**Narcissism Distorts the Fading Affect Bias in Autobiographical Memory**

**Abstract**

The Fading Affect Bias (FAB) occurs when the affect associated with personal events fades differentially across time: Positive affect fades slower than negative affect. Three studies examined whether the magnitude of the FAB is moderated by narcissism. Results from Study 1 (diary method, *N* = 26) showed that low narcissism participants evidenced a large FAB, but high narcissism participants evidenced a reversed FAB. Results from Study 2 (retrospective recall method, *N* = 110) showed that low narcissism participants evinced a large FAB, and that the FAB diminished or dissipated as narcissism increased. Results from Study 3 (retrospective recall method, *N* = 83) showed that high narcissists evinced a FAB when they recalled achievement-themed autobiographical events, but evinced a reversed FAB when they recalled communal-themed events. These findings occurred independently of event rehearsal frequency. Results are discussed in terms of the idea that emotion regulation efforts may be disrupted in narcissists.

*Keywords*: fading affect bias; autobiographical memory; narcissism; emotion regulation

**Narcissism Distorts the Fading Affect Bias in Autobiographical Memory**

 The recall of autobiographical events is often associated with strong affect. However, the affect associated with autobiographical memories is such that negative affect tends to fade faster than positive affect. This pattern of differential affective fading has been termed the *Fading Affect Bias* (*FAB*; Walker, Vogl, & Thompson, 1997).

This effect was described long ago (Cason, 1932; Holmes, 1970), and has since been examined systematically in a variety of contexts. The bias occurs regardless of whether events are harvested from diaries, from free retrospective recall, or from cued retrospective recall. The FAB also occurs across various ways of measuring affect (Ritchie & Batteson, 2013; Ritchie & Skowronski, 2008; Ritchie, Skowronski, Wood, Walker, Vogl, & Gibbons, 2006; Ritchie, Skowronski, Hartnett, Wells, & Walker, 2009; Walker, Skowronski, & Thompson, 2003; Walker, Skowronski, Gibbons, Vogl, & Thompson, 2003). Moreover, research by Landau and Gunter (2009) suggests that a FAB occurs regardless of whether autobiographical events are collected within-subject or between-subjects and regardless of whether ratings of the affect associated with event memories are obtained before or after ratings of the affect associated with events when they occurred. Similarly, research by Ritchie et al. (2009) suggests that a FAB effect occurs regardless of whether the event-related emotions assessed were active (elated, angry) or passive (calm, sad), and that affect arousal level, while related to the overall fading of affect, was unrelated to the FAB. Additionally, Ritchie et al. (2009) found that dispositional mood and personal theories about how emotions change across time each moderated the FAB, yet a FAB occurred for events even when those personal theories were statistically accounted for.

 However, the FAB is not a ubiquitous phenomenon. For example, its emergence is related to the characteristics of the person recalling the events: The FAB is known to be small or nonexistent for individuals who ingested intoxicating substances within 24 hours of event recall and affect ratings (Ritchie & Skowronski, 2008). However, especially relevant to this article are those studies that link the magnitude of the FAB to elements of the self. For example, increased levels of dysphoria are associated with substantial reduction of affective fading for negative events and acceleration of fading for positive events, patterns that minimize or eliminate the FAB in dysphoric individuals (Walker et al., 2003). Similarly, increased levels of anxiety can be associated with reduced affective fading for both positive events and negative events (Walker, Yancu, & Skowronski, 2014). The locus of these effects has typically been in the ratings of current affect but this is not always the case. For instance, psychopathy was found to reduce participants’ experience of affective intensity for both the initial event experience and its subsequent recollection (Burrow, Currence, Lemus, DeBono, Crawford, & Walker, 2014).

The results of other studies show that the FAB is linked to the perceived self: The more positive/stable/secure the perceived self, the greater the FAB (Ritchie, Sedikides, & Skowronski, 2014; Ritchie, Skowronski, Cadogan, & Sedikides, in press). Another study showed that an event’s importance to the self-concept moderates the FAB: The more important to the self that a person judges an autobiographical event, the smaller the FAB evinced by that event (Ritchie et al., 2006). Further, the causal influence of the self on the FAB was verified in studies conducted by Skowronski, Sedikides, Xie, and Zhou (2013). They showed that manipulations that altered an individual’s current perceptions of the self also altered the emotions prompted by event recall.

 The present research extends such ideas by examining the extent to which a FAB varies by an individual’s level of narcissism (Baumeister & Vohs, 2001; Gramzow & Willard, 2006; Twenge, 2006). Narcissism is associated with an inflated sense of self, expressions of arrogance, the tendency to exploit or demean others, and a sense of entitlement (Morf & Rhodewalt, 2001). Examination of whether the FAB varies by an individual’s level of narcissism is prompted by two theoretical perspectives.

One perspective on the relation is derived from current theory that links the FAB to the self (Ritchie et al., 2014; Ritchie et al., 2006). For example, Walker and Skowronski (2009) contended that the self-enhancement motive and the self-protection motive both drive the self’s attempt to manage the affect associated with event recall. These tendencies ought to be especially strong in narcissistic individuals. That is, to maintain a “feel-good-about-myself” high, narcissists may over-indulge in self-focused, ego-centric, self-aggrandizing reminiscence, over-emphasizing the good from positive events and drastically minimizing the bad from negative events. Accordingly, one straightforward prediction is that the self-enhancing tendencies of narcissism may magnify the FAB: in comparison to non-narcissists, narcissists should report especially high levels of positive affect, and especially low levels of negative affect (e.g., an enhanced FAB) when recalling their autobiographical events. This prediction about the enhanced magnitude of the FAB in narcissists is also consistent with a view that contends that the high self-esteem of narcissism is often associated with a number of psychological benefits (e.g., Campbell, Rudich, & Sedikides, 2002; Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004).

