

Short-term mood repair through art-making: Positive emotion is more effective than venting

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Abstract We examined two mechanisms by which creating visual art may serve as a form of short-term mood repair. After viewing a film that induced a negatively valenced mood, participants were given a self-report affect grid that assessed mood valence and arousal. Participants then engaged in one of three tasks: creating a drawing expressing their current mood (venting), creating a drawing depicting something happy (positive emotion), or scanning a sheet for specific symbols (distraction control). Mood valence and arousal were then reassessed. Arousal remained unchanged after the interventions in all conditions. Valence became more positive in all three conditions, but the greatest improvement occurred after the positive emotion intervention. Valence improved no more after venting than after the control task. Results show that in the short-term, attending to and venting one's negative feelings through art-making is a less effective means of improving mood than is turning away from a negative mood to something more positive. These findings are consistent with research on the beneficial effects of positive emotions and cast doubt on the often assumed view that artists improve their well being by expressing suffering.

Keywords Short term mood repair · Coping · Emotion regulation · Venting · Visual art

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In the last decade, numerous researchers have begun to investigate how we regulate emotion and negative mood (e.g., Diener 2000; Gross 1998; Larsen 2000; Diener et al. 1985; Meyers 2000; Watson 2000), adding to an extensive body of research on coping (e.g., Carver and Scheier 1994; Carver et al. 1989; DeWall and Baumeister 2007). Research into how we remediate negative mood in order to achieve greater subjective well-being is linked to the growing field of positive psychology, whose goal is to understand how people flourish (Seligman and Csikszentmihalyi 2000).

People engage in a variety of cognitive and behavioral strategies to remediate unpleasant subjective states such as sadness or anxiety; they so do both effortfully and unconsciously (Carver and Scheier 1990; Larsen 2000), and successful mood regulation is related to overall psychological well-being. While there are strong individual differences in emotional reactivity, encoding, and strategies used to regulate mood (Larsen and Diener 1987; Zelinsky and Larsen 1999), we are all motivated to feel good and the attempt to repair negative mood is a universal goal (Buss 2000; Larsen 2000).

A taxonomy of mood regulation strategies was proposed by Larsen et al. (1996) and Larsen et al. (1987), drawing on previous taxonomies (e.g., Morris 1989) and directly derived from a content analysis of people's statements about what they did to remediate unpleasant moods. Among the strategies reported were venting—the expression of one's negative feelings, and fantasy—daydreaming or positive distraction in order to forget one's negative feelings. These two strategies contrast sharply: when venting we typically express our negative emotions; when fantasizing, we typically imagine situations that prompt positive emotions. In the present study we investigated these two strategies in the context of art-making. These two strategies were selected for investigation because there is

theoretical and empirical reason to believe these are the two major ways in which the activity of making art serves to regulate mood. The relative effectiveness of these two strategies when creating art was compared. Both of these strategies were also compared against the effectiveness of one other strategy (in the context of a non-art activity) also reported by Larsen and his colleagues: distraction (without positive fantasy), or keeping busy as a way of forgetting.

To our knowledge, with the exception of a preliminary study in our lab (De Petrillo and Winner 2005), no studies have examined the function of art-making on mood regulation. Yet the act of creating works of art is a universal behavior and one that is often considered to have a positive effect on mood. Many artists (whether visual artists, poets, composers, etc.) believe that they need to make art in order to function well emotionally. The fact that people make art in desperate circumstances—(e.g., the underground art of concentration camp inmates, political prisoners, etc.) testifies to the powerful motivation to create art. And given that people are motivated to achieve a positive hedonic state (Larsen 2000), it seems reasonable to assume that the creating of a work of art (whether by a serious artist or by a non-artist making a sketch, humming a tune, doodling, etc.) results in a more positive emotional state after the act of creating than before.

