.99</td>
<td>1.03</td>
<td>1.14</td>
</tr>
<tr>
<td>Displaced aggression M</td>
<td>2.22</td>
<td>1.11</td>
<td>0.83</td>
<td>0.79</td>
<td>0.86</td>
</tr>
<tr>
<td>SD</td>
<td>2.32</td>
<td>1.33</td>
<td>1.07</td>
<td>1.17</td>
<td>1.03</td>
</tr>
<tr>
<td>Direct aggression M</td>
<td>—</td>
<td>—</td>
<td>2.97</td>
<td>1.58</td>
<td>—</td>
</tr>
<tr>
<td>SD</td>
<td>—</td>
<td>—</td>
<td>2.43</td>
<td>1.98</td>
<td>—</td>
</tr>
</tbody>
</table>

Results

Preliminary Analyses

Random assignment check. The mean values for callousness and trait aggressiveness were similar to those observed in other Dutch community samples (Reijntjes et al., 2010; van Baardewijk et al., 2008). Analyses of variance revealed that callousness, trait aggressiveness, and age did not differ between conditions, indicating effective random assignment (see Table 1).

Manipulation check. Compared with participants receiving mild negative feedback, participants receiving strong negative feedback rated the feedback as more negative, F(1, 140) = 17.59, p < .05, d = 0.71, and said the judges liked them less, F(1, 140) = 5.23, p < .05, d = 0.39. Thus, the negative feedback intensity manipulation was successful.

Primary Analyses

Effects of negative feedback intensity, provocateur availability, callousness, and trait aggressiveness on displaced aggression. The single and joint effects of the two situational factors and the two dispositional factors on displaced aggression were tested using a hierarchical regression analysis. In Step 1, callousness, trait aggressiveness (both centered), and two dummy variables representing the effects of provocateur availability and provocation intensity were entered. In Step 2, the two-way interactions between the two dummies, between callousness and the two dummies, and between trait aggressiveness and the two dummies were entered. In Step 3, the two 3-way interactions were entered (Provocation Intensity × Provocateur Availability × Callousness, and Provocation Intensity × Provocateur Availability × Trait Aggressiveness).

Results showed main effects for trait aggressiveness, β = .29, R^2 change = .08, F change = 12.68, p < .002, provocation intensity,
\[ \beta = .16, R^2_{\text{change}} = .03, F_{\text{change}} = 3.95, p < .05, \] and provocateur availability, \[ \beta = -.25, R^2_{\text{change}} = .06, F_{\text{change}} = 10.57, p < .01. \] Moreover, an interaction between provocateur availability and provocation intensity emerged, \[ \beta = -.28, R^2_{\text{change}} = .03, F_{\text{change}} = 4.10, p < .05. \] As expected, this interaction effect was further qualified by a significant three-way interaction between callousness, provocateur availability, and provocation intensity, \[ \beta = -.43, R^2_{\text{change}} = .03, F_{\text{change}} = 4.90, p < .03. \] No interactive effects emerged for trait aggressiveness, which highlights the specificity of our findings for callousness.

Subsequent analyses showed that when provocateurs were available, displaced aggression did not differ as a function of provocation intensity, callousness, or their interaction. Hence, regardless of callousness score, when provocateurs were available displaced aggression did not differ between participants who received strong versus mild negative feedback \((p > .20); \) see Figure 1). Post hoc analyses using Tukey’s honestly significant difference tests showed that participants in these two conditions did not differ from controls in their level of displaced aggression and that neither callousness nor trait aggressiveness exerted moderating effects \((p > .50).\)

When provocateurs were unavailable, a main effect for provocation intensity emerged, indicating that strongly provoked participants showed more displaced aggression than did mildly provoked participants, \[ \beta = .29, R^2_{\text{change}} = .08, F_{\text{change}} = 6.23, p < .02. \] However, callousness qualified the effects of provocation intensity on displaced aggression, \[ \beta = .26, R^2_{\text{change}} = .04, F_{\text{change}} = 3.00, p < .08. \] This interaction was probed using the Johnson-Neyman (Johnson & Neyman, 1936) technique (see Bauer & Curran, 2005; Hayes & Matthes, 2009). This technique does not arbitrarily define “low,” “moderate,” and “high” callousness values. Instead, it identifies the regions of the callousness continuum where the effect of provocation intensity on displaced aggression is statistically significant and where it is not. As displayed in Figure 1, for callousness scores above 30.28 \((M = 31.47,\) strongly provoked participants showed more displaced aggression than mildly provoked participants. Post hoc regression analyses contrasting mildly provoked participants with controls revealed that displaced aggression did not differ between these two conditions and that neither callousness nor trait aggressiveness exerted moderating effects. Hence, displaced aggression reliably occurred only when provocation was strong, retaliation was impossible, and callousness scores exceeded 30.28.