However, there is an alternative view of the narcissism-FAB link that harkens back to the foundation of narcissistic personality disorder (Kohut, 1968). This view relies on the notion that narcissism extends beyond inflated self-esteem and reflects a psychological illness prone to disordered patterns of thought and behavior (Twenge, 2006; Vazire & Funder, 2006). For example, narcissists are prone to being anti-authoritarian (non-conformists, disrespectful, disobedient). When their sense of superiority or entitlement is threatened, narcissists tend to rebel, and become deceptive and manipulative. When their sense of self-esteem is threatened, narcissists are prone to confrontation, violence, and self-destruction (Besser & Ziegler-Hill, 2010; Vaillancourt, 2013). Indeed, Baumeister and Vohs (2001) characterized narcissism as an addiction to self-esteem. Collectively, these tendencies suggest that high levels of narcissism may be associated with more drawbacks than benefits, and assuming that the FAB generally reflects positive psychological functioning, these drawbacks might induce narcissists to exhibit a small FAB, or even no FAB at all. This same prediction also falls out of a proposed link between effectiveness at emotion regulation and the magnitude of the FAB. That is, Walker and Skowronski (2009) suggest that the FAB may reflect effective emotion regulation, so that those who are poor at affect regulation should evince a reduced FAB. This idea is relevant to narcissism because it has been suggested that narcissists, despite their inflated sense of self-esteem, are poor at emotion regulation: High levels of narcissism have been linked to high levels of stress, anxiety, depression, and other affective disorders, as well as to reduced levels of happiness and life satisfaction (Twenge, 2006). Thus, a from an emotion regulation view, a link between high narcissism and a diminished FAB seems plausible.

To test these two competing perspectives, three studies were conducted. These examined the extent to which the FAB varied by an individual’s level of narcissism. Across studies, we also examined a possible mechanism by which such effects might occur: Event rehearsal. Previous research has demonstrated that the more often individuals rehearsed their personal events, the larger the FAB (Ritchie et al., 2006; Skowronski, Gibbons, Vogl, & Walker, 2004; Walker, Skowronski, Gibbons, Vogl, & Ritchie, 2009).

We considered the possibility that narcissism might be related to the FAB because it might also be related to the frequency with which positive events and negative events are rehearsed. On the one hand, narcissistic individuals may rehearse positive events more often than they rehearse negative events, but they may show this tendency to an even greater degree than non-narcissists. Such tendencies would seem to be a logical outcome of narcissists’ chronic need to feel good about themselves. On the other hand, narcissistic individuals may rehearse negative events as often as (or even more than) they rehearse positive events, which could minimize the FAB. This may occur because narcissists feel especially insulted or threatened by negative events, which may prompt narcissists to ruminate about the events. One goal of such rumination might be to plot ways to restore self-esteem (e.g., via revenge).

Of course, there is a third possibility. As suggested by results of recent research by Ritchie and Batteson (2013), event rehearsal may have little to no impact on the FAB, so it may have no impact on the relation between the FAB and narcissism.

**Study 1**

**Method**

**Participants.** A convenience sample of twenty-six African-American students and two Caucasian students, all attending Winston-Salem University, participated in this study (18 females, 8 males). Participants were between the ages of 18 and 38 years, and were recruited from upper division psychology courses. Each participant reviewed and signed an Informed Consent agreement prior to taking part in the study. The study design complied with the requirements of the school’s Institutional Review Board, in accordance with the Ethical Principles of Psychologists and Code of Conduct (American Psychological Association, 2002).

**Recall procedure.** Participants kept an event diary for five days. They were instructed to record two events each day: One positive event and one negative event. The diary-keeping period began on a Thursday and concluded on the following Monday. On the same day that they recorded both events, they rated each of their events for affect pleasantness (described below). At the end of the recording period, participants submitted their diaries to a research assistant. In all, participants submitted as few as three events to as many as 11 events; the mode was 10 events. The total tally was 109 negative events and 114 positive events. After a one-week retention interval, each participant was presented with their diary events in a random order (they were not shown their initial affect ratings). They rated each event for affect at recall and event rehearsal frequency (described below).

**Initial and current event affect.** Participants rated initial affect for an event on the same day that an event occurred. They rated the current affect for each event following the one week retention interval. The initial affect rating referred to the affect associated with an event at its occurrence. The current affect rating referred to the affect that was prompted when an event was recalled. Each rating was made on a 7-point scale from -3 (*Extremely Unpleasant*) to 3 (*Extremely Pleasant*), with 0 being *Neutral*. Affect change was calculated for each event by subtracting current affect from initial affect. Positive values indicate faded affect, negative values indicated flourishing affect, and values of ‘0’ indicated no change or fixed affect.

 **Narcissism**. Prior to the diary-keeping task, each participant rated 40 items from the **Narcissistic Personality Inventory** (NPI-40; Raskin & Terry, 1988). To complete the inventory, participants each read a series of paired items and selected the option that best described how they thought about their own self. An example item, in which the narcissistic response is option B, is: “[A] I try not to be a show off” or [B] I am apt to show off if I get the chance.” We summed the narcissistic responses, such that higher scores suggest higher self-reported narcissism. In the present study, the items evinced good internal consistency, Cronbach’s *α* = .83.

**Event rehearsal**. After the passage of the one-week retention interval, participants also rated how much they had thought about each event since it had occurred. Ratings were made on a 7-point scale ranging from 1 (*I have not thought about the event at all*) to 7 (*I have thought about this event several times a day*).