We suggest that these are the two major means by which art making can improve negative mood—venting and fantasizing. The venting hypothesis has become untested conventional wisdom, as can be seen in a recent headline in the *New York Times*, “Using Crayons to Exorcise Katrina—Art as Catharsis for Hurricane Scarred Children” (Dewan 2007). The assumption here is that by expressing negative affect through creating negatively valenced images showing our feelings, we vent and therefore reduce our negative affect. This view can actually be traced to Aristotle, who, in *The Poetics*, took the position that dramatic tragedy is therapeutic for the audience due to catharsis, a process by which the emotions of pity and terror are evoked and then purged. We see the same kind of assumption underlying the contemporary practice of art therapy, where art-making is considered therapeutic because it allows the discharge of negative feelings through self-expression (e.g., Kramer 2000).

Is venting an effective method of mood repair? Venting requires attention to one’s feelings, and Lischetzke and Eid (2003) report that under some circumstances, attention to feelings, even if they are negative, can be beneficial since attention to a negative mood can lead to attempts to repair the mood. However, attention to a negative mood can also have deleterious effects by intensifying and prolonging negative mood as the discrepancy between ideal and current state if confronted (Duval and Wickland 1972). Kross and Ayduk (2008) found that distanced analysis of one’s

negative feelings reduced depressed affect, but an immersed analysis of one’s negative feelings proved less effective. Bushman (2002) found that when participants vented their anger by hitting a punching bag they actually felt angrier and were more likely to engage in aggressive action (blasting a loud noise at the person who had angered them) relative to those who hit a punching bag for fitness and to those who did nothing at all. Similarly, Bushman et al. (2001) found that when people believed that venting their aggression would improve their mood, they were more aggressive when criticized; when people believed their moods could not be improved by venting, they did not respond to criticism with aggression. Thus venting through art may or may not improve mood. Creating images that reconstrue a negative experience could improve negative affect because reconstrual requires a degree of psychological distance. But on the other hand, creating images that immerse the artist back into the experience is likely to amplify negative affect.

Is fantasy an effective method of mood repair? This hypothesis finds its roots in Freud (1908, 1910), for whom art making was an unconscious means of fulfilling wishes in fantasy form. In the context of contemporary research on mood regulation, we can postulate that by creating art that depicts a fantasy about something pleasurable (in the context of a present reality that is not pleasant), we turn away from the stimulus causing negative mood and distract ourselves by creating positive emotions. Given research showing the buffering and coping effects of positive emotions after a crisis (Fredrickson 1998, 2001; Fredrickson et al. 2003), we can hypothesize that art making is most beneficial for mood repair when the artist creates art with content associated with positive emotions. This hypothesis is also supported by research showing that positive mood counteracts the ego-depletion effects of emotion regulation (Tice et al. 2007), a view consistent with the energy model of self-regulation developed by Muraven et al. (1998). The finding that, when confronted with mortality, we automatically cope by turning to positive emotional information, also demonstrates our need for positive emotion (DeWall and Baumeister 2007).

No studies thus far have systematically compared the relative effects on mood of venting versus positive emotion through visual art making. However, there is a considerable body of research demonstrating that venting through writing has a positive effect on long-term mood. Pennebaker and Beall (1986) examined the health benefits of writing after a traumatic experience. Undergraduate students were asked to write for 15 min a night in one of four conditions. Those in the trauma-emotion condition were asked to write about a personally upsetting experience and to describe only the feelings they had about the experience, rather than the events. Those in the trauma-fact condition were asked to

write about a personally upsetting experience and to describe only the event itself rather than their feelings. Those in the trauma-combination condition wrote about both the event and their feelings. Those in the control condition were told to write about a new trivial topic each evening. In the short term, writing about either the emotions or the facts of a traumatic event was associated with higher blood pressure and a more negative mood after completing the essays. But in the long term, those who wrote about trauma reported feeling happier than the control group 3 months later (Pennebaker et al. 1988). Thus, venting negative feelings through writing appears to lead to initial decrements in mood valence but later improvements in mood valence. However, as mentioned, these studies did not compare the relative effects of venting versus writing about something positive.

