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Looking at or Through Rose-Tinted Glasses? Imagery Perspective and Positive Mood

Emily A. Holmes, Anna E. Coughtrey, and Abigail Connor
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The authors can imagine looking at ourselves (observer perspective) or through our own eyes (field perspective). Cognitive and clinical theories suggest that compared to field perspective, observer perspective imagery reduces emotional intensity, for example, of trauma memories. Tests of causality are lacking and less is known about perspective and positive emotion. Using contrasting experimental manipulations, participants imagined 100 positive descriptions from either (1) a field perspective or (2) an observer perspective, or (3) thought about their verbal meaning. Affect was more positive after field than observer imagery and verbal conditions, with mood deterioration within the latter two. Findings are the first to demonstrate causality of imagery perspective on emotion. Further, the results demonstrate that imagining positive events from one's own perspective is critical to improving positive affect. Treatment implications include promoting field imagery to facilitate a more rose-tinted view of positive events.

AQ: 1

Keywords: mental imagery, observer perspective, vantage, positive affect, depression, prospection

The vantage point of mental imagery is thought to have differential effects on emotion. Events can be imagined from one's own perspective, experiencing the situation through one's own eyes, known as field (or 1st person) perspective, or from seeing oneself from the outside, experiencing the event as a detached bystander, known as observer (or 3rd person) perspective (McIsaac & Eich, 2002, 2004; Nigro & Neisser, 1983).

Clinical and cognitive studies suggest that the observer perspective protects against negative mood whereas field perspective allows greater engagement with emotion. McIsaac and Eich (2004) demonstrated that patients with posttraumatic stress disorder (PTSD) who recalled traumatic events from an observer rather than a field perspective described less anxiety. This pivotal, correlational study underscores clinical conceptions of observer perspective being used to avoid emotion in PTSD (Ehlers & Clark, 2000; Kenny & Bryant, 2007), despite association with poor clinical outcome. In a nonclinical context, Robinson and Swanson (1993) found switching from field to observer perspective memory was associated with reduced emotional intensity, but no effect of the converse switch. Similarly, Berntsen and Rubin (2006) found that remembering emotional events from a naturally occurring observer perspective reduced intensity of negative and positive emotions, but obtained mixed evidence for a field to observer switch.

However, though the literature suggests there are differential effects of observer versus field perspective on emotion, causal conclusions are restricted. First, to investigate causality, we need robust experimental manipulations of perspective, rather than merely correlational designs. Second, the resultant effect on state mood itself needs to be assessed since it is not possible to tell from ratings of memory characteristics or coded memory descriptions if perspective caused even short-term emotional effects. Further, a nonimagery control condition, hitherto lacking, is required for comparison.

The clinical interest in observer perspective reducing emotional intensity has focused on the "protection" adopting such a perspective can afford by reducing *negative* affect, for example, avoiding emotion in traumatic memories. However, the converse implication is that observer perspective can also reduce or dampen *positive* emotion. This second implication has been largely neglected, despite the fact that clinically this could clearly have a detrimental impact. For example, if imagining a positive event (e.g., a holiday) from an observer rather than field perspective dampens positive affect, then one would be less able to benefit emotionally from thinking about the holiday, with potential downstream consequences on optimism about taking a holiday and so forth. It is important for our mood and well being to be able to recall positive memories or imagine positive futures, and people with depression have deficits in just this (Holmes, Lang, Molds, & Steele, in press; Joormann & Siemer, 2004). We propose that an association between observer perspective and reduced positive affect would have particular relevance to the area of depression. Indeed, recently, the clinical literature on imagery perspective has extended from the field of trauma to depression and findings appear to be in line with this proposal.

Kuyken and Howell (2006) found that, compared with never-depressed controls, depressed adolescents were more likely to recall their autobiographical memories from an observer perspective. Similarly, adults with depression remembered more positive

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memories from an observer perspective than nondepressed controls (Lemogne et al., 2006). Furthermore, within dysphoric individuals, observer perspective memory style was associated with increased depressive symptoms of detachment and numbing (Williams & Molds, 2007). While again relying on correlational approaches, such studies suggest that decreased positive emotion in depression may be associated with observer perspective memory recall. In summary, a hallmark clinical feature of depressed patients is low positive mood and, since they seem to use the observer (rather than field) perspective in memory recall, we infer that observer perspective may be related to reduced positive emotions. However, experimental evidence is lacking.