**Results and Discussion**

 **Analytic strategy**. The data were clustered, with multiple events nested within each participant. To account for between-person effects we included in each model a nominal-level person variable. Thus, the results we report cannot be accounted for by recourse to between-subjects variance in the events that each participant recalled and rated. We examined the variables of interest in a mixed design that incorporated within-persons, event-level ratings (i.e., event affect and event rehearsal per event valence) and between-persons, dispositional narcissism. The analysis examined how the variable of event valence, the variable of dispositional narcissism, and the interaction between the two variables predicted the affect change scores.

Also, in this study, prior to analysis we removed affect change scores that were negative (i.e., felt more intensely at later recall than on the day the event occurred). Such events, termed elsewhere as *affect flourishing* (Ritchie et al., 2009; Walker & Skowronski, 2009), are typically the minority in FAB studies. In this sample, we removed 24 of such events from 251 (less than 10%) total events. The analysis included events with affect that either did not change (35% of the events) or faded (55.4% of the events). A similar approach was used by Gibbons et al. (2013). For completeness, we re-tested the hypothesis with the affect flourishing events in the dataset; inferential conclusions from the analyses did not vary from the conclusions derived from the analyses that we report.

 To test our moderation hypothesis in each study, we employed the Process macro for IBM SPSS (Hayes, 2013; Hayes, Glynn, & Huge, 2012). In Study 1, we tested Process model #1, because it enabled us to examine the relation between event valence (negative versus positive) and perceived affect change (i.e., fading) along the continuum of participants’ ratings on the NPI. Specifically, we not only examined the FAB at the 10th, 25th, 50th, 75th, and 90th percentiles on the NPI, via the Johnson-Neyman technique we also examined exactly where along the NPI continuum the FAB may be augmented. This latter technique elucidates exactly where along a scale (i.e., the NPI) an effect (i.e., the FAB) is smaller or larger, or does and does not occur (Preacher, Curran, & Bauer, 2006), denoted as regions of non-/significance.

**Analysis results.** A FAB occurred (see Table 1 for means): The affect associated with negative autobiographical events faded more (*M* = 1.09, *S.E*. = .09) than the affect associated with positive events (*M* = 0.86, *S.E*. = .09), *F*(1, 196) = 3.46, *p* = .06, albeit non-significant statistically. More important is the finding that narcissism moderated the relation between event valence and affect fading, *B* = 0.03 (*S.E*. = 0.01), *t* = 3.78, *p* = .0002, *ΔR2* = .06.

Decomposition of the moderation results revealed that participants who rated in the 10th percentile on the NPI (a rating of 12) evinced the largest FAB, *B* = -0.44 (*S.E*. = 0.10), *t* = -4.05, *p* = .0001; those in the 25th percentile on the NPI (a rating of 18) evinced a large FAB, *B* = -0.20 (*S.E*. = 0.06), *t* = -3.05, *p* = .003; those in the 50th (a rating of 21) and 75th (a rating of 25) percentiles on the NPI evinced no FAB, *ps* > .14; and, participants in the 90th percentile on the NPI (a rating of 29) evinced a reversed-FAB, *B* = 0.22 (*S.E*. = 0.10), *t* = 2.09, *p* = .03. Moreover, The results produced by the Johnson-Neyman technique revealed that participants who rated at, and below, a rating of 20.18 on the NPI evinced a significant FAB, *B*s from -0.04 to -0.56, *p*s from .05 to .0001. Also, participants who rated at, and above, a rating of 28.45 on the NPI evinced a significant reversed-FAB, *B*s from 0.20 to 0.38, *p*s from .05 to .008.

To explore whether this moderation effect could be accounted for by overall rehearsal we first examined the correlation between overall rehearsal and affect change. The correlation revealed an inverse relation that was significant, *r*(223) = -.29, *p* < .0005. We then entered this rehearsal variable into the analytic model. Results showed that the relation between narcissism and the FAB cannot be explained by perceived event rehearsal. As in the initial analysis, results from the new analysis showed that narcissism interacted with event valence such that the NPI ratings moderated the relation between event valence and affect fading, *B* = 0.04 (*S.E*. = 0.01), *t* = 4.40, *p* < .0005, *ΔR2* = .07. Moreover, the analysis results showed that there was no three-way interaction between event valence, perceived event rehearsal, and the NPI: Narcissism moderated the FAB regardless of how often participants reported rehearsing their events. This latter finding is consistent with results about the influence of perceived event rehearsal frequency on the changes in event-related affect (Ritchie & Batteson, 2013).

Collectively, the findings from Study 1 show that individuals who exhibit low to moderate levels of narcissism also evince a large or moderate FAB, which in theory is an indication of adaptive emotion regulation. The results also suggest that as narcissism increase, the FAB diminishes, and that at very high narcissism levels a reversed-FAB emerges. This finding is consistent with the idea that narcissism might be associated with maladaptive thinking and poor emotion regulation. These findings do not appear to be accounted for by event rehearsal tendencies.

In an attempt to replicate these findings, a second study was conducted. To reduce the possibility that the Study 1 results were caused by details of method, Study 2 used a research method that was somewhat different from the method used in Study 1.

**Study 2**

**Method**

**Participants.**  A convenience sample of 110 African-American students, all from Winston-Salem State University, participated in this study. The sample included 78 women and 32 men between the ages of 18 and 41, all recruited from General Psychology courses. Each participant reviewed and signed an Informed Consent agreement prior to taking part in the study. The study design complied with the requirements of the school’s Institutional Review Board, in accordance with the Ethical Principles of Psychologists and Code of Conduct (American Psychological Association, 2002).