Evidence for the beneficial effects on mood from creating visual art is scant. Evidence from art therapy has generally been limited to clinical cases correlating improved mood with art-making (Kramer 2000), as well as to artists' testimonials that creating art saves them from despair. A few experimental studies of art therapy have been conducted, however. These studies converge in demonstrating that visual art therapy improves mood in clinical samples, but have not examined the mechanism by which this occurs (e.g., Grodner et al. 1982; Puig et al. 2006; Thyme et al. 2007).

Two studies have compared the relative effectiveness of writing versus visual art-making on mood repair. Pizarro (2004) randomly assigned forty-five undergraduates to one of three conditions. In the writing-stress and visual art-stress conditions, students were asked to write or draw about their "most stressful or traumatic current or past experience" and were told to "let go and explore your very deepest emotions and thoughts." In the visual art-control condition, participants drew their interpretations of a still-life photograph as objectively as possible. Those in the writing condition experienced more negative affect directly after writing (consistent with Pennebaker and Beall (1986)) than did the visual art participants after drawing, and their levels of social dysfunction decreased. Thus, while writing "therapy" resulted in more long-term health improvements, art "therapy" proved to be a more enjoyable form of treatment. This study suggests that venting through visual art-making leads to greater short-term mood improvement than does venting through writing. Contradictory findings were reported by Chan and Horneffer (2006) who found that drawing about stressful experiences was less effective at reducing distress in the short-term than was writing about stressful experiences.

De Petrillo and Winner (2005) examined whether visual art-making led to short-term mood improvement. Participants

underwent a negative mood induction in which they were shown tragic and upsetting images. Participants then either drew a picture based on their feelings (venting), copied simple geometric shapes, or completed a word puzzle (distraction control conditions). Those who drew improved in mood valence more than did those in the control conditions. A content analysis of the images created was used to classify nine participants as having used a venting strategy (these participants created negative images) and 13 participants as having used a positive emotion strategy (these participants created images diametrically opposed to the negative emotional tone of the images in the film they had just seen). Mood improved equally for both groups, suggesting that that venting and positive emotion may be equally effective ways of using art to regulate mood in the short-term. These results are also consistent with Lischetzke and Eid's (2003) finding of individual differences in the extent to which attention to negative feelings results in improved mood. However, because no individual difference information was gathered by De Petrillo and Winner, the possibility that some individual difference characteristic predicted which strategy was most effective could not be checked. And of course, since this study did not examine the long-term effects of art-making, these results are neutral with respect to whether venting leads to more positive mood later on, as Pennebaker et al. (1988) study would suggest.

De Petrillo and Winner (2005) only had an indirect way to determine whether participants were using the art-making task to vent versus turn to positive emotion—by coding the content of drawings. Therefore, in the present study, we modified De Petrillo and Winner's methodology so that we could directly compare the relative short-term effectiveness of these two strategies. After inducing a negatively valenced mood, we asked participants to draw something that expressed their current feelings (venting) or to draw something that depicted happiness (positive emotion). The control condition was a distraction task requiring participants to scan a page for symbols.

All three conditions were predicted to result in mood improvement, each by a different mechanism. A comparison of degree of mood improvement in the two art conditions, venting and positive emotion, should demonstrate whether either strategy is more effective: as discussed above, the positive emotion condition was predicted to be the most effective means of mood repair. A comparison of each condition to the control distraction condition should reveal whether venting and/or positive emotion generation through art is any more effective than mere distraction through a non-art activity in which one keeps one's mind busy enough that the original negative stimulus is pushed aside.

Method

Participants

Seventy-five participants (22 male, 53 female) between 18 and 22 years of age were recruited from the undergraduate subject pool in the Psychology Department at Boston College.

Materials and procedure

Participants were randomly assigned to one of three conditions: venting, positive emotion, and control, with 25 participants in each group. There were more females in all conditions, but the distribution of females to males did not differ across conditions as shown by a chi-square analysis, $p = .2$. Participants were tested in groups of one to four in a quiet room.

