Flies on the wall are less aggressive: Effects of self-distancing on aggressive affect, cognition, and behavior.

THESIS

Presented in Partial Fulfillment of the Requirements for the Degree Master of Arts in the Graduate School of The Ohio State University

By
 Dominik Mischkowski

Graduate Program in Psychology

The Ohio State University

2012

Master's Examination Committee:
Jennifer K. Crocker (Advisor)
Brad J. Bushman
William A. Cunningham
Abstract

People tend to ruminate after being provoked, which is like using gasoline to put out a fire — it feeds the flame by keeping aggressive thoughts and angry feelings active. Previous research has shown that reflecting over past provocations from a self-distanced perspective reduces aggressive thoughts and angry feelings. However, it is unclear whether self-distancing “in the heat of the moment” — immediately after provocation — has similar effects. In addition, no research has tested whether self-distancing reduces aggressive behavior. Two experiments addressed these issues. In Experiment 1, provoked participants who self-distanced had fewer aggressive thoughts and feelings than did provoked participants who self-immersed or were in a control group. Experiment 2 showed that provoked participants who self-distanced were less aggressive than were provoked participants who self-immersed or were in a control group. These findings demonstrate that self-distancing reduces aggression, even in the heat of the moment.
Acknowledgments

First of all, I want to thank Prof. Jennifer Crocker, Prof. Ethan Kross, Prof. Brad Bushman, and Prof. Wil Cunningham their constant advice and support. Without their mentorship and supervision, this thesis would not have been realized. Furthermore, my thanks go to Chris Archer, Brittney Bataglia, Joshua Brittain, Nicholas Cormier, Ashley Fowler, Sanjay Kataria, Sarah LaBerge, Mano Rehman, and Gabriel Sotomayor for their efforts in collecting the data reported in this thesis. I particular, my thanks go to Azra Alic, Joshua Prasad, Sammy Ta, and Cassandra Wolfe for managing and coordinating the reported studies. Finally, my thanks go to all people who have provided me with advice during various stages of this project.
Vita

2001 .................................................. Gymnasium Leopoldinum Passau, Germany

2008 .................................................. M.S. Psychology, Universität Konstanz, Germany

2008-2009 ........................................ Graduate Fellow, Department of Psychology, University of Michigan

2009-2010 ........................................... Graduate Teaching Associate, Department of Psychology, University of Michigan

2010 to present .................................... Graduate Fellow, Department of Psychology, The Ohio State University

Publication


Fields of Study

Major Field: Psychology
# Table of Contents

Abstract ................................................................................................................................. ii

Acknowledgments .................................................................................................................. iii

Vita .......................................................................................................................................... iv

Table of Contents .................................................................................................................. v

List of Figures ........................................................................................................................ vii

Chapter 1: Introduction ........................................................................................................ 1

  Aggressive Rumination ....................................................................................................... 2

  Can people self-reflect without rumination? ..................................................................... 2

  Overview of studies .......................................................................................................... 4

Chapter 2: Experiment 1 ...................................................................................................... 5

  Method ................................................................................................................................. 5

  Participants ......................................................................................................................... 5

  Procedure .......................................................................................................................... 5

  Results ............................................................................................................................... 9

  Preliminary Analyses ....................................................................................................... 9
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Analyses</td>
<td>9</td>
</tr>
<tr>
<td>Discussion</td>
<td>10</td>
</tr>
<tr>
<td>Chapter 2: Experiment 2</td>
<td>12</td>
</tr>
<tr>
<td>Method</td>
<td>12</td>
</tr>
<tr>
<td>Participants</td>
<td>12</td>
</tr>
<tr>
<td>Results</td>
<td>14</td>
</tr>
<tr>
<td>Preliminary Analyses</td>
<td>14</td>
</tr>
<tr>
<td>Aggression</td>
<td>15</td>
</tr>
<tr>
<td>Discussion</td>
<td>15</td>
</tr>
<tr>
<td>Chapter 4: General Discussion</td>
<td>16</td>
</tr>
<tr>
<td>Future Research</td>
<td>17</td>
</tr>
<tr>
<td>Conclusion</td>
<td>17</td>
</tr>
<tr>
<td>References</td>
<td>19</td>
</tr>
<tr>
<td>Appendix: Figures</td>
<td>24</td>
</tr>
</tbody>
</table>
List of Figures

Figure 1. Adjusted means and standard errors for implicit aggressive cognition and change in hostile affect in Study 1 .......................................................... 25

