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Enhancing the Emotional Impact of Prospections Via Personal Values

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ENHANCING THE EMOTIONAL IMPACT OF PROSPECTIONS VIA PERSONAL VALUES
By

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Prospection involves imagining future events using mental representations. When people engage in positive, vivid, prospections they rep–ort "boosts" of mood, and higher rates of well-being. This study sought to cultivate positive affect in response to prospections by incorporating values into future imagery. Two groups imagined everyday future events in detail. One group additionally learned about values and linked these values to the everyday future events. We hypothesized that the values-based prospection would result in greater increases in mood, and that this increase would be mediated by additional access to details and phenomenological features. Contrary to hypotheses, there was no positive affect change in either group, and no between group differences related to condition. Preliminary analyses suggest other promising changes may have occurred as a result of the values condition. Future research will further examine the impact of this intervention, as well as the clinical utility of incorporating values into future imagery.

Bandura proposed that, "through cognitive self-regulation, humans can create visualized futures that act on the present; construct, evaluate, and modify alternative courses of action to secure valued outcomes" (Bandura, 2006, p. 164). Since Bandura proposed this idea, research related to visualizing the future (Buckner & Carroll, 2007) and personal values (Schwartz, 2011) has grown exponentially. However, despite this growth, no research has directly examined the assumption that visualizing a valued future can act upon the present to produce changes in action, emotion, or cognition. This question is timely, given both the rise of value-based interventions such as Acceptance and Commitment therapy (ACT) (Gaudiano, 2011) as well as renewed interest in the ways in which adaptive, and maladaptive future visualization contribute to mental health outcomes (Pearson, Naselaris, Holmes, & Kosslyn, 2015; Roepke & Seligman, 2016).

Prospection

Consistent with Bandura's social cognitive theory, future visualization is indeed a frequent and universal part of human mental life (Busby Grant & Walsh, 2016). Even while occupied with other tasks, researchers have observed that the brain continues to envision future events (Spreng, Mar, & Kim, 2009). Future visualization is often called "prospection" which is a cognitive process in which mental imagery is used to generate "pictures" of the future. Prospection is now understood to be implicated in a variety of important cognitive processes such as planning (Baumeister, Vohs, & Oettingen, 2016) and decision making (Benoit, Gilbert, & Burgess, 2011; DeWall, Baumeister, Chester, & Bushman, 2015) and engages many of the same neural networks that are activated during actual perception (Kosslyn, Ganis, & Thompson, 2001). Prospection also overlaps substantially with neural networks that are implicated in

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autobiographical memory, suggesting that autobiographical memory provides the content with which prospections are generated (Schacter & Addis, 2007). Given that future visualization is processed as if it were actually being perceived, emotional reactions often accompany the experience of visualizing the future (Ji, Holmes, & Blackwell, 2017). This process is highly adaptive, as "pre-experiencing" the emotional repercussions of hypothetical decisions is safer than exposing oneself to potential danger (Gilbert & Wilson, 2007)

Prospection is distinct from other future-oriented cognitions, such as future-thinking, because it involves the use of imagery. Paradigms employed to study future-thinking, such as the future thinking task (FTT) measure the number of anticipated events people can produce (MacLeod & Byrne, 1996; MacLeod & Conway, 2007). In this task, individuals generate lists of future events they expect to occur in 1 week, 1 year, 5 years or 10 years. The number of future events produced is summated for each time period in order to see how many positive and future experiences people can generate. In contrast, researchers examining prospection typically examine the quality or form of anticipated future events. Prospection tasks instruct individuals to construct vivid images of the future, and then rate them on a variety of phenomenological characteristics such as vividness, level of detail, valence, and the degree that the prospection is "pre-experienced" or feels as if it is happening in real life (D'Argembeau & Van Der Linden, 2004). Thus, these tasks focus more on mental imagery as opposed to thoughts regarding one's personal future.

The distinction between verbal cognitions and mental imagery is important, as there is evidence that these two processes recruit distinct neural networks (Kosslyn et al., 2001) and differentially impact emotions. For instance, experiments that use the same cues to elicit either verbal mental processing or visual mental processing find that imagery evokes stronger

emotional reactions than verbal cognitions (Holmes, Coughtrey, & Connor, 2008). The

emotional differences between verbal and imaginal processing is relevant to clinical work, as

targeting different modes of processing may produce differential effects. Indeed, researchers

have observed that experiential techniques using imagery produce different benefits than more

verbal approaches such as cognitive restructuring (Norton & Abbott, 2016).