Mood induction and mood measurement

A 3.5 min clip from *Band of Brothers*, a television series about World War II, depicting scenes from a concentration camp rescue, was piloted to determine its effect on mood. Although the clip depicted a rescue, the mood of the clip was extremely tragic. Twelve pilot participants first completed Russell et al. (1989) Affect Grid, and were asked to report how they were currently feeling before any intervention. The Affect Grid, a self-report, single-item scale that has been shown to be both valid and reliable, assesses two dimensions of affect states: valence (positive feelings or pleasure versus negative feelings or displeasure) and arousal (extreme excitement or tension versus sleepiness or calmness). Combinations of these two factors describe specific mood states such as stress (unpleasant activation), calm (pleasant deactivation), gloominess (unpleasant deactivation), and enthusiasm (pleasant activation). Participants were told to place a single mark somewhere within the grid. The arousal score is determined by the number of the row checked, counting from the bottom. The valence score is determined by the number of the column checked, counting from the left. Each score can range from 1 to 9. Next, the pilot participants were shown the film clip, and at its end they were told to “focus on how this film made you feel.” They were then given the affect grid to fill out a second time. As shown by a *t*-test, pilot participants experienced a significant decrease in valence following the film, but no significant change in arousal (valence, $p = .001$; arousal $p = .750$). The decrease in valence confirmed that participants experienced the film as sad despite the fact that the prisoners were rescued.

The procedure with the study participants began with viewing the same film clip, followed by completing the

affect grid (T1). Participants were then randomly assigned to one of intervention three conditions. Immediately after the intervention, participants again filled out the affect grid.

Venting

In the venting condition, participants were instructed as follows: “Draw a picture that expresses your feelings in reaction to this movie.” Participants were given a 9 × 12 in. sheet of drawing paper, oil pastels, and colored pencils, and were told that could use any of the supplies provided and work for as long as they wished.

Positive emotion

The positive emotion condition was identical to the venting condition except for the instructions, which were follows: “Draw a picture that depicts happiness.”

Distraction control

Participants in the distraction control condition were given a sheet of symbols and were told: “Read the instructions on the sheet given. You are to find and cross out each assigned symbol. Look for one symbol at a time. Once you think you have crossed out all of one specific symbol, move on to the next symbol on the list.” Participants were stopped after 8 min since this was the typical amount of time taken in the other two conditions.

Results

Participants in the venting condition produced clearly sad drawings which typically expressed sadness metaphorically (e.g., storms, dying plants, etc., as shown in Fig. 1a). Those in the fantasizing condition produced clearly cheerful drawings which typically expressed happiness metaphorically (e.g., sunny scenes and blooming plants, as shown in Fig. 1b).

Table 1 shows the mean valence and arousal scores at T1 and T2 for each condition, as well as the change scores. As can be seen, valence change scores were positive in all conditions; arousal remained stable from T1 to T2 in all conditions.

Mood following film

To check for mood differences by condition after the film but before the interventions, a univariate one-way ANOVA by condition was performed first on valence and then on arousal scores at T1. There was no difference in arousal