Figure 2. Adjusted means and standard errors for aggressive behavior in Study 2 ....... 26
Chapter 1: Introduction

During the final debate of the 2008 United States presidential election John McCain repeatedly provoked Barack Obama. Yet, Obama somehow managed to remain calm. Summarizing Obama’s performance, New York Times Columnist David Brooks (Brooke, 2008, October 16) wrote:

*When Bob Schieffer asked him tough questions during the debate Wednesday night, [Obama] would step back and describe the broader situation. When John McCain would hit him with some critique — even about fetuses being left to die on a table — he would smile in amusement at the political game they were playing. At every challenging moment, his instinct was to self-remove and establish an observer’s perspective.*

Does the capacity to take a step back “in the heat of the moment” and reflect over emotionally arousing situations from an observer’s perspective attenuate aggressive thoughts, feelings, and behavior? Addressing this issue is critical to advancing knowledge concerning the basic mechanisms underlying the effective regulation of aggression, which harms both individuals and society, and is the focus of this research.
Aggressive Rumination

Aggression is defined as behavior intended to harm another person who is motivated to avoid that harm (e.g., Baron & Richardson, 1994). One of the most significant situational causes of aggression is interpersonal provocation (Bushman & Huesmann, 2010). Provocation is especially harmful when people focus on the feelings they experienced after being provoked in order to understand them, a process called aggressive rumination (Bushman, Bonacci, Pedersen, Vasquez, & Miller, 2005; Denson, Pedersen, Friese, Hahm, & Roberts, in press; Pedersen et al., in press).

People engage in rumination because it is widely assumed that working through negative feelings helps resolve them (Greenberg, 2002; Pennebaker & Graybeal, 2001; Wilson & Gilbert, 2008). Rather than improve people’s mood, however, rumination stamps in hostile cognitive and affective semantic associations, which decrease the threshold for activating aggressive behavioral scripts (Anderson & Bushman, 2002; Berkowitz, 1990; Huesmann, 1998). For example, prior research indicates that rumination increases aggressive thoughts, angry feelings, and aggressive behaviors against the provocateur (Bushman, 2002; Pedersen, et al., in press). Rumination even increases displaced aggression against victims who have committed a trivial offense (Bushman, et al., 2005).

Can people self-reflect without rumination?

A growing number of studies have begun to examine whether people can reflect adaptively over negative experiences — in ways that allow them to make meaning and resolve them — without ruminating. According to one program of research that has
addressed this issue, the type of self-perspective that people adopt when reflecting over negative experiences plays a key role in this regard (Ayduk & Kross, 2010a; Kross & Ayduk, in press).

Several studies indicate that people tend to adopt a self-immersed or first-person perspective when they reflect over their feelings in order to understand them (Ayduk & Kross, 2010b; Grossmann & Kross, 2010). When people self-immerses while analyzing distressing memories, they re-experience the negative thoughts, feelings, and physiological sensations that accompanied the initial event without resolving them (Ayduk & Kross, 2008; Kross & Ayduk, 2008; Kross, Ayduk, & Mischel, 2005). However, there is an alternative point of view that people can take. Rather than adopting a first-person perspective, people can analyze their feelings from a self-distanced or “fly on the wall” perspective. When people reflect over anger provoking experiences from a self-distanced perspective they see themselves from a far, and perceive the broader situation rather than staying in the victim role. Prior research indicates that self-distancing, whether experimentally manipulated or spontaneously activated, not only helps people resolve negative experiences (Ayduk & Kross, 2010b; Kross & Ayduk, 2008), it also alleviates many outcomes that have been connected to rumination, such as angry affect, aggressive cognition, and delayed cardiovascular recovery (Ayduk & Kross, 2008, 2010b; Kross, et al., 2005). These studies suggest that self-distancing facilitates adaptive self-reflection. However, they all rely on recalled rather than in vivo provocations. Although recalling past provocations arouses intense feelings, few would attribute the same level of intensity to them as being provoked directly in the here and
now, when people are most likely to engage in impulsive, aggressive behavior. Therefore, it remains unclear whether people can self-distance immediately after a real provocation, “in the heat of the moment,” and even if they can, whether doing so leads to similar beneficial effects as have been observed in prior research using autobiographical memories of provocations. Furthermore, to our knowledge no experimental research has examined whether self-distancing decreases aggressive behavior.