Psychological Outcomes & Prospection

Given the ubiquity of prospection in everyday life (Barsics, Van der Linden, &

D'Argembeau, 2015) and its impact on emotions (Ji et al., 2017) and behavior (Szpunar, Spreng,

& Schacter, 2014) is not surprising that prospection plays a key role in helping people to lead a

fulfilling life (Macleod, 2017). In a recent review, MacLeod (2015) integrated psychological and

philosophical conceptions of "well-being" under one combined perspective. These elements

include (a) good feelings that arise authentically (b) ability to use and express human capacities

such as achieving, relating, and knowing, which contribute to positive feelings (c) liking,

desiring, or valuing the life that one is living. Two phenomenological features of prospection,

valence and vividness, contribute to these types of positive outcomes.

Valence

Valence refers to the degree to which future expectancies are rated as being positive or

negative. Depression has recently been conceptualized as primarily reflecting maladaptive

prospections that are overwhelmingly negative, and lack positive valence (Roepke & Seligman,

2016). Indeed, lack of positive future expectancies have been shown to better predict suicidal

ideation two months after a self-harm incident over and above baseline measures of negative

future expectancies, hopelessness, mood, age, and sex (O'Connor, Fraser, Whyte, MacHale, &

Masterton, 2008). In longitudinal studies, lack of positive future expectancies has also been

shown to be a better predictor of suicide attempts over and above the severity of depression at baseline (O'Connor, Smyth, & Williams, 2015). Conversely, when people have a plethora of positive future expectancies they tend to report higher rates of well-being and higher rates of positive affect (MacLeod & Conway, 2005). These studies suggest that a person's current well-being is partially rooted in whether they can construct, and dwell upon positive future experiences.

Vividness

The vividness of prospections is another factor that can impact psychological well-being. Vividness refers to the degree that prospections are imagined in detail and is often studied using the prospective imagery task (PIT). The PIT uses cues, such as words or pictures, to elicit mental future imagery related to the cues, that are then subjectively rated for degree of vividness (D'Argembeau & Van Der Linden, 2004). Research using this paradigm has found that the more vividly a future event is imagined, the more likely it feels to occur. For instance, Szpunar & Schacter (2014) modified the PIT by using people, places, and objects that participants personally generated. These cues were then randomly selected, and participants were instructed to generate scenarios using those elements. Participants rated more vivid prospections as more likely to occur, and vividness was impacted by the number of times that participants were encouraged to rehearse the scenario.

Clinically, these findings are notable, as they suggest that encouraging vivid constructions of positive futures could help people believe that a positive future is possible. Indeed, optimism, which is characterized by positive future expectancies, is highly related to the ability to construct vivid, positive prospections. Sharot, Riccardi, Raio, & Phelps (2007) had healthy volunteers respond to neutral, negative, and positive cues with prospections and observed

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that individuals high in optimism rated positive prospections as higher in "pre-experiencing" than those low in optimsm. Blackwell et al., (2013) similarly found that while both controls and optimists could generate positive visualizations of the future, the distinguishing factor between these groups was that optimists tended to construct more vivid images of the future, rated them as more likely to be "pre-experienced" and felt they were more likely to occur.

In fact, vividness for mental imagery has been so thoroughly linked with optimism that these researchers suggest that vivid, positive prospection is a cognitive biomarker for optimism (Blackwell et al., 2013; Ji et al., 2017). For instance, in a group of depressed individuals, Ji et al., (2017) measured vividness ratings for 10 positive future scenarios at baseline, and 7 months later. Even when controlling for factors such as age, health, nationality, anxiety, and severity of depression, vividness ratings for the positive scenarios predicted the level of optimism endorsed by participants. Notably, higher vividness ratings for positive prospections predicted greater optimism and lower BDI scores 7 months later, indicating that vividness of positive future scenarios may be a protective factor against depression.