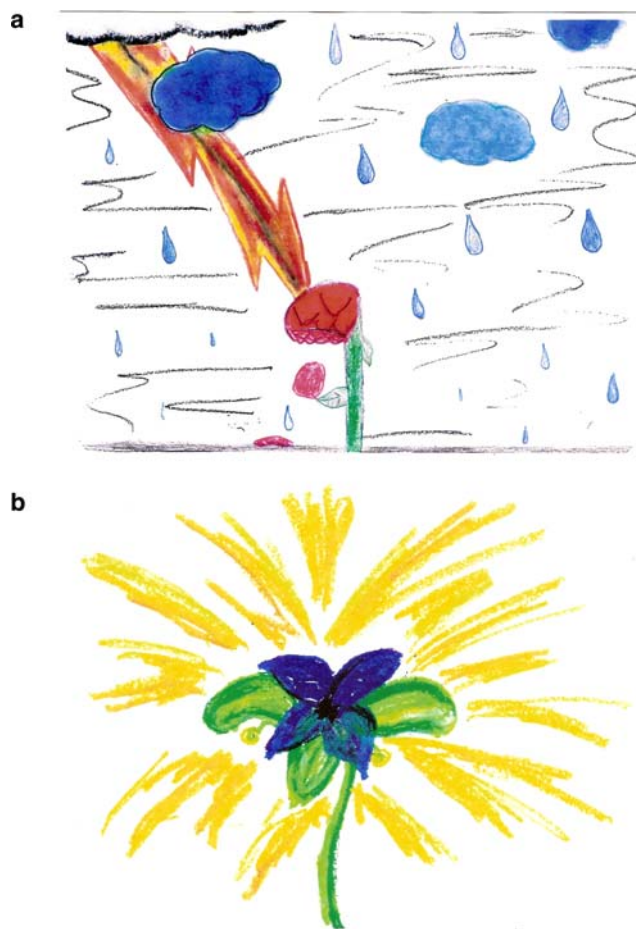


Fig. 1 a Sample “sad” drawing from venting condition; b sample “happy” drawing from positive emotion condition

scores for participants assigned to the four conditions, $F(2,74) = .521$, $MSE = 1.773$, $p = .596$. However, for valence scores, results showed an effect of condition, $F(2,74) = 3.527$, $MSE = 4.17$, $p = .035$: participants assigned to the venting condition reported significantly higher valence than did those in the positive emotion condition ($p = .016$) and those in the distraction control condition ($p = .041$). This higher valence occurred prior to beginning the art intervention task. As we show below, the higher pre-intervention valence in the venting condition had no effect on the findings.

Effects of the post-film interventions

Table 1 shows the mean time taken to complete the tasks in each condition. Because mere passage of time might affect mood change, with longer times leading to the greatest mood improvement, we checked for time differences across conditions. A one-way ANOVA by condition showed no effect of condition on time taken, $F(2,74) = .870$, $MSE = 5.613$, $p = .423$.

A two-way repeated measures ANOVA, time \times condition, was performed on valence scores. There was a significant effect of time, $F(1,72) = 172.00$, $MSE = 343.53$, $p < .001$, showing that mood improved from T1 to T2. There was also a significant effect of condition, $F(2,72) = 3.853$, $MSE = 7.33$, $p = .026$. This occurred because those in the positive emotion condition had greater valence improvement than those in the distraction control condition, $p = .007$. As shown in Fig. 2, there was a significant interaction of time \times condition, $F(2,72) = 8.055$, $MSE = 16.087$, $p = .001$. A univariate analysis by condition on valence scores at T2 was performed to reveal the source of the time \times condition interaction, followed by LSD post hoc tests. These tests showed that mood valence improved more in the positive emotion condition than in either the venting condition ($p = .005$) or in the distraction control condition ($p = .001$). The venting condition proved no more effective than the distraction control condition, $p = .55$. When this same analysis was conducted including gender as a factor, results were unchanged: there was no main effect of gender, nor any interactions with gender.

Because valence scores were not equivalent across conditions at T1, as reported earlier, we also conducted a one-way ANOVA on T2 scores, covarying valence at T1. This analysis again yielded a significant effect of condition, $F(2,74) = 6.728$, $MSE = 18.51$, $p = .002$. Bonferroni post-hoc tests confirmed that those in the positive emotion condition had significantly greater valence improvement than did those in the venting ($p = .025$) and control ($p = .003$) conditions, and the venting and control conditions did not differ ($p = 1.0$). Thus, the higher pretest valence scores for participants in the venting condition had no effect on the finding that the use of art-making to vent (or express) one’s negative mood is a less effective means

Table 1 Mean valence and arousal scores (and standard deviations): time 1, time 2, and change scores from time 1 to time 2

Condition/mean minutes on task	n	Valence			Arousal		
		T1	T2	T2 – T1	T1	T2	T2 – T1
Positive emotion/8.04 min	25	2.08 (1.04)	6.4 (1.71)	4.32 (2.11)	4.24 (1.56)	4.04 (1.34)	–0.02 (1.80)
Venting/8.84 min	25	2.84 (1.34)	5.04 (1.88)	2.2 (2.12)	4.40 (2.02)	3.92 (1.41)	–0.48 (2.00)
Control/8.00 min	25	2.20 (0.82)	4.76 (1.30)	2.56 (1.73)	4.76 (1.92)	4.44 (1.80)	–0.33 (2.31)

