LOVE AND LAUGHTER: ATTACHMENT STYLE AND THE USE OF HUMOR WHEN EMOTIONALLY SUPPORTING A RELATIONSHIP PARTNER

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Abstract

In romantic relationships, it is important for partners to master a range of social skills to support each other. Yet attachment research has focused mostly on reducing negative emotions without considering how positive processes, including humor, may contribute to the support process. I tested two hypotheses about the use of humor by analyzing videotaped couple interactions during which one partner disclosed a personal problem and the other partner responded. Because the data were taken from an experimental study in which cognitive depletion and experimentally enhanced security were manipulated, I also examined the effects of the manipulations on the use of humor. I predicted that participants who were more securely attached would use more positive humor, as would participants who received the security-enhancement manipulation. The results supported the predictions only weakly, suggesting a need to improve the coding system and study interactions that provide more opportunities for humor.

Keywords: attachment, anxiety, avoidance, humor, relationship satisfaction, couples, positive interactions, self-disclosure.

Introduction

HUMOR and its by-product, laughter, are valuable affect-regulation tools that can create a warm bond between individuals. Gervais and Wilson (2005) proposed that the function of laughter is rooted in the lives of our evolutionary primate ancestors, a hypothesis that is supported by the bonobo species' use of laughter as “a universal signal of well-being in a playful situation to help regulate social interactions” (Gervais & Wilson, 2005, p. 398; Zimmerman as cited in Beale, 2003, paragraph 8). Sharing this evolutionary history of social behavior, human infants across all cultures have the innate ability to show delight through laughter and, as they mature, to gradually become adept at employing humor in social interactions.

The attachments that infants form with caregivers affect their ability to regulate their own and others’ emotions as they grow older. The internal working models of self and relationships constructed through caregiver-infant interactions also affect later adult attachments by laying the foundations for how romantic partners perceive and react to their significant others’ behavior (Hazan & Shaver, 1987; Mikulincer & Shaver, 2007). In couple relationships, both partners usually become emotionally attached to each other and are likely to serve as each other’s care providers during difficult times, much like the way parental figures once cared for them.

In modern busy lives, the responsibility of supporting or caring for a partner often follows a cognitively or emotionally draining day. According to Gailliot (2010), showing sensitivity, responsiveness, and support to a needy partner requires cognitive effort and physiological sources of energy (e.g., blood glucose). Consequently, a mentally weary individual may find it difficult to be attentive, supportive, and responsive to a partner's
needs. Research from our laboratory (Mikulincer, Shaver, Sahdra, & Bar-On, 2013) has already shown that supportive care is affected by both a potential caregiver's security and his or her state of mental depletion. However, the previous data analyses did not address the possible role of humor in providing support, an issue that has been raised in a recent book by Nelson (2012). The purpose of the present study is to examine the influences of cognitive fatigue as well as attachment security on the frequency of potentially affect-regulating humorous responses to a partner's self-disclosure about a personal problem.

Laughter from an Attachment Theory Perspective

Bowlby (1973, 1982) posited that the ability to down-regulate negative emotions is one of the products of human attachment relationships. Drawing from various academic disciplines such as evolutionary biology, ethology, and developmental psychology, he theorized that an attachment bond between an infant and a parental figure (in his terms, an attachment figure) is formed by repeated occasions on which the infant’s expressions of fear or distress are followed by an alleviation of the negative emotion by an attuned caregiver's appropriate responses (Tidwell, Reis, & Shaver, 1996).

Subsequently research by Ainsworth, Blehar, Waters, and Wall (1978) led to the development of a system for categorizing infants’ attachment patterns based on observations of laboratory interactions between the infants and their mothers in a “strange situation.” By analyzing the varying infant reactions in what came to be called the Strange Situation Procedure – a 20-minute experimental protocol featuring the mother's separation from the infant and her return – Ainsworth et al. distinguished three different types of attachment: secure, anxious-ambivalent, and avoidant. A secure attachment results when the caregiver is consistently responsive, available, and caring. However, when a caregiver is inconsistently responsive, the infant’s attachment system becomes hyperactivated (a sign of anxious attachment), resulting in the infant exhibiting behaviors Bowlby referred to as “protest” (Bowlby, 1982; Bretherton, 1992). On the other hand, when a caregiver is frequently and consistently unavailable, the infant's attachment system becomes deactivated (a sign of avoidance), causing the infant to exhibit “detachment” behaviors (Dinero et al., 2011; Hazan & Shaver, 1987).