Overview of studies

The present research aims to advance knowledge concerning the psychological mechanisms that underlie the effective regulation of aggression by addressing two key questions: First, can people self-distance in the “heat of the moment,” immediately after they have been provoked? Second, if so, does self-distancing reduce aggressive thoughts, angry feelings, and aggressive behavior?

Two laboratory experiments addressed these questions. In each experiment, provoked participants were randomly assigned to reflect on their feelings from either a self-distanced perspective, a self-immersed perspective, or received no instructions regarding what type of self-perspective they should adopt (i.e., no-instruction control group). We then examined the effect of these manipulations on aggressive affect, cognition, and behavior. We predicted that the self-distanced group would be less angry, have fewer aggressive thoughts, and would behave less aggressively compared to both the self-immersed and no-instruction control groups.
Chapter 2: Experiment 1

Method

Participants

Participants were 94 college students (52% female; \( M_{\text{age}} = 21.5, SD = 3.06 \); 54% Caucasians, 30% Asian American, 9% African American, 7% other) who received $8 for participating.

Procedure

Cover story. A male experimenter informed participants that the researchers were studying the effects of music on problem solving, creativity, and emotions. They were then told that the first task involved solving anagrams while listening to music.

Baseline affect. Participants indicated on the valence subscale of the Self-assessment Manikin (SAM, Bradley & Lang, 1994) how happy they felt “RIGHT NOW” (1 = unhappy, frowning, manakin to 9 = happy, smiling manikin; \( M = 6.33, SD = 1.33 \)).

Provocation task. We used an established task to provoke participants (Bushman, et al., 2005). Specifically, participants listened to an intense piece of classical music (viz., Holst’s Mars, the Bringer of War) while attempting to solve 14 difficult anagrams (e.g., CCONIFTESA as the anagram of CONFISCATE). Participants were told that they would have 7 seconds to solve each anagram, write down their answer, and then communicate it
over an intercom to the experimenter seated in a separate room. If participants were unable to solve the anagram in time they were told to first write down and then say, “I don’t know.”

Once participants communicated their answer over the intercom, the correct solution appeared on the computer screen. When they saw the answer they were told to construct a first person sentence that used the correct word (e.g., I saw the police officer *confiscate* some marijuana), and then communicate their sentence over the microphone. The experimenter emphasized that participants should speak loudly and clearly so their answers could be recorded.

To further provoke participants, the experimenter rudely interrupted them three times during the task through the intercom (using pre-recorded messages). After the 4th anagram the experimenter said, “Look, I can barely hear you. I need you to speak louder please.” After the 8th anagram, the experimenter said in a louder and angrier tone, “Hey, I still need you to speak louder please!” After the 12th anagram, the experimenter said with an even louder and angrier voice, “Look, this is the third time I have to say this! Can’t you follow directions? Speak louder!”

*Self-reflection task.* Participants were told that the second task examined the effects of music on creativity and feelings, but it was actually used to administer our perspective manipulation. After putting headphones on, participants were instructed to “go back to the anagram task and see the scene in your mind’s eye.” They were then randomly assigned to a self-immersed (*n* = 28), self-distanced (*n* = 30) or control (*n* = 36) group.
In the self-immersed condition, participants were told,

*Now see the situation unfold through your own eyes as if it were happening to you all over again. Replay the event as it unfolds in your imagination through your own eyes.*

In the self-distanced condition, participants were told,

*Now take a few steps back. Move away from the situation to a point where you can now watch the event unfold from a distance and see yourself in the event. As you do this, focus on what has now become the distant you. Now watch the situation unfold as if it were happening to the distant you all over again. Replay the event as it unfolds in your imagination as you watch your distant self.*

In the no perspective control condition the participant did not get any specific instructions beyond the initial prompt. Participants were given as much time as they needed to adopt their instructed perspective ($M = 35.7$ sec, $SD = 15.6$). Next, participants in all conditions were asked to analyze their emotions for 45 seconds, while maintaining their initial perspective focus. This procedure has been successfully used to manipulate self-perspective in previous research (Ayduk & Kross, 2008; Gruber, Harvey, & Johnson, 2009; Kross & Ayduk, 2008; Kross, et al., 2005; Wisco & Nolen-Hoeksema, in press).