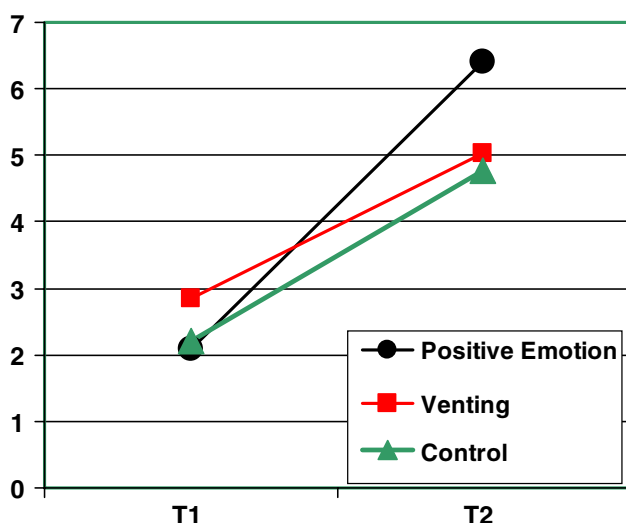


Fig. 2 Change in mood valence from T1 to T2 by condition

of short-term mood repair than is the use of art to create an image of something associated with positive emotion.

A two-way repeated measures ANOVA, time \times condition, was performed on arousal scores. There were no main effects of condition, $F(2,72) = 1.125$, $MSE = 3.38$, $p = .33$ or time, $F(1,72) = 1.516$, $MSE = 4.167$, $p = .22$, and no interaction of time \times condition $F(2,72) = .09$, $MSE = .247$, $p = .91$. Thus, arousal was unaffected by the three interventions, and remained stable from Time 1 to Time 2.

Discussion

The present study attempts to apply the growing literature on mood regulation and repair to the near-universal behavior of art-making. While only a few individuals become professional artists, most of us engage in art-making in at least a small way, doodling and sketching, photographing, humming tunes, etc. While artists often state that the activity of creating works of art is a therapeutic one, few studies have examined the means by which making art can improve mood, whether in professional artists or in non-artists. The goal of the present study was to investigate two means by which non-artists may use the activity of art making as a means of regulating and repairing negatively valenced mood.

Our results revealed no short-term effect of art-making on arousal: drawing did not make mood any calmer, or any more intense. The primary immediate mood effect of art-making appears to be on mood valence. At least in the short-term, art-making is most effective as a means of repairing negative mood valence when we create content associated with positive emotion. Creating positively-

valenced images in the context of a present, unpleasant reality may allow the artist to escape from the here and now into a more pleasant imagined situation.

The strategy of making art to vent or express distressed feelings differs qualitatively from the strategy of using art to turn away from distressed feelings towards a more positive vision. The present findings show that, as hypothesized, the self-expression venting strategy is less effective than the strategy of using art-making to turn away from the negative and focus on something positive. Because our findings pertain only to short-term mood repair, they are not in conflict with those of Pennebaker and his colleagues (Pennebaker and Beall 1986; Pennebaker et al. 1988) showing that writing about trauma (which is similar to our venting condition) led to positive outcomes in the long-term.

The greater effectiveness of creating positive images rather than venting by depicting negative ones is consistent with the body of literature on problem-focused and emotion-focused coping (Carver and Scheier 1994; Carver et al. 1989; Lazarus 1966; Lazarus and Folkman 1984; Gross 2002). Cognitive strategies such as reinterpreting or reappraising a situation to view it in a positive light lead to positive outcomes (Gross and Thompson 2006). In contrast, negative outcomes are associated with excessive ruminating (Nolen-Hoeksema 2000) a behavior not entirely dissimilar from venting. Lischetzke and Eid (2003) propose that as long as we are competent in regulating our emotions, redeployment of attention (not dissimilar from our positive emotion condition) may be the best way to repair a negative mood. In contrast, rumination (focusing on emotions) can extend the duration of negative mood states (Nolen-Hoeksema et al. 1993).