Conversely, it has been well-established that depressed individuals experience diminished vividness for positive future images when compared to control or low dysphoric individuals (Holmes, Coughtrey, et al., 2008; Holmes, Lang, Moulds, & Steele, 2008; Morina, Deeprose, Pusowski, Schmid, & Holmes, 2011; Stober, 2000). This cognitive style is strikingly different than the positivity bias characteristic of the general population. Using a variety of cues (visual, verbal) as well as retrieval styles (involuntary, voluntary) researchers have observed that nonclinical populations imagine positive future events more vividly than negative future events (Cole & Berntsen, 2016; D'Argembeau & Van Der Linden, 2004; Rasmussen & Berntsen, 2013).

Value-Based Prospection

As a whole, research on prospection suggests that the form and clarity of positive future imagery is closely associated with mental health. The present study sought to identify a unique approach to enhancing the subjective emotional impact of prospections by having people incorporate personal values into future imagery. Values are defined as "global life desires" that guide and motivate behaviors (Hayes et al., 2011 p. 94). Unlike concepts such as personality traits, attitudes, and preferences, values cannot be categorized as being desirable, or undesirable (Rohan, 2000; Schwartz, 1992). Rather, people develop different value *priorities* that uniquely guide behavior across situations and help to formulate one's identity or self-concept (Hitlin, 2003; Hitlin & Piliavin, 2004).

In order to enhance the emotional impact of prospections, participants in the current study imagined how planned future events are consistent with their personal values. Despite generally engaging in activities and actions that are values congruent (Bardi & Schwartz, 2003) people rarely think about everyday events in terms of their values (Eyal, Sagristano, Trope, Liberman, & Chaiken, 2009). For instance, a person may have a future coffee date planned that is congruent with their values of friendship, intimacy, or leisure, and yet fail to perceive that this activity fulfills a highly important personal value. This likely occurs because prospections related to the immediate future tend to be related to planning aspects of that event, rather than reflecting on the broader implications of that behavior (Eyal et al., 2009; Szpunar et al., 2014). By relating planned future events to one's values, those imagined events may become more reinforcing and important, and bring to awareness the ways in which one is living in accordance with their values.

Hayes et al., (2011) developed ACT therapy based on Relational Frame Theory, which posits that verbally connecting values to behaviors increases the reinforcing quality of neutral stimuli or established reinforcers. Thus, an imagined future event that is already reinforcing (i.e., a coffee date) becomes inherently more motivating and reinforcing when it is framed as being related to one's values. Furthermore, even challenging events such as studying at the library for hours at a time can be contextualized as an invigorating, life-giving pursuit when it is perceived as being in service of one's values (i.e., achievement, knowledge, personal growth).

This intervention sought to enhance current emotions by making prospections more personally relevant, and therefore more vivid, and positive. D'Argembeau & Van Der Linden (2004) found that prospections rated as "highly important" to the self, also tend to be more vivid, positive, and emotionally provocative (Barsics, Van der Linden, & D'Argembeau, 2015). Similarly, as compared to non-personal positive events (i.e., walking in a sunny garden) prospections elicited using cues related to highly important goals are more likely to be "pre-experienced", emotionally positive, feel more plausible, and to be rated as more personally important (Lehner & D'Argembeau, 2016). Cole & Berntsen (2016) also found that imagined events consistent with "current concerns," (i.e., uncompleted tasks or goals) were more vivid, intense, positive, important to the self, and impacted current positive mood more strongly than prospections that did not relate to current concerns. Thus, since values are highly related to one's self-concept, values-based prospection should enhance the positive emotional impact of prospections by modifying the valence, and vividness of those prospections.

It is important to note that this approach is different than other future-focused therapies which promote the *generation* of meaningful goals, plans, and pursuits, and identification of obstacles and plans to overcome them (Green, Oades, & Grant, 2006; Rosenstreich, Feldman,

Davidson, Maza, & Margalit, 2015; Vilhauer et al., 2012). Rather, contextualizing the future as being in service to personal values more closely mirrors savoring, in which people notice, and appreciate positive experiences that are likely to occur (Bryant, 2003; Bryant, Chadwick, & Kluwe, 2011). Additionally, since values are so important to the self-concept, this approach may be more impactful than other interventions that enhance mood, such as imagining future humorous events (Wellenzohn, Proyer, & Ruch, 2016) or positive future experiences, more broadly (Quoidbach, Wood, & Hansenne, 2009).