Bowlby's work (1973, 1982) focused almost exclusively on the down-regulation of negative emotional states without much discussion of the elicitation of positive emotions such as amusement. However, Schore (2003, p. 78) asserted that affect regulation is contingent upon “…not just the reduction of affective intensity, the dampening of negative emotions…[and] the reestablishment of security after a dysregulating experience and a stressful state; it is also the interactive amplification of positive affects, as in play states.” But research in the attachment field has yet to place an emphasis on the up-regulation of positive states, such as warmth, comfort, amusement, interest, and other such emotions that are likely to be important in any close relationship.

Positive affect regulation provided by a caregiver is important in establishing a feeling on the part of a child that his or her care provider can be viewed as a safe haven and secure base—important concepts in attachment theory. The theory proposes that having a safe haven and secure base allows a child's exploration/play system to function optimally. Furthermore, caregiving behaviors that intensify and up-regulate an infant’s state of positive arousal, including laughter, promote
not only a secure infant-caregiver attachment bond, but also aid in the infant’s neurological development (Nelson, 2012). Through positive arousal, attunement, and regulation, the caregiver’s mature and the infant’s immature endocrine and nervous systems undergo a process called “symbiotic entrainment” (Schore, 2003, p. 14). During this process, the caregiver’s nervous system regulates the infant’s nervous system by eliciting hormonal responses that up-regulate the infant’s positive feelings. A study supporting the existence of symbiotic entrainment found a positive correlation between the frequencies of 6- to 12-month-old infants’ laughter and the frequencies of their caregivers’ laughter (Zajka as cited in Nwokah et al., 1994). This link between the caregiver’s and infant’s nervous systems encourages the development of social and affect-regulation skills essential to navigating later interpersonal relationships (Nelson, 2005).

Humor and Self-Disclosure in Adult Attachment Relationships

As one enters adulthood, attachment bonds with previous caregivers are gradually replaced or greatly supplemented with attachments to peers and romantic partners. However, as Bowlby (1982; p. 350) pointed out, “attachment behavior does not disappear with childhood but persists throughout life.” Rather than remaining as isolated behaviors of childhood, attachment behaviors extend into adulthood and continue solidifying attachment bonds and regulating interpersonal affect in the context of adult attachment relationships. Similar to infants’ engagement in exploration and play, adults also benefit from being securely attached to a caring partner if they are to comfortably explore novel social environments and tackle demanding life projects (Feeney & Thrush, 2010).

In a secure adult relationship, individuals who encounter an anxiety-provoking problem will seek their partner and use him or her as a safe haven from distress and a secure base for exploring and solving the problem. Self-disclosure is an important part of this intimate process (Cutrona, 1996; Cutrona, Suhr, & MacFarlane, 1990; Pistrang & Barker, 1992). According to Reis and Shaver’s (1988) interpersonal process model of intimacy, intimacy is created through a dynamic process involving two primary components: the self-disclosure of personal information, thoughts, and feelings to a partner, and an understanding, validating, and caring response from the partner (Laurenceau et al., 1998; Reis & Patrick, 1996).

The main concern here is the possibility that humor may be part of the process of building and sustaining secure intimacy. The success of using humor in response to self-disclosure is contingent upon the self-discloser's interpretation of the partner's humorous response. If the self-discloser perceives the humorous response as understanding, validating, and caring, the interaction results in an increase in intimacy and positive affect. A study by Pistrang and Barker (1992) of cancer patients and self-disclosure to intimate partners found that patients with lower distress levels had partners who responded to their self-disclosures with humor (the causal direction of the association was not determined). This finding is consistent with a small but growing literature on humor in marriage (De Konig & Weiss, 2002; Lauer, Lauer, & Kerr, 1990; Ziv & Gadish, 1989).