**Self-distancing.** Participants rated the extent to which they saw the event replay through their own eyes vs. watched the event unfold as an observer (1 = predominantly immersed participant, 4 = both, more or less equally, 7 = predominantly distanced observer) and how far away from the scene they were (1 = very close, saw it through my own eyes, 4 = neither too close nor too far, 7 = very far, saw it as if an observer) to
examine whether participants are capable of self-distancing in the heat of the moment. These items correlated strongly, $r(94) = .60, p < .001$, and were therefore averaged into a self-distancing composite score ($M = 3.34, SD = 1.49$). After this task, we measured aggressive thoughts, hostile feelings, and aggressive behavior.

**Implicit aggressive cognition.** Following prior research (Kross, et al., 2005), the accessibility of aggressive cognitions was measured using a 21-item word completion task. Seven stems could be completed using either neutral or aggression words (insult, hate, mad, kill, anger, rage, hit), matched for frequency using the Educator’s Word Frequency Index (Zeno, Ivens, Millard, & Duvvuri, 1995). For example, an_e_ could be completed as angel or anger. We scored the measure by counting the number of stems that were completed with aggression words ($M = 2.47, SD = 1.27$).

**Hostile affect.** Hostile affect was assessed using two measures. First, participants completed the valence subscale of the SAM a second time ($M = 5.23, SD = 1.34$). Next they rated how “irritable” and “annoyed” they felt right now (1 = Very slightly or not at all; 5 = Extremely), along with several filler items (e.g., “happy”). These two items correlated highly, $r(94) = .71, p < .001$, and were therefore averaged to create an anger index ($M = 2.45, SD = 1.08$). Scores on the SAM and anger index were significantly negatively correlated, $r(94) = -.53, p < .001$. Therefore, we collapsed these scales after reverse scoring SAM scores and standardizing scores on both measures.

**Aggressive behavior.** Participants were given the opportunity to volunteer for a follow-up study to help the experimenter complete his honor’s thesis. They were told, “If not enough participants volunteer, the follow-up survey cannot be conducted.” Thus,
participants could harm the experimenter by not volunteering for the follow-up study (Twenge, Baumeister, DeWall, Ciarocco, & Bartels, 2007). 19% of participants declined to volunteer. A funnel debriefing followed, which all participants passed.

Results

Preliminary Analyses

The groups did not differ on baseline affect, indicating that random assignment was successful ($p = .41$).

Next, we examined the effect of condition on self-distancing, which was significant, $F(2,91) = 5.88, p < .01, \eta^2 = .11$. As expected, participants in the self-distanced condition ($M = 4.07, SD = 1.17$) self-distanced more than did participants in the self-immersed condition ($M = 3.05, SD = 1.42$), $F(1,91) = 7.35, p < .01, d = 0.57$, and the control condition ($M = 2.94, SD = 1.60$), $F(1,91) = 10.20, p < .01, d = 0.67$. The latter groups did not differ, $p > .76$. Thus, it is possible for people to self-distance in the heat of the moment, immediately following provocation.

Primary Analyses

The omnibus $F$-test comparing the three groups was significant for hostile affect, $F(2,89) = 5.64, p < .01, \eta^2 = 0.11$, and implicit aggressive cognition, $F(2,89) = 4.10, p < .05, \eta^2 = 0.08$, controlling for baseline affect and gender.

We predicted that the self-distanced group would score lower on each of the dependent variables than participants in the self-immersed and control groups. We tested this prediction by performing planned contrasts that compared the self-distancing group
against the other two groups on each dependent variable. Preliminary analyses included
gender and the interaction between gender and group in the model, and included baseline
valence as a covariate. Because gender did not interact with group ($ps > .26$) we excluded
the interaction between gender and group from subsequent analyses. ANCOVAs were
used to analyze aggressive affect and implicit aggressive cognition; logistic regression
was used to analyze aggressive behavior.

As predicted, self-distanced participants displayed lower levels of implicit
aggressive cognition, $F(1,89) = 7.92, p < .01, d = 0.60$, and hostile affect, $F(1,89) = 7.50,$
$p < .01, d = 0.58$, compared to the self-immersed and control groups (see Figure 1). The
effect of self-distancing on aggressive behavior was in the predicted direction, but not
quite significant, $\chi^2(1, N = 94) = 2.41, B= 0.95, p \leq .12$, odds ratio = $2.60 – 13\%$ of
participants declined volunteering in the self-distancing condition compared to $28\%$ in
the other conditions.