Many authors have suggested that mental imagery is likely to have relatively powerful effects on emotions (e.g., Kosslyn, Ganis, & Thompson, 2001), though have not delineated the role of vantage perspective within this. Indeed, compared to verbal processing, experimental manipulations confirm that imagery generally has a more powerful impact on promoting positive emotion (Holmes, Mathews, Dalgleish, & Mackintosh, 2006; Holmes, Mathews, Mackintosh, & Dalgleish, 2008). Indeed, verbal processing of the same positive material led to relative mood deterioration rather than improvement. The methods used in these studies offer a new tool to systematically modify imagery vantage (Holmes & Mathews, 2005; Mathews & Mackintosh, 2000). Using standard and novel to-be-imagined descriptions—rather than autobiographical memories—provides similar events across participants (cf. McIsaac & Eich, 2002) and reduces confounds between memory vantage point per se and the type of people who opt for one or the other (as highlighted by McIsaac & Eich, 2004).

What is the theoretical context for our differential predictions for affect following field imagery, observer imagery, and verbal processing of positive material? We have previously argued (Holmes, Lang, & Shah, in press; Holmes & Mathews, 2005) that, unlike verbal information, imagery has perceptual correspondence to direct sensory experience, “as if” it were really happening (Kosslyn et al., 2001). Just as a real percept can directly provoke emotion, so can imagery. Through resemblance to real-life perceptions, imagery can facilitate access to related emotional autobiographical memories (Conway, 2001). Imagined events are also more likely to be believed as being real than their verbal counterparts (Hyman & Pentland, 1996). If one is experiencing imagery from a field perspective, through one’s own eyes, this is more like a real simulation of an actual experience that imagining observing oneself would be and accrues affect accordingly. In contrast, observer perspective lacks as direct correspondence to actually experienced events.

Positive verbal information not only appears less believable than field imagery but also is more readily contrasted with disconfirmatory information available in rich verbal semantic networks (Holmes et al., in press). Negative emotional consequences can arise from the process of making self comparisons with positive information known as “evaluation”—“an evaluative mode of thinking characterized by the use of information about the standard as a reference point against which to evaluate one’s present standing” (Markman & McMullen, 2003, p. 245). Evaluative processing produces affective contrast, that is, if comparing with more positive information, negative affect will result and vice versa. In a related note, thinking about discrepancies between how one actually is with either how one would ideally like to be or feel one

should be has been found to relate to depression and anxiety (Strauman & Higgins, 1987). It has been demonstrated that it is making unfavorable comparisons with positive material, rather than verbal processing per se, that brings about mood deterioration in the face of positive material (Holmes et al., in press, Experiment 2). However, verbal processing is not the only mode to facilitate making comparisons. Kuyken and Howell (2006) argued that when seeing oneself from the outside in observer perspective imagery, this facilitates evaluative thinking and highlights how the self can be falling short of some more ideal standard. That is, observer perspective can also promote unfavorable self-comparisons with positive material. In contrast, field imagery by simulating actual experience does not readily promote such comparisons. It is possible to make comparisons using field imagery, but this would be more effortful, requiring active switching between images, or switching between imagery and verbal modes. Thus Holmes, Lang, and Shah (in press) predicted for future research that, compared to field perspective imagery, instructions to use observer perspective imagery with positive stimuli would be more likely to facilitate comparative thinking and lose positive affect.

In the current experiment, participants listened to 100 brief descriptions of events with consistently positive outcomes in one of three conditions: Participants either imagined the descriptions using a field perspective or from an observer perspective. To provide a nonimagery control, in a third “verbal” condition participants thought about the meaning of the descriptions. We predicted that imagining positive descriptions from a field perspective, compared to observer imagery and verbal conditions, would lead to greater positive affect. Furthermore, within the field imagery condition, mood would improve relative to baseline. However, mood would deteriorate within the verbal condition (replicating Holmes et al., 2006) and further (as predicted by Holmes et al., in press) mood would deteriorate within observer perspective condition.

Methods

Participants

Seventy-eight students (37 men and 41 women; mean age = 21.42, $SD = 5.72$) from two local universities participated for a small fee.