**Recall procedure**. In a single session study**,** each participant was given 20 minutes to recall five positive events from their own life and five negative events from their own life. Each participant was asked to describe each event in four to 10 sentences and to include event details (e.g., time, location, sensory information) in the description.

**Initial and current event affect.** For each event, participants rated both the affect at the event’s occurrence and the affect that was prompted when each event was recalled. The rating scales and the affect change score calculated from those ratings were the same as those described in Study 1.

**Narcissism**. Participants completed the brief Narcissistic Personality Inventory (NPI-16; Ames, Rose, & Anderson, 2006), a shortened version of the original NPI-40 (described in Study 1). The NPI-16 was administered to half of the participants *before* memory recall and to half of the participants *after* memory recall. The items evidenced adequate internal consistency, Cronbach’s *α* = .74.

**Event rehearsal**. The same rehearsal item from Study 1 was again used in Study 2.

**Results and Discussion: Study 1 Replication**

 **Analytic strategy**. The data were again clustered, with multiple events nested within each participant. Hence, for the main analysis we relied on the analytic approach described in Study 1. In this study, we again tested Process model #1, because it enabled us to examine the relation between event valence (negative versus positive) and perceived affect change (i.e., fading) along the continuum of participants’ ratings on the NPI.

 **Analysis results.** A FAB occurred: The affect associated with negative autobiographical events was perceived to fade more (*M* = 1.01, *S.E*. = .05) than the affect associated with positive events (*M* = 0.57, *S.E*. = .05), *F*(1, 1035) = 37.79, *p* < .0005. More importantly, as in Study 1, narcissism moderated the relation between event valence and affect fading, *B* = 0.02 (*S.E*. = 0.01), *t* = 2.26, *p* = .02, *ΔR2* = .01. Figure 2 presets a decomposition of this interaction. It shows that participants who rated in the 10th percentile on the NPI (a rating of 1) evinced the largest FAB, *B* = -0.33 (*S.E*. = 0.06), *t* = -5.43, *p* < .0005; those in the 25th percentile on the NPI (a rating of 3) evinced a FAB, *B* = -0.28 (*S.E*. = 0.04), *t* = -6.36, *p* < .0005; those in the 50th percentile on the NPI (a rating of 5) evinced a FAB, *B* = -0.22 (*S.E*. = 0.03), *t* = -6.32, *p* < .0005; those in the 75th percentile on the NPI (a rating of 7) evinced a FAB, *B* = -0.16 (*S.E*. = 0.04), *t* = -4.02, *p* = .0001; and finally, those who rated in the 90th percentile on the NPI (a rating of 9) evinced the smallest FAB, at marginal significance, *B* = -0.11 (*S.E*. = 0.06), *t* = -1.94, *p* = .053. Results produced by applying the Johnson-Neyman technique to the data revealed that individuals who rated at, and above, a rating of 8.96 on the NPI evinced no FAB, *B*s from -0.11 to -0.00, *p*s from .050 to .96.

 We conducted an additional analysis to test if the narcissism-FAB relation might be attributable to the extent to which events were perceived to have been rehearsed. As in past research, perceived event rehearsal frequency and affect change were inversely correlated: The more often a person thought they rehearsed an event, the less that the event’s affect faded, *r*(1016) = -.19, *p* < .0005. Hence, we included event rehearsal as an additional variable in our regression model. Importantly, controlling for perceived event rehearsal, the interaction between event valence and narcissism remained statistically significant, *B* = 0.03 (*S.E*. = .01), *t* = 2.48, *p* = .01.

These findings from Study 2 conceptually replicate the findings of Study 1 and show that individuals who exhibit low to moderate levels of narcissism also evince a large or moderate FAB, which in theory is an indication of adaptive emotion regulation. The results also suggest that as narcissism increases, the FAB diminishes. This latter finding is consistent with the idea that narcissism might be associated with maladaptive thinking and poor emotion regulation. The replication of the Study 1 results in Study 2 are also encouraging because the methods used in Study 2 diverge from those used in Study 1 (Study 1 = diary study and full version of the narcissism scale; Study 2 = retrospective memory study and brief version of the narcissism scale). Such convergence enhances the chances that our results are not an artifact of method.

**Study 2 Exploratory Analyses: Agency and Communion**

In addition to replicating the results of Study 1, we conducted additional analyses on the data from Study 2 to take it in a new direction. We wondered whether some of the qualities of events that were reported by participants would also be linked to differences in the magnitude of the FAB that emerged. This new direction was derived from the idea that narcissistic individuals may think in different ways about their pasts than non-narcissists. One possibility is that narcissists may chronically ruminate on events in ways that emphasize the accomplishments of the self, while non-narcissists may think more broadly about themselves in a social context.

Our exploratory analyses in Study 2 focused on the agentic qualities of events and on the communal qualities of events. As illustrated by McAdams et al. (1996), agentic and communal themes often are present in autobiographical memories: In three studies that included more than 350 community adults and college students, participants provided narratives of personally important life events. These were coded to detect themes related to agency (self-mastery, status, achievement/responsibility, and empowerment) and communion (love/friendship, dialogue, care/help, and community). These themes emerged frequently: 21% of reported events reflected agency themes, and 30% of events reflected communal themes.

 We hypothesized that the agency/communion distinction may be especially germane to narcissism. We began with the idea that the FAB is especially small when recalled events are perceived to be self-caused (Ritchie et al., 2006). Thus, because narcissists seem to be especially preoccupied with protecting the self and enhancing the self, these motives should be especially strong in narcissists for events that have direct applicability to the self (agentic events). This reasoning suggests that while non-narcissists ought to show little or no FAB after recalling agentic events, narcissists ought to exhibit a large FAB after recalling agentic events. A similar view suggests that narcissistic individuals do not relish past events that involve other individuals, at least not positive events. They may, however, take some delight in others’ negative events in the present, especially if the person(s) associated with a negative event could be blamed by the narcissist for making it a negative event. Thus, there is reason to suspect that that the communal content of events may moderate the relation between the narcissism and the FAB in a different way than the expected additional moderation expected from the agentic content of events.