The difference between the present findings (that venting is less effective than positive emotion) and those of De Petrillo and Winner (2005) (that creating negative images was as effective as creating positive ones) may be explained by the difference in instructions. De Petrillo and Winner asked participants to make a drawing “based on how you are feeling right now,” and found that those who spontaneously depicted negative scenes experienced the same level of mood improvement as those who spontaneously depicted positive scenes. However, in the present study we instructed people explicitly to depict something “happy.” It is likely that supplying the term “happy” forced participants to think about the emotion of happiness, which then resulted in mood improvement. One might also argue that asking people to draw a happy image is actually a way of inducing a new and positive emotion, rather than a way of regulating current negative emotions. However, we suggest that the very act of inducing a new emotion may serve the goal of repairing an old emotion.

One might argue that the control condition was so repetitive that it would be irritating and would result in a

negative mood. However, even in this condition, mood valence improved. The surprising finding is that mood improvement in the venting condition was no greater than in this control condition. The fact that the distraction control condition, which did not involve art-making, was not as effective as the positive emotion condition suggests that the effectiveness of the positive emotion condition was not only due to distraction. This conclusion is consistent with the finding that distraction without a refocusing of emotion is not an effective means of short-term mood repair (Lischetzke and Eid 2003).

The present study was not designed to compare the relative effectiveness of venting and positive emotion generation in the context of art-making with the use of these strategies in a non-art activity. That is, whether the two strategies used here work differently when the activity is one of making art than when the activity is unrelated to art (e.g., as in the experiencing of an incompatible emotion, or attempting to refocus (Gross 2002)) has not been tested. It remains possible that simply instructing people to turn their attention to a happy thought might be as effective as asking them to draw a picture expressing happiness. Such a finding would be consistent with studies showing that thinking of pleasant things can be a more effective means of short-term mood repair than is rumination or venting (Lischetzke and Eid 2003).

The finding reported here, that venting through art is not as effective a method of short-term mood repair as is fantasizing through art, is contrary to the conventional wisdom (found in all writings on art therapy, for example) that expressing negative feelings through art-making is therapeutic. The fact that the participants in De Petrillo and Winner's (2005) study were more likely to spontaneously make a happy image after viewing an upsetting film ($n = 13$ vs. 9) also suggests that people are more likely spontaneously to use art-making to redirect rather than to vent.

The film clip we used to induce a negative mood involved a rescue scene from a concentration camp. Thus a potential concern might be that some participants felt positive emotions after this film because they felt relief or felt happy for the rescued victims. But since all 12 pilot participants experienced a decrease in mood valence after viewing the film, we suggest that this possibility is unlikely. Because the mood measure was not given before and after the film for the study participants (but only before and after the intervention), we cannot be sure that all study participants experienced a decrease in mood after viewing the film. It is possible that some participants focused most on the rescue, and such a focus might enabled these participants to experience a more positive mood improvement as a result of the intervention. However, the horror of the depiction of the concentration camp victims, and the fact

that they were rescued only after terrible harm, makes it highly likely that even though the film ends with a rescue, the emotions generated by this film were extremely negative.

The sample used here were typical college undergraduates, and thus we cannot know whether the act of creating or copying works of art would have the same mood valence improvement effect either in artists, or in a clinical sample. In addition, these findings cannot necessarily inform us about the coping strategies that may be most effective in dealing with stressful real-life situations which are enduring. In this study; participants knew that the stressful situation (the film) was over and would not recur, and they of course knew that these were events that had happened to other people and would not happen to them. Nonetheless, many situations in life involve negative experiences which we know are over, or which we know are happening only to others, and we must cope with the negative feelings that such experience cause. The present findings demonstrate that in art-making, self-expression is not the most effective means of immediate mood repair. Instead, creating a work expressing more positive emotions than one actually feels is a more effective coping strategy. Future research should examine the generality of these findings in clinical samples, among actual artists, in response to persistent real-life stressors, and as a result of both art and non-art activities.

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