Discussion

Experiment 1 showed that cueing participants to self-distance as they reflected
over the feelings they experienced immediately after being provoked reduced hostile
affect and implicit aggressive cognition. This is in line with earlier findings involving
self-distancing from past provocations (Ayduk & Kross, 2008; Kross, et al., 2005), and
suggests that self-distancing may be an effective tool in regulating aspects of aggression.
Although the effect of condition on aggressive behavior was in the predicted direction
with a non-trivial effect size, it did not reach conventional levels of significance using a
two-sided test. This can be attributed to two shortcomings of the measure. First, it was
fairly subtle, and our participants may have missed the notion that they could retaliate
against the experimenter by not volunteering. The high volunteer rate may be an
indication of this — 77% of participants volunteered to complete the follow-up study.
Second, the measure was dichotomous, which may have restricted the power to detect a
significant effect. Experiment 2 overcomes these weaknesses. To further avoid suspicion
that might be caused by having multiple measures of aggression-related constructs, we
only measured aggressive behavior in Experiment 2.
Chapter 2: Experiment 2

Method

Participants

Participants were 86 college students (35% male; $M_{\text{age}} = 21.0$, $SD = 2.4$; 47% Caucasians, 37% Asian American, 11% African American, 5% other) who received $15.

Procedure

Cover story. Participants were told that the researchers were studying the effects of music on team processes and imaginative creativity; they were tested individually, although they were told that they would be competing with another college student of the same sex. To make it more believable that there was a second participant, two experimenters were initially present, one for each participant. In addition, a tape recording of the second experimenter interacting with the other participant was played in an adjacent room.

Baseline affect. As in Experiment 1, participants completed the valence subscale of the SAM (Bradley & Lang, 1994) to measure of baseline affect ($M = 6.30$, $SD = 1.36$).

Provocation task. The provocation induction was the same as in Experiment 1 with three exceptions. First, participants were told that they would complete the anagram
task with their partner. They were told that this part of the study tested the effects of music on team cooperation; one of them would solve the anagrams and dictate the answers via the intercom to the other participant who would record their responses. Second, to create the illusion of random role assignment, the experimenter conducted a rigged “lottery” by letting the participant draw one of two pieces of paper out of a box (both papers contained the role of solving anagrams). Third, participants received pre-recorded provoking feedback from their gender-matched partner, using the same provoking feedback as in Experiment 1.

**Self reflection task.** Participants next completed the same self-reflection task administered in Experiment 1 (Recall Time: $M = 34.84 \text{ sec}, SD = 15.0$). They were again randomly assigned to a self-distanced ($n = 26$), self-immersed ($n = 27$), or no-perspective control group ($n = 33$), Self-distancing was then measured using the same two items, $r(86) = .60, p < .001$, used in Experiment 1 ($M = 3.28, SD = 1.45$).

**Aggressive behavior.** This part of the study ostensibly examined the effect of music on team competition. Participants were told that they would compete with their partner on a 25-trial game in which they had to respond to a visual cue faster than their partner, with the loser receiving a noise blast through a pair of headphones. The intensity and duration of the noise were determined by each participant at the beginning of each trial, from 60 dB (Level 1) to 105 dB (Level 10). A nonaggressive no-noise level was also offered (Level 0). Participants could also determine how long their partner suffered by setting the noise duration from 0 to 5 sec in 0.5 sec noise increments. This task effectively provides participants with a weapon that can be used as a means of revenge.
for the provocation received during the anagram task. In fact, the participant did not play against their partner; a computer controlled everything.

The construct validity of this task is well established (Anderson & Bushman, 1997; Bernstein, Richardson, & Hammock, 1987; Giancola & Zeichner, 1995), and has been used for decades (Taylor, 1967). We followed established procedures for scoring the measure. Specifically, to exclude any trials that could be contaminated by the participant’s motivation to reciprocate how their partner treated them we analyzed the noise intensity and duration on the first trial (Bushman, et al., 2005).

Noise intensity and duration on the first trial of the competitive reaction time task correlated highly, \( r(86) = .65, p < .001 \). Consequently, we standardized both variables, and then averaged them to create a single aggression index following prior research (Bushman, 2002; Bushman & Baumeister, 1998; Bushman, et al., 2005). A funnel debriefing followed, which all participants passed.

Results

Preliminary Analyses

The groups did not differ on baseline affect indicating that random assignment was successful \( (p = .56) \). As expected, the conditions differed in their average reported self-distancing, \( F(2,83) = 15.64, p < .001, \eta^2 = .27 \). Simple contrasts showed that participants in the self-distanced condition reported higher self-distancing \( (M = 4.33, SD = 1.38) \) than did participants in the self-immersed condition \( (M = 2.41, SD = 1.15) \), \( F(1,83) = 30.83, p < .01, d = 1.51 \) and the control condition \( (M = 3.17, SD = 1.24) \),
The latter two groups also differed, $F(1,83) = 5.41, p < .05, d = 0.63$, with participants in the control group scoring higher on self-distancing than participants in the self-immersed group.