Materials

Positive stimuli. To cue content for imagery/verbal processing, participants listened to 100 positively resolved descriptions as in Holmes et al. (2006) and Holmes, Lang, and Shah (in press). Each digitally recorded description lasted 10 to 13 s and was presented using E-Prime (Version 1.1.4.1, Pittsburgh; Psychology Software Tools Inc.). For example, “It’s Saturday morning—the start of the weekend— and you have many things to do. You are feeling lively and energetic and make an enthusiastic start.” To promote focus on their assigned task, after each description, participants rated either use of field or observer imagery or the ease of comprehension on 5-point scales from 1 (*not at all vivid/detached/difficult*) to 5 (*extremely vivid/detached/difficult*).

Questionnaire measures. Tendency to use mental imagery was measured using the 12-item Spontaneous Use of Imagery

AQ: 2 Scale (SUIS; Reisberg, Pearson, & Kosslyn, 2003) rated on a 5-point scale (*never appropriate to always completely appropriate*).

AQ: 3 Trait anxiety was measured by the 20-item State Trait Anxiety Inventory trait scale (STAI-T; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983) rated on a 4-point scale (*almost never to always*).

AQ: 4 Depression was measured using the 21-item Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996). Participants rated depressive symptoms during the past 2 weeks on a 4-point scale (0–3).

AQ: 5 State positive affect was measured using the positive affect subscales (21-items) of the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) rated on a 5-point scale (*very slightly or not at all to extremely*), using short-term time instructions (“Indicate to what extent you feel this way now/in the past few minutes”).

Manipulation checks. Four questions were given to assess use of verbal processing, field imagery, observer imagery, and concentration difficulties during the training phase, rated on 9-point scales (*not at all to all the time*).

Procedure

Participants completed the SUIS, BDI-II, STAI-T, and PANAS (Time 1) and were randomly assigned to one of three conditions. In both imagery conditions, participants completed an imagery practice task of cutting a lemon, then four practice training descriptions but with different perspective instructions: Field imagery condition—“as if you are there, seeing what is happening looking through your own eyes”; Observer perspective—“as if you are there, seeing what is happening looking at yourself from the outside, as if you are watching yourself taking part in the situation.” The verbal condition used an equivalent practice task of cutting a lemon plus four practice descriptions, with instructions to “concentrate on the words and meaning as the description unfolds.” Participants listened to the 100 descriptions making condition-associated ratings after each, in 5 randomized blocks of 20, with instruction reminders between blocks. The PANAS was readministered after this experimental phase (Time 2) and finally the manipulation check ratings.

Results

An alpha level of 0.05 was used for all statistical tests.

Baseline Characteristics

There were no significant differences between conditions in terms of gender, $\chi^2(2, N = 78) = 3.81, p = .15$; age ($M = 21.42, SD = 5.72$); BDI-II ($M = 5.17, SD = 4.77$); STAI-trait ($M = 35.27, SD = 8.63$); SUIS ($M = 37.86, SD = 7.36$); or Time 1 PANAS ($M = 70.15, SD = 12.93$). For each measure, $F(2, 75) < 1$.

Positive Affect Change Over the Training Phase

The hypothesis that the field imagery condition would result in greater positive affect (PANAS) than both other conditions was tested using a 3 (field vs. observer imagery vs. verbal) \times 2 (Time 1 vs. Time 2) analysis of variance (ANOVA). For mean scores see Table 1. This analysis revealed only the predicted interaction, $F(2,$

Table 1
Means and Standard Deviations for Positive Affect (PANAS) and Manipulation Checks per Condition

	Field imagery (<i>n</i> = 26)		Observer imagery (<i>n</i> = 26)		Verbal (<i>n</i> = 26)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Measure						
PANAS, Time 1	70.04	15.04	71.19	13.15	69.23	10.66
PANAS, Time 2	74.04	15.81	66.39	16.77	64.54	13.94
Manipulation checks						
Use of field imagery	7.77	0.91	3.65	1.52	5.08	2.45
Use of observer imagery	2.50	1.36	6.96	1.34	3.46	1.77
Use of verbal	4.04	1.78	4.19	2.28	6.27	1.61

Note. Time 1 = preexperimental phase; Time 2 = postexperimental phase; PANAS = total positive affect score from the Positive and Negative Affect Schedule.