A partner’s appropriate use of humor to cut through fear and anxiety and connect with a partner through shared positive feelings is likely to be conducive to greater intimacy in a relationship. However, humor might backfire, or cause damage, if it is used to avoid an important discussion of a partner’s problem or distress. Attachment research on adults (reviewed by Mikulincer & Shaver, 2007)
suggests that individuals who are more secure with respect to attachment (i.e., who score relatively low on measures of anxious or avoidant attachment), might be better able to use positive humor to demonstrate support when engaging in a discussion with a partner about his or her problems.

The purpose of the present study is to examine the relation between attachment insecurities (measured in terms of attachment-related anxiety and avoidance) and the frequency of positive humor exhibited in response to a romantic partner’s self-disclosure of a problem. My first hypothesis is that because relatively secure individuals are generally less defensive, more empathic, and more likely to have enjoyed previous relationships that involved warm humor and laughter, they will use humor effectively with their romantic/marital partner when discussing a personal problem.

Since the data for this study come from a larger project in which both cognitive depletion and feelings or thoughts related to security were manipulated experimentally, I will also examine how cognitive depletion and security enhancements prior to a video-recorded conversation affect a caregiver’s ability to show support by regulating mutual affect with humor. My second hypothesis is that the experimental condition in which the supportive (listening) partner was cognitively depleted and not security primed will show the lowest level of humor during the interaction with his or her self-disclosing partner.

Method

Participant couples were randomly assigned to one of four experimental conditions to explore the possible interactions between security priming, mental depletion, and dispositional attachment anxiety and avoidance as influences on supportive caregiving, including the uses of humor. The experimental design is a 2 x 2 factorial defined by mental depletion (yes, no) and experimentally enhanced attachment security (security priming, neutral priming).

Participants

The participants were 143 couples from the University of California, Davis (men’s mean age = 22.73 years, $SD = 16.85$; women’s mean age = 20.46 years, $SD = 2.37$). Their relationships averaged 24.23 months in length ($SD = 18.87$). In approximately two-thirds of the study’s sample, one member from each couple was recruited from an undergraduate introductory psychology participant pool and then was asked to recruit his or her romantic partner to participate in the study. The remaining third of the couples was recruited through campus advertisements and student websites. All couples were heterosexual and had been dating for at least six months at the time of recruitment. The couples varied in ethnicity, as is typical at UC Davis. Because of the relatively small sample size, I did not analyze the data in terms of ethnicity.

Materials and Procedure

The study began with a research assistant contacting the couples by phone and inviting them to participate in a study of personality, cognitive processes, and behavior in relationships. The research assistant explained that both partners would be asked independently to complete questionnaires on a website and then participate in an experimental session in a psychology laboratory, where they would perform a cognitive task and engage in a video-recorded 10-minute conversation. After receiving their consent, the assistant scheduled a date for the experimental session and gave each partner a personal code to enter the study’s website and complete the questionnaires described below.

Experiences in Close Relationships questionnaire (ECR). Each partner independently entered the website from home or work and completed
four randomly ordered scales. As a measure of attachment anxiety and avoidance, participants completed the 36-item ECR (Brennan, Clark, & Shaver, 1998; numerical scale reproduced here in Appendix A). They rated the extent to which each item was descriptive of their feelings in close relationships on a 7-point scale ranging from 1 (disagree strongly) to 7 (agree strongly). Eighteen items tapped attachment anxiety (e.g., “I worry about being abandoned”) and 18 items tapped avoidance (e.g., “I prefer not to show a partner how I feel deep down”). The internal consistency reliability (coefficient alpha) of these scales has been high in previous studies, around .90. In the present study, the alpha for the attachment anxiety scale was .90; for the attachment-related avoidance scale it was .88.

*Relationship Assessment Scale.* Each partner also completed the 7-item Relationship Assessment Scale (Hendrick, 1998; numerical scale reproduced in Appendix B), a brief measure of global relationship satisfaction. They were asked to rate the extent to which each item was descriptive of their relationship on a 7-point scale ranging from 1 (not at all) to 7 (very much). The coefficient alpha for this scale in the present study was .80.