However, there is an alternative view. A hallmark of narcissism is excessive self-focus. Events may always be perceived to especially relevant to the narcissistic self, regardless of whether events are agentic-themed or communally-themed. Incorporating the Ritchie et al. (2006) findings suggesting that high event self-importance is associated with a small FAB, from this view it could be that narcissists will evince an especially small FAB, regardless of whether events are agency-themed or communal-themed.

To get some preliminary insight into these ideas, we conducted new analyses that re-examined the Study 2 data through the lenses of agency and communion. To begin this approach, three coders shared the task of reading 1,078 handwritten events that participants provided for Study 2. Using the descriptions of agency and communion given by McAdams, Hoffman, Day, and Mansfield (1996), coders rated each event for agency themes and communion themes, responding to two items: “In this event description, to what extent did the person express an indication of achievement, accomplishment, recognition or prestige?” and “… an indication of friendship, enjoyment of experiences with others, understanding between people, or social acceptance?”. Responses were made on a 4-point scale (1 = *not at all*, 2 = *a little*, 3 = *a moderate amount*, 4 = *a lot*).

In the present study, the mean agency rating was 2.30 (*SD* = 1.34), the mean communion rating was 2.38 (*SD* = 1.28), and the correlation between them was large, *r*(1078) = .88, *p* < .0005. Hence, each follow-up test included both variables in our analytic models, one acting as a potential moderator of the FAB, the other acting as a covariate. Also, neither agency nor communion correlated with the NPI, *r*(1078) = -.03 and *r*(1078) = -.02, *p*s > .39, respectively.

We extended the idea that narcissism disrupts the FAB by seeing if this disruption effect was further moderated by the extent to which an event contained agentic themes, and by the extent to which an event contained communal themes. We used Process model #3 (Hayes, 2013) to do so because it enabled us to examine not only the interaction between event valence and the NPI composite, the interaction between valence and agency, controlling for communion, event rehearsal, and event selection differences between-persons, but also the two-way interactions and three-way interactions between valence\*agency\*narcissism and between valence\*communion\*narcissism, controlling for the aforementioned variables). Neither model evinced a statistically significant three-way interaction: the model for agency ratings, *B* = 0.01 (*S.E*. = .04), *t* = 0.09, *p* > .92; and, the model for communion ratings, *B* = 0.00 (*S.E*. = .02), *t* = 0.12, *p* > .90. These results do not support the idea that the moderation of the FAB by narcissism level was further dependent on the agentic or communal content of events.

However, some evidence did emerge suggesting that event content was important to the FAB. The model that included the two way interaction between valence and communion indicated that it was significant, *B* = 0.13 (*S.E*. = 0.06), *t* = 2.08, *p* = .03.

To decompose this interaction, we further examined the magnitude of the FAB across levels of the NPI and across levels of communal themes among event descriptions. At the lowest level of communal theme (1 = *not at all*), the FAB decreased across the spectrum of the NPI. This interaction revealed that participants who rated in the 10th percentile on the NPI (a rating of 2) evinced the largest FAB, *B* = -0.48 (*S.E*. = 0.13), *t* = -3.66, *p* = .0003; those who rated in the 25th percentile on the NPI (a rating of 3) evinced a FAB, *B* = -0.45 (*S.E*. = 0.13), *t* = -3.52, *p* = .0004; those who rated in the 50th percentile on the NPI (a rating of 5) evinced a FAB, *B* = -0.39 (*S.E*. = 0.12), *t* = -3.13, *p* = .002; those who rated in the 75th percentile on the NPI (a rating of 7) evinced a smaller FAB, *B* = -0.32 (*S.E*. = 0.12), *t* = -2.61, *p* = .009; and finally, those who rated in the 90th percentile on the NPI (a rating of 9) evinced the smallest FAB, *B* = -0.25 (*S.E*. = 0.13), *t* = -2.00, *p* = .04.

At the next level of communal theme (2 = *a little*), the FAB disappeared at the highest levels of the NPI. This interaction revealed that participants who rated in the 10th percentile on the NPI evinced the largest FAB, *B* = -0.35 (*S.E*. = 0.11), *t* = -2.91, *p* = .004; those who rated in the 25th percentile on the NPI evinced a FAB, *B* = -0.31 (*S.E*. = 0.12), *t* = -2.74, *p* = .006; those who rated in the 50th percentile on the NPI evinced a smaller FAB, *B* = -0.24 (*S.E*. = 0.11), *t* = -2.27, *p* = .02; those who rated in the 75th percentile on the NPI evinced no FAB, *B* = -0.18 (*S.E*. = 0.11), *t* = -1.68, *p* = .09; and finally, those who rated in the 90th percentile on the NPI also evinced no FAB, *B* = -0.11 (*S.E*. = 0.12), *t* = -1.03, *p* > .29. At communal levels 3 and 4, the FAB was non-significant across the NPI continuum, without and while controlling for agency ratings, communion ratings, and event rehearsal.