In order to examine whether incorporation of values into future imagery increased the impact of prospection we compared the emotional impact of imagining everyday events in detail or imagining everyday events within the context of one's values. This study is a between-group comparison in which one group engaged in everyday prospections (e.g., going out for coffee with a. friend), and the other group incorporated values into typical prospections (e.g. going out for coffee is linked with the value of "intimacy" or "social connection").

We hypothesized that incorporating values into future imagery would increase the affective impact of prospection. To examine this, we compared the emotional impact of imagining everyday events in detail or imagining everyday events within the context of one's values. We used a between-group comparison in which one group engaged in everyday prospections, and the other group engaged in values-based prospection. We hypothesized that positive increases in subjective emotional experiences would be mediated by enhanced access to vivid, positive, prospections. Since it was possible that this intervention would highlight incongruence between future events and personal values, we also examined whether perceived values-congruence influenced negative and positive affect.

Methods

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Participants

        One hundred and fifty-six students at the University of Montana participated for course credit. A total of twenty-three students were dropped for reasons including: misunderstanding the task (n=1), five out of six questions answered incorrectly on control filler task (n=1) administration error (n=2) choosing goals rather than values in the experimental condition (n=2), not writing about selected event (n=3), English as a second language (n=4), and writing in past rather than future-tense during the imagery task (n=10). This resulted in a total of one hundred and thirty-three adults (ages 18-66yrs, *M*=22.36, *SD*=6.6).

Design

        This study used a randomized, between-groups design with experimental (values group) and control conditions. Participants completed the experiment individually on a computer. Both groups first identified 12 discrete events (i.e., clear beginning and end) that would occur within the next week (adapted from Levine et al., 2012) (Appendix A). The values groups then learned about personal values and selected and imagined 3 events that were related to those values (Appendix B). The control group completed a filler task, and then selected and imagined 3 events they wanted to imagine in more detail (Appendix C). After imagining each event participants rated each event on a number of phenomenological features. Both groups completed pre (PANAS) and post (PANAS, LOT-R, HS, BDI-2) measures.

Measures

Affect

Current affective state was measured using the Positive and Negative Affect Scale (PANAS) (Watson, Clark, & Tellegen, 1988) (Appendix D). This measure consists of 10 positive adjectives (i.e., inspired, alert, excited) and 10 negative adjectives (i.e., afraid, upset, nervous)

that are each rated using a 5-point scale from 1 (*very slightly)* to 5 (*extremely)*. This measure results in two factors, positive affect (PA) and negative affect (NA) and has good internal consistency (.89 and .85 respectively) as well as good discriminant validity (correlations between NA and PA factors ranging from -0.12 to -0.23). When used with short-term instructions (e.g. *right now* or *today)* this measure is sensitive to fluctuations in mood. Due to administration error the PA scale is calculated using 9 adjectives as "interested" was unintentionally omitted for a portion of the sample.

Depression

The BDI-2 (Beck Depression Inventory-2) is a 21 item self-report measure of symptoms of depression (Beck, Steer & Brown, 1996). Each item is comprised of a four-point scale ranging from 0 to 3. Total scores on this measure can range from 0 to 63, with cut-off scores for mild, moderate, and severe depression. The BDI-2 has been used for decades to identify and assess for symptoms of depression, and has good reliability and validity.

Dispositional Optimism

The Life Orientation Test-Revised (LOT-R) consists of 10 items and produces a Pessimism score and an Optimism score (Scheier, Carver, & Bridges, 1994) (Appendix E). This instrument consists of three items related to Optimism (e.g., "in uncertain times, I usually expect the best"), three items related to Pessimism (e.g., "I hardly ever expect things to go my way"), and four filler items (e.g., "I enjoy my friends a lot."). Each item is rated on a 4-point scale from 0 (*strongly disagree)* to 4 (*strongly agree)*. The pessimism items are reversed scored to obtain an overall 6-item optimism score. For this study, one item was dropped due to administration error, resulting in a 5-item optimism scale. Research has demonstrated these items have good internal

reliability (α=.78). This instrument is frequently used by researchers examining the

phenomenological features of prospection and optimism (Blackwell et al., 2013).