*WHOTO Scale.* Participants also completed two measures designed to identify the names of attachment figures and acquaintances to be used in the priming task. In one measure, participants received a list of 100 first names displayed in an Excel worksheet and marked the names of people they knew. The second measure was a computerized version of the 6-item WHOTO scale developed by Fraley and Davis (1997), which asked participants to provide the first names of close relationship partners who serve certain attachment-figure functions. Specifically, they were asked to record in a separate Excel worksheet the first names of people to whom they sought proximity and who provide them with a safe haven (security in times of need) and/or secure base (a secure foundation for engaging in other activities, pursuing personal goals, etc.). For each item, participants wrote the first name of the person who best served the targeted function and labeled that person’s relation to them (e.g., mother, father, friend).

The second part of the experiment was conducted in the UC Davis Social Interaction Laboratory by two experimenters. The experimental sessions were similar to the laboratory paradigm used by Collins and Feeney (2000). Before coming to the laboratory, one partner in each couple was randomly assigned to the care-seeker role and the other to the caregiver role. When the couples arrived, they were informed that they would be video-recorded during an interaction in which one of them (the “care-seeker”) disclosed a personal problem to the other (the “caregiver”). The study’s procedures were briefly described and participants were asked to sign an informed consent agreement.

After participants signed the consent agreement, one experimenter took the caregiver to another room where security priming and cognitive depletion manipulations were applied. The second experimenter remained in the lab with the care-seeker, who was asked to think and write about a personal problem currently bothering him or her that the couple could discuss for ten minutes. Care-seeker participants were asked to not use personal problems that were focused on their relationship with the caregiver.

*Priming.* After entering the second room, the caregiver was seated in front of a computer monitor and informed that he or she would perform a 40-trial computerized cognitive task. This task manipulated security priming and cognitive depletion; each caregiver was randomly assigned to one of the four experimental conditions.

Cognitive depletion was manipulated using an experimental paradigm developed by
Gailliot et al. (2007). Caregivers assigned to the depletion condition completed a 40-trial Stroop color-naming task. On each trial, they were exposed to the name of a color (red, blue, or green) presented in the middle of the screen for 1000 ms. Each word was printed in one of two colors other than the one it named (e.g., the word red might appear in blue). Caregivers were asked to indicate, by pressing color-coded keys on the computer number keypad, the color in which each word was presented. This procedure has been shown in previous studies to create a condition of cognitive depletion, because the discrepancies between the color names and the colors in which they are presented causes considerable response conflict. Caregivers assigned to the no-depletion condition completed a control version of the Stroop task in which they received the same color words, but the color in which it was presented was the same one named by the word, making the task easy and non-stressful.

The two versions of the 40-trial Stroop task also included subliminal prime words. On each trial, a subliminal caregiver’s name was presented for 20 ms, which was not long enough to allow it to be consciously read, and it was then immediately masked with an XXX display and a target word. Caregivers were told that each trial would begin with an “x” in the middle of the screen, on which they should fixate, followed by a brief flash, which they could ignore, and then, after a brief pause, a target word. The procedure was identical to the one used by Mikulincer et al. (2001).

In each depletion condition, caregivers were randomly divided into two subconditions according to the name used as a subliminal prime on all 40 trials. In the acquaintance-priming condition, the prime was the name of a person known by the participant but not regarded as an attachment figure. In the security-priming condition, the prime was the name of the person who was most frequently mentioned as an attachment figure in the WHOTO measure (In cases where the top two names appeared equally often, the computer program chose one randomly). In cases where the romantic partner was nominated as the primary attachment figure on the WHOTO, the computer chose the second most frequently chosen person.

When the caregiver finished the Stroop task, the experimenter escorted him or her into the observation room, where the couple was reunited and told that the next part of the study would involve an interaction in which the care-seeker would talk about a personal concern or worry. Couple members were then video-recorded for up to ten minutes while they discussed the issue the care-seeker had selected. Finally, participants were debriefed and thanked for participating.

**Coding Interactions**

Independent judges coded the video-recorded couple interactions using the Specific Affect Coding System (SPAFF; Coan & Gottman, 2007), which I modified to focus on caregivers’ humorous responses. The coding scheme emphasized the verbal content of the interactions rather than nonverbal behavior. Every five-second interval of continuous behavior was coded as one unit of possible humor.