**Study 3**

 The post-hoc event coding method used in the Study 2 exploratory analyses may not have been ideal for pursuing evidence for a Event Valence x Event Type (agentic versus communal) x Narcissism interaction. For one, in the analyses clean separation of the effect of agentic event content from the effects of communal event content may have been difficult because of the robust correlation between these two variables (*r* = .88). Secondly, it may be the case that because participants were not instructed to focus on the agentic content or the communal content of events, they may not have generally recalled events that were especially good exemplars of either of those variables. This idea is supported by the fact that the coder ratings indicated that the events contained only mild agentic content and mild communal content (recall that the mean agency rating was 2.30 and the mean communion rating was 2.38). This line of thought suggests that a better approach to see if the moderation of the FAB by narcissism observed in Studies 1 and 2 was further moderated by event type, as opposed to the event content variable that we used in Study 2. We aimed to conduct a study that was explicitly designed to elicit recall of some events that participants perceived to be highly agentic, and to elicit recall of other events that participants perceived to be highly communal.

Hence, in the recall task that we employed in Study 3, we directly asked participants to recall some events that they thought were agentic and some events that they thought were communal. Critical is whether the FAB data in Study 3 evinces an Event Valence (positive versus negative) x Event Type (agentic versus communal) x Narcissism interaction. Such an interaction would show that not only is the FAB moderated by narcissism (as revealed in Studies 1 and 2), but that the nature of this moderation effect itself may also depend on the type of event recalled (agentic or communal). Finally, as in Studies 1 and 2, we again tested whether any FAB moderation effects, should any emerge, could be accounted for by the overall frequency with which events are perceived to have been rehearsed.

**Method**

 **Participants.** Participants were 83 students (74 women) attending the University of Southampton, England. Over 85% indicated they were Caucasian British; fewer than 15% indicated birthplaces from Europe, Asia, USA, Canada, and South Africa. Their ages ranged from 18 to 26 years. The ethics-compliance procedures used were those of the British Psychological Society.

 **Recall procedure**. In a single session study, all participants recalled two positive events and two negative events from their own lives. Given 40 minutes to complete the task, they read the following instructions for each of four types of personal events: “Please recall an ordinary event that occurred at some time in your life when you...did something independently (alone) and felt [un-]pleasant feelings during this event” and “...had to cooperate with others and felt [un-]pleasant feelings during this event.”

 They handwrote each of their four event descriptions in half a page of ruled space in response to the prompt: “Please take a few minutes to recall then briefly describe your event.” Event solicitation order was the same for everyone: (1) agentic, negative; (2) communal, positive; (3) agentic, positive; and then, (4) communal, negative. Participants dated each event by specifying the number of years, months, or days ago on which the event occurred. For analysis purposes we converted years into months and days into fractions of a month. Participants next rated the following event’s characteristics, and then completed the same brief version of the NPI used in Study 2.

 **Initial and current event affect.**  For each event participants rated initial affect, “When it happened, how pleasant [unpleasant] did the event make you feel?” and current affect, “When you remember the event now, how pleasant [unpleasant] does the event make you feel?” along applicable 6-point unipolar scales (0 = *not at all pleasant* [*unpleasant*] to 5 = *exceptionally pleasant* [*unpleasant*]). Affect change was again computed by subtracting current affect from initial affect, and was computed such that positive values suggest perceived affect fading.

 **Narcissism**. As in Study 2, participants rated 40 items from the **Narcissistic Personality Inventory** (NPI-40; Raskin & Terry, 1988). In the present study, the items evinced good internal consistency, Cronbach’s *α* = .87.

**Event rehearsal**. Participants rated each event for how much they had thought about each event since the time it had occurred: “Relative to other events of a similar age, how often do you think about, rehearse or review this event?” (0 = *not at all* to 5 = *very frequently*).

**Results and Discussion**

 **Event type manipulation check**. We first attempted to confirm that our within-subjects event type manipulation worked (agentic versus communal) worked. We did so using the Linguistic Inquiry and Word Count program (Pennebaker, Francis, & Booth, 2001). We used the program to analyze the extent to which participants used a singular pronoun (“I”, “my”) versus a plural pronoun (“we”, “us”) in their event descriptions.

 Results showed that participants described their agentic events using personal pronouns with nearly twice the frequency (*M* = 12.31, *S.E*. = 0.42) than they did when describing their communal events (*M* = 6.75, *S.E*. = 0.42), *F*(1, 330) = 86.25, *p* < .0005. They described their communal events using plural pronouns significantly more often than (*M* = 2.26, *S.E*. = 0.17) than they did when describing their agentic events (*M* = 0.12, *S.E*. = 0.17), *F*(1, 330) = 83.76, *p* < .0005. These results suggest that the agentic vs. communal recall instructions prompted recall of the desired event types.

 **Moderation analyses**. We first tested the simple effects of valence and for event type on affect change, controlling for each other. The results revealed an effect of event type, with greater affect fading for agentic events (*M* = 0.94, *S.E*. = .08) than for communal events (*M* = 0.28, *S.E*. = .08), *F*(1, 323) = 33.77, *p* < .0005. There was, however, no effect for valence, with about equal affect fading for negative (*M* = 0.65, *S.E*. = .08) and for positive events (*M* = 0.58, *S.E*. = .08), *F*(1, 323) = 0.36, *p* > .55.

Importantly, controlling for all simple effects and all two-way interactions, the analysis yielded an Event Valence x Event Type x Narcissism interaction (but not yet including event rehearsal), *B* = 0.08, *S.E*. = .03, *t*(317) = 2.35, *p* = .01, *ΔR2* = .015. A decomposition of this interaction appears in Figure 3.

The top panel of Figure 3 reveals that, for agentic events, individuals with NPI scores of a 4, a 6 and a 10 (i.e., 10th, 25th and 50th percentiles, respectively) evinced no FAB for their agentic events (*t*s from -1.25 to 0.05, *p*s > .13). However, for those with NPI scores of 14 and 20 (75th and 90th percentiles, respectively) on the NPI evinced a FAB for their agentic events (*B*s of -0.35 and -0.56, *t*s of -2.05 to -2.23, *p*s of .04 and .02, respectively).