**Effects of negative feedback intensity, callousness, and trait aggressiveness on direct aggression.** For the two conditions in which participants could retaliate, a similar regression analysis was performed to test the single and joint effects of provocation intensity and the two dispositional factors on direct aggression. Callousness, trait aggressiveness (both centered), and a dummy variable representing provocation intensity were entered in Step 1. Two-way interactions between callousness and the dummy, and between trait aggressiveness and the dummy were entered in Step 2.

Results revealed main effects for trait aggressiveness, \[ \beta = .27, R^2_{\text{change}} = .07, F_{\text{change}} = 5.10, p < .03, \] and provocation intensity, \[ \beta = .36, R^2_{\text{change}} = .13, F_{\text{change}} = 10.24, p < .01. \] Direct aggression was stronger when trait aggressiveness was higher, and strong negative feedback elicited more direct aggression than did mild negative feedback. No moderating effects for callousness or trait aggressiveness emerged. Post hoc regression analyses contrasting mildly provoked participants with controls also showed no moderating effects for these two variables. Thus, callousness moderated only displaced aggression, not direct aggression.

**Discussion**

The present study advances previous work on displaced aggression in two important ways. First, no prior research has examined whether engaging in direct aggression increases or decreases co-occurring displaced aggression. Second, whereas previous work has exclusively examined the isolated effects of either situational or dispositional factors on displaced aggression, the present study is the first to examine both their independent and joint effects.

Results provide the first empirical demonstration of the widespread assumption that displaced aggression is unlikely to occur when people can engage in direct aggression. In fact, engaging in direct aggression appears to be an effective antedote against displaced aggression. One possible explanation is that engaging in direct aggression addresses the need to restore justice or to re-establish a sense of agency.

The importance of examining the interplay between situational and dispositional factors in displaced aggression research is highlighted by the finding that when provocateurs were unavailable, participants showed displaced aggression only when provocation intensity was high and callousness scores were at least medium in magnitude. These results, which held after controlling for the effects of trait aggressiveness, indicate that regardless of their level of callousness youth tend to inhibit their aggressive impulses when faced with mild provocation. However, when faced with strong provocation, for calloused youth such inhibitions seem to be over-
ridden by more potent impulses to lash out aggressively, even against innocent bystanders. Results indicate marked differences between callousness and trait aggressiveness in their effects on both direct and displaced aggression. Regardless of provocation intensity, higher levels of trait aggressiveness predicted more direct and displaced aggression. In contrast, calloused children were not more prone to engage in direct aggression. This finding supports the hypothesis that, with regard to aggression in response to provocation (i.e., reactive aggression), elevated callousness predicts stronger displaced but not direct aggression. Moreover, the potentiating effects of callousness on displaced aggression emerged only in response to strong (not mild) provocation and did not hold for youth low in callousness.

Our findings point to the potential significance of incorporating strategies that target callousness into aggression prevention and intervention programs for youth. Recent work has shown that multifaceted cognitive–behavioral interventions can yield significant long-term reductions in callous-unemotional traits among at-risk youth (Kolko et al., 2009).

Our aggression measure deserves further comment. Although laboratory aggression measures share few surface features with real-world physical aggression, they do share the core conceptual feature of delivering a noxious stimulus with the intent and expectation of harming the victim. In the real world, people also harm others by taking money away from them. Moreover, situational (e.g., provocation) and individual difference (e.g., trait aggressiveness) factors have similar effects on aggression inside and outside the laboratory (Anderson & Bushman, 1997). Accordingly, we found that higher trait aggressiveness predicted more direct and displaced aggression.

Limitations and Future Directions

The present study has limitations. First, we used a community sample of young male adolescents, primarily Caucasians. We studied young adolescents because in this developmental period serious instances of aggression increase sharply (Dodge, Coie, & Lynam, 2006). To examine generalizability, future research should examine displaced aggression in clinical samples and girls. Because youth are less proficient than adults in regulating negative emotions (Saarni, 1999), future work should also examine whether the reluctance to aggress against innocent others is more easily overridden by emotionally driven impulses to aggress in youth than in adults. Second, the credibility of the negative feedback deception was not formally checked, although no participant expressed suspicion about it during the debriefing. Third, although some researchers have posited that negative affect may mediate the link between negative feedback and displaced aggression, the present study was not designed to assess these effects.

Conclusions

Engaging in direct aggression appears to eliminate displaced aggression. When provocateurs are unavailable, displaced aggression reliably occurs only when negative feedback is strong and youth display at least medium callousness scores. Calloused youth specifically show more displaced (but not direct) reactive aggression.


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