Coders were trained to focus on the frequency and types of humorous responses made by caregivers during the care-seeker’s self-disclosure and discussion of the personal problem. Humorous responses were categorized into two main categories: positive-affiliative and aggressive. Each interaction was coded by two coders, and in cases where they produced discrepant ratings, they discussed the reasons for each discrepancy and agreed on the most appropriate score (Before these meetings, independent codes for each interaction agreed in 71% of cases).

*Positive-affiliative humor.* Positive-affiliative humor (hereafter simply called affiliative
humor, for short) refers to the “essentially nonhostile, tolerant use of humor that is affirming of self and others and presumably enhances interpersonal cohesiveness and attraction through [the tendency] to say funny things, to tell jokes, and to engage in spontaneous witty banter in order to amuse others, to facilitate relationships, and to reduce interpersonal tensions” (Martin et al., 2003, p. 53).

**Aggressive humor.** Aggressive humor is the use of humor for the purpose of criticizing or manipulating others, as in sarcasm, teasing, ridicule, derision, or disparaging humor (Martin et al., 2003, p. 54). This type of humor is viewed as a means of enhancing the self at the expense of others. Because there turned out to be very few instances of aggressive humor in the data available for this study, I will focus only on affiliative humor in the present paper.

**Results**

**The Effects of Attachment Insecurities on the Use of Humor**

The first hypothesis was that affiliative humor would be negatively associated with dispositional attachment insecurities. The results are shown in Table 1a for the caregivers only, and in Table 1b for all of the participants. The only hint of the predicted effects appears in the negative Pearson correlation of -.137 (p = .105) between avoidance and affiliative humor in the analysis of caregivers only. This suggests, as expected, that more avoidant caregivers show less warm, affiliative humor while listening and reacting to their partners’ problems. The effect is not strong, however, which might be partly due to the imprecision of the measure of affiliative humor used in this study (an issue addressed in the Discussion section).

I also conducted a hierarchical regression analysis predicting affiliative humor, among caregivers, from both anxiety and avoidance and their interaction. The model was not significant, $F(3,138) = 9.946, p = .125$, but the largest beta coefficient, -.14, $p = .101$, was associated with the interaction term, suggesting that affiliative humor was used less by caregivers who scored relatively high on both anxiety and avoidance.

These results, while insufficient to fully support my hypothesis, are in the predicted direction and suggest that further research, with more precise humor measures, might show that attachment-related avoidance or a combination of avoidance and anxiety is associated with less use of warm, affiliative humor.

**Effects of the Experimental Manipulations on Humor Use**

Because the data used for the present study were taken from an experimental study in which cognitive depletion (mental fatigue) and security priming were manipulated, it was possible to see whether the experimental manipulations had an effect on humor. I used a two-way analysis of variance to analyze the affiliative humor variable as a function of security priming and cognitive depletion. The only effect that approached significance was the one for cognitive depletion, $F(1,274) = 2.980, p = .085$. As shown in Figure 1, there was less affiliative humor when caregivers had undergone the depletion manipulation. As can be seen in the figure, there was also a hint of the predicted interaction, because the use of affiliative humor was highest in the experimental condition in which caregivers received security priming but were not cognitively depleted. Humor levels were lowest in the experimental condition in which caregivers were depleted but not security primed. So again, the results leaned in the expected direction but were not statistically significant.
The Role of Relationship Satisfaction in the Prediction of Humor

Although I proposed no hypotheses about relationship satisfaction, I ran correlational analyses to see whether satisfaction was associated with the use of affiliative humor, and whether satisfaction was predictable from attachment anxiety and avoidance, as has been found in other studies (reviewed by Mikulincer & Shaver, 2007). The correlation between relationship satisfaction and using affiliative humor was .147, *p* = .015. The correlation between satisfaction and attachment anxiety was -.18, *p* = .003; between satisfaction and avoidance it was -.327, *p* < .001 (The higher negative correlation for avoidance, compared with anxiety, is compatible with previous studies; Mikulincer & Shaver, 2007).