In contrast, for the communal events, the magnitude of the FAB was unrelated to a participant’s NPI score (*B*s from -0.19 to 0.47, *p*s > .17); however, those who rated the NPI in the 90th percentile evinced a marginally significant distorted FAB, *B* = 0.48, *S.E*. = .25, *t*(317) = 1.88, *p* = .06, a result that replicates findings at high levels of narcissism in Study 1.

 Analyses were also conducted to see if these effects could be accounted for by event rehearsal. Once more, event rehearsal correlated negatively with affect change, *r*(321) = -.31, *p* < .0005: Thinking about events a lot reduced the FAB. Accordingly, we included rehearsal frequency into our model to test if this variable would account for the Event Valence x Event Type x Narcissism interaction. It did not: Controlling for all main effects and two-way interactions, the Event Valence x Event Type x Narcissism interaction emerged, controlling for event rehearsal, *B* = 0.07, *S.E*. = .03, *t*(314) = 2.16, *p* = .03, *ΔR2* = .012. Decomposition of the interaction resembled the pattern depicted in Figure 3.

 Collectively, the results from Study 3 suggest that narcissism was related to the emergence of a FAB only for achievement-focused autobiographical events. The effect cannot be explained by event rehearsal. In comparison, across the continuum of narcissism, the FAB did not emerge reliably for communal events. In fact, for the most narcissistic participants, the FAB was reversed for their communal events: when thinking about events in which they cooperated with other individuals, their positive affect faded more than their negative affect, a reversed FAB. Across studies, this distorted FAB pattern suggests that very narcissistic individuals deflect positive communal, cooperative experiences and memories, and they do not deflect negative cooperative experiences and memories (i.e., retain such affect). Future studies could elucidate the impact of a person’s attitude towards communal events past on the affect they experience in the present. Finally, even though event age estimates did not correlate with any of the model’s variables, we nonetheless included it in a subsidiary analysis. The pattern described above persisted when event ages were statistically accounted for in the statistical analyses.

**General Discussion**

 Frequently, a person will remember events from their personal past and such recall prompts emotions. When recalling the time that one scored the winning point for the team, triumph and joy follow. When recalling the premature death of a spouse, grief and sadness follow.

FAB research compares how event valence is related to the intensity of emotions experienced at event occurrence to the intensity of emotions experienced at event recall. Intuition suggests that the sting of negative events should persist for far longer than the glow of positive events (Ritchie et al., 2009). The truth seems to be quite the opposite. The general finding of FAB research has been that positive events retain their emotional intensity longer than negative events (Skowronski, Walker, Henderson, & Bond, 2014).

 One thread of recent research examined how elements of the self might be linked to the FAB (Ritchie et al., 2006; Ritchie et al., 2014; Skowronski, 2011; Skowronski et al., 2014; Walker & Skowronski, 2012). The research described in the present article fits this theme by exploring the relation between narcissism and the FAB.

 Results from Study 1 showed that the FAB was related to narcissism, such that higher levels of narcissism were associated with smaller levels of the FAB. From the view that the FAB emerges in an attempt to regulate emotions (Walker & Skowronski, 2009), this is a sensible finding. It suggests that emotion regulation occurs normally among non-narcissists, who show a FAB, but such regulation does not occur normally among narcissists, for whom the FAB is disrupted or disappears. In contrast to the non-narcissists, this disruption occurred via a reduction of fading for the negative events and an enhancement of fading for the positive events. This finding is similar, but not identical, to the pattern of FAB-elimination that emerges among the dysphoric (Walker et al., 2003a). In the case of dysphoria, diminishing the FAB was accomplished primarily through the reduced fading of negative affect. The data from Study 1 suggests that narcissism increases the tendency for positive affective fading, a disruption of the FAB that may be different than previously observed. Such a finding implicates inaccessible positive affect and perhaps even anhedonia at high levels of narcissism, characteristics of depression.

This minimization of the FAB in narcissists might not occur for all events. We thought that narcissists might exhibit a FAB for those events that had especially high self-relevance, such as events reflecting on individual achievements. This expectation again highlights differences between narcissists and non-narcissists: Among non-narcissists, high event self-relevance tends to be associated with a minimized FAB; among the narcissists, high event self-relevance tends to be associated with a FAB. This idea was pursued in Studies 2 and 3 by examining the relation between narcissism and the FAB in the context of agentic-themed events (self-focus prompts high self-relevance) and communally-themed recalled events (group focus prompts low self-relevance).

Study 2 was not designed to specifically pursue evidence for this effect. Instead, agentic event content and communal event content were determined by event coders. Results from Study 2 found that narcissism moderated the FAB, but did not find evidence that this moderation effect itself depended on the either agentic event content or on communal event content.

However, it may have been the case that there were problems with Study 2’s method that may have led to the absence of such evidence. Most notable is the fact that (because it was not initially designed to do so) the study did not do a good job of separating the variables of agency and communion. This was rectified in Study 3, in which participants were explicitly asked to recall some events with agentic content, and other events with communal content. The results of Study 3 did find evidence that narcissism moderated the FAB, and that this moderation effect itself depended on whether a recalled event was either agentic or communal.