Hope

The Hope Scale (HP) is a 12 item scale to measure a respondents level of hope with four items

pertaining to the Agency scale, four items for the Pathways scale, and four filler items (Snyder et

al., 1991) (see Appendix F). The Agency scale measures how goal-directed a person feels (i.e., "I

energetically pursue my goals"). In this study, one item from the Agency scale was dropped due

to administrator error. The Pathways subscale measures the extent to which people can identify

means to achieve their goals (i.e., "even when others get discouraged, I know I can find a way to

solve the problem"). Studies with college students demonstrate acceptable internal reliability and

validity (Snyder et al., 1991). Hopelessness has been linked with diminished ability to produce

positive future expectancies (Macleod et al., 2005). Therefore, this measure allowed us to

examine whether differences in positive affect, or phenomenological features related to

prospections are impacted by pre-existing levels of hope or hopelessness.

Interview Coding

Typed responses to the prospection task was coded for episodic and semantic details

(Levine et al., 2002). Episodic details are information pertaining directly to the selected event,

and include details about people, objects, actions, feelings, thoughts, location and time. Semantic

details reference general knowledge or facts (e.g. "the speed limit is 80-miles an hour"), ongoing

events or extended states of being (e.g. "this has been a hard semester") and metacognitive

statements or editorializing (e.g. "that probably won't be good for me"). Coding of events was

completed by 1 of 3 raters. Prior to coding participant responses, raters practiced with 10

example responses. They then coded another 10 responses which had high interrater reliability

for episodic and semantic details (Cronbach's alpha=0.98 for episodic, 0.88 for semantic). All raters were blind to condition.

Procedure

Before beginning the experiment, participants completed informed consent, turned off cellphones, and were seated in a quiet room with the research assistant available to answer questions. After demographic information and the pre-test mood measure (PANAS), participants generated 12 events likely to occur the next week related to 4 general life categories to aide generation (1. Family/friends/partner 2. Health/physical care 3. School/work 4. Fun/recreation/leisure). Consistent with previous studies, events were required to be plausible, have a clear beginning and end, and occur at a specific time and setting (Lehner & D'argembeau, 2016). Examples of acceptable and unacceptable answers were provided, as well as examples for each category (See Appendix A).

Following the generation of 12 events, both groups completed a learning task. The values group learned about personal values which were defined as a person's deepest desire for how they want to live, guideposts for action, and distinct from goals as they are on-going and have no end (Dahl et al., 2009). The values group read 3 paragraphs about values and answered multiple-choice questions to check understanding. Incorrect answers were corrected. The values group selected and wrote down 5 personal values. To help with values selection they were provided a list of 30 common values from the Values Card Sorting Test (i.e., "Health: to be physically well and healthy") (Miller, C'de Baca, Matthews, & Willbourne, 2011) (See Appendix B). In order to assure that both groups spent about the same amount of time in the experiment, the control group completed a filler task that was comprised of unrelated biology facts. They read 6 short

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paragraphs and answered reading comprehension questions. Incorrect answers were corrected (See Appendix C).

After the learning task, the control and values groups selected 3 events from the original 12 to imagine in more detail. The values group selected 3 events related to selected values (i.e., "Fishing with friend on Saturday" relates to the value of "adventure" or "fitness"), and the control group selected 3 events they wanted to spend more time imagining. Participants were required to spend at least 3 minutes writing as much as possible about the event, including details about the course of the event, setting, people, objects, what is being said, what they may be thinking or feeling (Lehner & D'Argembeau, 2016). Like the autobiographical interview, there was no upper limit for time spent writing.

After each description, participants rated the imagined event on phenomenological characteristics linked to phenomenological experiences (D'Argembeau & Van Der Linden 2004; D'Argembeau, Lardi & Van der Linden 2012). All dimensions were rated using a 7-point Likert scale. Items included the overall clarity of the event (1=not clear at all, 7=extremely clear), amount the event was pre-experienced (1=not pre-experienced at all; 7=completely), ease of construction (1=not easy; 7=very easy), valence (1=negative, 4=neutral, 7=positive), importance of the event (1=not at all important, 7=very important) and meaningfulness of the event to their life (1=not at all meaningful, 7=very meaningful). The values group additionally related the extent that the event related to their selected value (1=no relation to value, 7=completely related to value).