Discussion

The purpose of this study was to begin to study the role of humor in supportive couple interactions and its possible connection with attachment security and relationship satisfaction. Contrary to my first hypothesis, the two dispositional attachment scales, measuring attachment anxiety and avoidance, did not significantly predict the use of warm, affiliative humor, although there was some indication that avoidance was associated with less use of humor. Whereas the failure to obtain significant results might mean that attachment security is not related to the use of humor, it is also possible that the situation created for this experiment or the humor coding system I devised were not optimal for encouraging and detecting relational humor. The situation was one in which the spotlight was on the self-disclosing partner’s discussion of a problem. Thus, the caregiver’s normal behavior may have been somewhat constrained by his or her role, and the knowledge that the session was being video-recorded. A different situation might have allowed less constrained behavior.

As for the coding scheme, there was none in the humor literature that suited my needs in this study, so it was necessary to adapt one for my purposes. As a result, the coding scheme I used was one that had not undergone pilot testing or peer review. It may therefore not have been ideal. Future studies should be preceded by more pilot testing and validation analyses. Because several of my results were in the predicted direction, future studies with more sensitive and validated measures might yield stronger results in the predicted direction.

Moreover, due to both time constraints and the immense volume of verbal and physical behaviors that occurred during the social interactions we recorded, I decided to focus on verbal behavior, which is generally less subtle than laughter and facial movements (i.e., smiling) and requires fewer subjective interpretations on the part of coders. A future study with a longer timeframe could include the coding of nonverbal expressions of humor. It seems likely that humor plays an important role in high-functioning relationships, as indicated by the significant correlation I found between relationship satisfaction and the use...
of humor, but it may take a lot of non-humor labor to figure out exactly what that role is. Because attachment anxiety and avoidance, especially avoidance, were negatively related to relationship satisfaction in the present study, there are hints that insecurity may reduce relationship quality, which then makes warm humor less likely, but this more complex possibility can only be examined in a larger-N study. I hope that this study spurs the curiosity of other researchers who can examine the use of humor in close relationships in greater detail.
Tables and Appendices

Table 1a: Correlations between the Attachment Insecurity Measures and the Use of Two Kinds of Humor (Caregivers Only)

<table>
<thead>
<tr>
<th>Types of Humor</th>
<th>Attachment Anxiety</th>
<th>Attachment Avoidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affiliative</td>
<td>-.087</td>
<td>-.137*</td>
</tr>
<tr>
<td>Aggressive</td>
<td>-.072</td>
<td>-.049</td>
</tr>
</tbody>
</table>

*p = .105

Table 1b
Correlations between the Attachment Insecurity Measures and the Use of Two Kinds of Humor (All Participants)

<table>
<thead>
<tr>
<th>Types of Humor</th>
<th>Attachment Anxiety</th>
<th>Attachment Avoidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affiliative</td>
<td>-.013</td>
<td>-.084</td>
</tr>
<tr>
<td>Aggressive</td>
<td>-.044</td>
<td>.003</td>
</tr>
</tbody>
</table>

Appendix A: Numerical Scale for the Experiences in Close Relationships Scale (ECR)

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Disagree Strongly</em></td>
<td><em>Disagree</em></td>
<td><em>Disagree Slightly</em></td>
<td><em>Neutral/Mixed</em></td>
<td><em>Agree Slightly</em></td>
<td><em>Agree</em></td>
<td><em>Agree Strongly</em></td>
</tr>
</tbody>
</table>

Appendix B: Numerical Scale for the Relationship Scale

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Not at all</em></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>Very Much</td>
</tr>
</tbody>
</table>
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First and foremost, I would like to thank Dr. Phil Shaver for his generous guidance of my work. His patience and great sense of humor have helped make a challenging project less overwhelming. I would also like to thank the members of the UC Davis Social Interaction Lab for their contributions, as well as the members of the UC Davis Developmental Research Center for their huge support in the development of this project. I am also very grateful to my family and friends for enduring my periods of frustration while creating this thesis.

References Cited
Gailliot, M. T. (2010). The effortful and energy-demanding nature of prosocial behavior. In M. Mikulincer & P. R. Shaver (Eds.), Prosocial motives, emotions, and behavior: The better angels of our nature (pp. 169-180).