In Study 3, it was the narcissists who evinced the usual FAB, but only for agentic events. The data suggest that non-narcissists do not experience a FAB for positive achievement events relative to negative achievement events; however, narcissistic individuals do. In this study, the narcissism-FAB relation did not occur for communal events; however, Figures 1 and 3 (lower panel) suggest emotion dysregulation for highly narcissistic individuals. Indeed, across two studies, highly narcissistic participants evinced greater fading for positive affect than for negative affect; a distorted FAB, especially pronounced in Study 1. Collectively, these results suggest that relative to their less narcissistic counterparts, narcissistic individuals retain the positive affect and deflect the negative affect that is associated with highly self-relevant events, such as events that reflect individual achievements. While a suggestive finding, future studies should examine the contexts when narcissists experience significantly more affect fading for pleasant events than they do for unpleasant events. These data hint at the communal, interpersonal nature of such events.

Across all studies, the results suggested that the moderation of the FAB by narcissism could not be attributed to perceived event rehearsal frequency. However, while perceived overall rehearsal may not be a cause of the effects that we observed, how an event is rehearsed may be important. For example, when a narcissistic individual recalls an ordinary negative event, upon retrieval the accompanying unpleasant affect could trigger an affect reappraisal process. The discomfort caused by the negative affect could act as a cue for narcissistic individuals to ruminate on such affect and revisit details of the event. During such instances, non-narcissistic individuals, in comparison, may seek closure of a negative event, and in doing so facilitate the resolution of the event’s emotional impact (Beike & Wirth-Beaumont, 2005). These ideas need to be explored in subsequent research.

The data produced a generally converging pattern of results across three studies. This generally fits past experience with the FAB (see Skowronski et al., 2014). However, effects that were unique to a single study did emerge. For example, a reversal of the FAB such that individuals at high levels of narcissism evinced significantly more affect fading for positive events than negative events emerged only in Study 1. This might be important because Study 1 employed a diary method to harvest events. In the Study 1 diary method affect at occurrence ratings were recorded on the same day as each event, and the affect at recall ratings were recorded on a different occasion. In contrast, Studies 2 and 3 utilized semi-structured, event retrospection where both affect ratings were recorded within the same session. It is possible that such method differences might account for the fact that the FAB reversal occurred only in Study 1. For example, the event retrospection method might somehow bias event recall so that the kinds of events included by a participant in a study might differ across methods. Alternatively, at least for some kinds of events, affect at occurrence ratings might be biased by the affect that is promoted at event recall. Future research should attempt to replicate the FAB reversal that appeared in Study 1, see if that reversal is unique to studies that employ the diary method, and explore whether the mechanism that we have offered might contribute to differential effects across methods.

Finally, we note that the results that we report on this article support the view that narcissism disrupts the generally healthy pattern of affective fading characterized by the FAB. Future research could further explore the conditions in which the FAB occurs and does not occur among narcissistic and other individuals and more closely link those FAB patterns to the specific ways of thinking that are involved in emotion regulation or dysregulation.

**Coda**

The FAB suggests that across time and on average, adults thrive emotionally when their memory content steers them toward positive affect and away from negative affect (Kennedy, Mather, & Carstensen, 2004). Taylor (1991) framed such effects in terms of a mobilization-minimization hypothesis. The hypothesis argues that reactions to negative stimuli need to be quick and efficient, so that potential dangers and unpleasantness can be identified and dealt with rapidly. However, across time, such negative reactions need to be dampened so that a person can get on with life. This idea has implications for the FAB. While life’s events may sometimes provoke intense negative reactions, because positivity promotes adaptive functioning, over time various systems involved in emotion regulation tend to dampen negativity.

The FAB also fits well with Fredrickson’s (2001) Broaden and Build Theory of Positive Emotions. According to this theory, positive emotions can engender tendencies for growth, exploration, and creativity. Such tendencies help an individual to broaden their skill set, their cognitive resources, and their social resources. A mechanism that selectively dampens negative affect while allowing positive affect to linger could potentially sustain the benefits of memorial positivity. However, for some individuals, such as narcissists, emotion regulation systems might fail, hence, disrupting the FAB. Past research suggests that this happens to those beset by dysphoria, those prone to anxiety and those who engage in recreational substance use.

The present research suggests that narcissism can also disrupt the FAB, and that such disruptions can occur despite how often an event is rehearsed. These data suggest that narcissistic individuals may be prone to retaining the negative affect of life events, particularly for events that involve interactions with other individuals. Narcissists also may be prone to excessive retaining of the positive affect associated with achievement and other agency themed events, which might result from the narcissistic need to over-indulge in the self when, ironically, the self is at stake.

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Table 1

*Raw Means (SD) for the perceived affect intensity at event’s occurrence, perceived affect intensity at recall, and event rehearsal of positive events and negative events per study*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Study | Valence | Affect at Occurrence  | Affect at Recall | Event Rehearsal |
| 1 | Positive | 2.56 (0.63) | 1.66 (1.05) | 2.87 (1.91) |
|  | Negative | 2.35 (0.75) | 1.24 (1.07) | 2.06 (2.06) |
| 2 | Positive | 2.60 (0.77) | 2.03 (1.15) | 3.09 (1.86) |
|  | Negative | 2.47 (0.86) | 1.46 (1.19) | 3.21 (1.79) |
| 3 | Positive | 3.78 (0.93) | 3.21 (1.20) | 2.01 (1.22) |
|  | Negative | 3.84 (0.92) | 3.18 (1.22) | 2.02 (1.36) |

*Figure 1*

The fading affect bias for diary-kept events across the NPI continuum, controlling for perceived event rehearsal (Study 1)



*Figure 2*

The fading affect bias for retrospective events across the NPI continuum (Study 2)



*Figure 3*

The fading affect bias for agentic events (i.e., achievement, upper panel) and communal events (i.e., cooperation, lower panel) across the NPI continuum (Study 3)