75) = 6.62, $p = .002$, $\eta^2 = .15$. Independent samples t tests of PANAS change scores over time revealed, as predicted, greater increases after field imagery than both observer imagery ($M = +4.00, SD = 9.33$ vs. $M = -4.81, SD = 10.95$), $t(50) = 3.12, p = .003, d = .87$; and verbal condition ($M = -3.69, SD = 10.13$), $t(50) = 2.85, p = .006, d = .79$. There was no significant difference between observer and verbal conditions, $t(50) < 1$.

Changes in positive affect within groups were examined using paired samples t tests. As predicted, positive affect increased significantly within the field imagery condition, $t(25) = 2.19, p = .038, d = .26$. As predicted, positive affect decreased significantly within verbal, $t(25) = 2.47, p = .021, d = .38$, and observer imagery, $t(25) = 2.24, p = .034, d = .32$.

Manipulation Checks

Ratings were compared using one-way ANOVAs, decomposed with independent samples t tests (see Table 1). Rated use of field imagery was higher in field imagery than both other conditions ($ps < .001$) and higher in observer than verbal condition, $t(44) = 2.52, p = .015, d = .70$. Observer imagery ratings were higher in observer than both other conditions ($ps < .001$) and higher in field than verbal condition, $t(44) = 2.19, p = .033, d = .61$. Use of verbal processing was highest in the verbal condition ($ps < .001$) with no difference between imagery conditions, $t(50) < 1$.

Finally, conditions did not differ on reported concentration difficulties, $F < 1$; $M = 3.06, SD = 1.24$. Correlation analyses revealed no significant associations between concentration and positive affect change, largest correlation, $r(25) = -.35, p = .08$, within verbal.

Discussion

Our results are the first to demonstrate that imagining positive scenarios from a field perspective is causal in producing positive emotion relative to either an observer perspective or verbal processing. Critically, we extend previous literature by experimentally manipulating perspective through systematic training techniques, using a verbal control condition, directly assessing impact on state emotion, focusing on overtly positive cueing events, and using

novel to-be-imagined stimuli rather than autobiographical memories. Positive affect improved over time with field imagery, yet deteriorated within both other conditions. Thus, simply imagining, or exposure to, positive events does not guarantee positive mood, rather field imagery perspective appears crucial.

Our data provide robust support for cognitive theories that observer perspective limits engagement with emotional material and is associated with reduced emotional intensity (Berntsen & Rubin, 2006; McIsaac & Eich, 2004; Robinson & Swanson, 1993). This theory accounts for the supremacy of field perspective in our data but does not fully explain the finding of observer perspective mood deterioration. One possibility is that mood declined due to fatigue; however, the lack of difference in, or associations with, concentration difficulty speaks against this. Alternatively, as we have outlined in more detail in the Introduction, Kuyken and Howell (2006) suggested for depression that observer perspective promotes unfavorable self-comparisons. Indeed, making evaluative self-comparisons with overtly positive stimuli reduces positive affect (Markman & McMullen, 2003) and has been shown to be responsible for the mood deterioration previously found in the positive verbal condition (Holmes et al., in press; Holmes et al., 2006).

A potentially thorny issue in all studies attempting to manipulate imagery perspective is demand (e.g., Berntsen & Rubin, 2006; Libby, Shaeffer, Eibach, & Slemmer, 2007). McIsaac and Eich (2002) suggest while endemic to manipulations of all psychological states, it is notable if differences emerge despite no emotion specific instructions, and findings are convergent with clinical literature. Future experiments, pending due ethical consideration, could use clinical participants.

Patients with depression and anxiety lack the “rose-tinted” view of healthy individuals (Mathews & Macleod, 2005). Depression has been associated with an inability to imagine a positive future (Holmes et al., in press; Williams, Healy, & Ellis, 1999)—we suggest vantage may contribute to this deficit. Just as vantage for the way memories are retrieved can affect emotion, so too the perspective from which the future is imagined (Schacter, Addis, & Buckner, 2007; Sharot, Riccardi, Raio, & Phelps, 2007) should affect emotion. Our data suggest that it may be difficult for people to enhance their positive mood, with possible downstream consequences, when using an observer perspective for positive material. Future clinical interventions should target the promotion of a field perspective when imagining positive events. That is, it would be beneficial to “look through” rather than “look at” rose-tinted glasses when we try to imagine a positive world.

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