**Aggression**

The omnibus $F$-test comparing the three groups on aggressive behavior was significant, $F(2,79) = 4.82, p < .05, \eta^2 = .11$, controlling for baseline affect and gender.

As in Experiment 1, we used the same planned contrast to test our hypothesis that participants in the self-distanced group would display lower levels of aggressive behavior compared to participants in the other two conditions.

As expected, participants in the self-distanced group displayed lower levels of aggression compared to the other groups, $F(1,82) = 9.17, p < .001, \eta^2 = 0.10$ (see Figure 2.1). Consistent with prior research, men ($M = 0.19, SD = 0.98$) were more aggressive than women ($M = -0.43, SD = 0.51$), $F(1,82) = 5.65, p < .05, \eta^2 = 0.06$. Gender did not interact with group ($p = .48$), so this term was excluded from the analysis.

**Discussion**

Experiment 2 was designed to overcome the limitations of Experiment 1. Using a well-established paradigm to measure aggression, we showed that taking a self-distanced perspective, in contrast to a self-immersed perspective and a control group reduced aggression against a provocateur. Thus, adopting a self-distanced perspective is an effective technique of controlling aggression, even in “in the heat of the moment.”
Chapter 4: General Discussion

Understanding how people can adaptively control aggressive impulses is a critical challenge. The current findings identify a specific psychological mechanism – self-distancing – that enables people to do this. In Experiment 1, participants who self-distanced immediately after being provoked displayed lower levels of self-report hostile affect and implicit aggressive cognition than did people who self-immersed or were in the no-perspective control group. In Experiment 2, participants who self-distanced, in contrast to those who self-immersed or were in the no-perspective control group, displayed less aggressive behavior against an ostensible partner.

From a basic science perspective, these findings extend prior research on self-distancing. They demonstrate that people can reflect from a self-distanced perspective “in the heat of the moment,” and that doing so leads to adaptive psychological and behavioral consequences. They also extend research on aggression. Research to date on aggressive rumination has focused almost exclusively on the role that distraction plays in reducing anger and aggression after provocation (Bushman, 2002; Rusting & Nolen-Hoeksema, 1998). The current findings highlight how people can neutralize aggressive thoughts, feelings, and behaviors while focusing on their emotions, and the situation at hand — by adopting a self-distanced perspective. This is noteworthy because distraction is often not feasible in the heat of the moment in daily life. For example, could Obama have
distracted himself during the Presidential debate with McCain without losing focus and appearing absent-minded, uninterested, and perhaps even slow-witted? Understanding how people can remain calm and reflect deliberately during such situations is an important issue – one that the current findings directly address.

Future Research

Although these findings raise multiple questions for future research, three stand out in our view as most pressing. First, what mechanisms underlie the aggression buffering effects of self-distancing? Second, how do self-distancing and distraction compare in their aggression regulation effects? Is one strategy easier to engage in or more effective? Third, are there long-term protective benefits associated with reflecting over provocations from a self-distanced perspective? Prior research indicates that when people reflect over negative autobiographical experiences from a self-distanced perspective they ruminate less over time and become less distressed when they think again about their experiences in the future (Ayduk & Kross, 2010b; Kross & Ayduk, 2008). Do these findings generalize to reflecting over intense provocations in the heat of the moment? Addressing these questions is important for refining knowledge concerning the mechanisms that underlie effective aggression regulation.

Conclusion

Aggression harms not only the individuals involved, but also society as a whole. Thus, research aimed at decreasing aggression is more important than ever. Although we cannot know for certain whether self-distancing helped Obama curb aggressive responses
during the Presidential debate, the current findings demonstrate that this process can help ordinary people regulate their aggressive impulses.
References


capacity are mechanisms underlying the provocation-aggression relationship.

*Journal of Personality and Social Psychology.*


Appendix: Figures
Figure 1. Adjusted means and standard errors for implicit aggressive cognition and change in hostile affect in Study 1. Capped vertical bars denote 1 SE.
Figure 2. Adjusted means and standard errors for aggressive behavior in Study 2. Higher scores indicate higher levels of aggression. Capped vertical bars denote 1 $SE$. 