Participants were given a post-test mood measure (PANAS) and measures of depression (BDI-2), hope (HS), and optimism (LOT-R). These measures were included as they are theoretically related to prospection and could help to elucidate any pre-morbid factors that

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impact the efficacy of the values-intervention. Following completion of the computer portion, participants were given a research debrief and mental health resource list should they have endorsed high rates of suicidality on the BDI-2.

Results

Similar to other short-term imagery interventions using the PANAS (Peters, 2010), we conducted a 2X2 repeated measures ANOVA with the between-subjects factor of condition (control vs. values) and within-subjects factor of positive affect (Positive Affect Time 1 and Positive Affect Time 2). There were no observed main effects of time on positive affect, $F(1, 131)=1.908$, $p=0.170$ and no interaction effect between time and condition $F(1,131)=0.075$, $p=0.785$. An examination of means revealed little change in PA scores for both the control group ($M=0.51$, $SD=5.652$) and values group ($M=0.76$, $SD=4.874$). Similarly, a paired samples t-test for the control group revealed no significant change in positive affect from time 1 ($M=25.22$, $SD=7.35$) to time 2 ($M=25.73$, $SD=9.04$) ($t=-.735$, $p=.465$) and a paired samples t-test for the values group demonstrated no significant change in positive affect from time 1 ($M=26.53$, $SD=6.75$) to time 2 ($M=27.29$, $SD=8.58$) ($t=-1.263$, $p=.211$).

Given that there was no significant affect change for either group, regression analyses were not conducted to examine the relative contributions of experimental condition and phenomenological features on changes in positive affect. Phenomenological data for each group is presented in Table 1. Independent t-tests revealed no between group differences for phenomenological features.

A simple linear regression was conducted to predict positive affect change based on perceived relation of the selected value to the event. A significant regression analysis was found

$F(1,65)=4.38$, $p=0.04$ with $R^2=0.64$. For every 1-point increase in the events relationship to the value there was a 1.51 point increase in positive affect.

Table 1				
Mean ratings (and standard deviations) of event properties				
	Control	Values	T(*1,131*)	P-Value
Clarity	5.44 (1.11)	5.70 (1.00)	-1.383	0.531
Pre-Experiencing	5.26 (1.18)	5.34 (1.26)	-0.400	0.309
Ease of Construction	5.90 (1.06)	6.06 (0.97)	-.931	0.505
Emotions	5.66 (0.86)	5.78 (0.96)	-.766	0.246
Importance	5.61 (0.99)	6.01 (0.85)	-2.514	0.153
Meaning	5.09 (1.35)	5.62 (1.00)	-2.520	0.062
Average Total Details	18.6 (8.92)	17.2 (9.31)	1.195	0.741
Average Episodic Details	14.6 (8.6)	12.9 (7.95)	-.762	0.497
Average Semantic Details	4.01 (4.27)	4.17 (4.17)	-.753	0.586
*no significant difference between groups with independent samples t-tests				

Discussion

Prospection is a frequent part of everyday life, and has been shown to aid decision-making (Benoit, Gilbert, & Burgess, 2011; DeWall, Baumeister, Chester, & Bushman, 2015), planning (Baumeister, Vohs, & Oettingen, 2016), and prospective memory (Ward, 2016). Given its ubiquity in daily life, it is not surprising that faulty prospection has been demonstrated in various clinical populations, such as individuals with anxiety, depression, and PTSD (Holmes et al., 2016; Holmes & Mathews, 2005). The current study sought to identify a novel means of increasing access to detailed prospections, which we hypothesized would result in enhanced mood. The goals of this study are relevant for many clinical populations, but particularly for individuals with depression, who reliably demonstrate deficits in positive prospection. Individuals with depression have difficulty generating positive future events (O'Connor, Fraser, Whyte, MacHale, & Masterton, 2008) and typically generate less detailed and vivid positive prospections than healthy controls (Holmes, Lang, Moulds, & Steele, 2008). Since vivid prospections are more emotionally evocative (Ji, Holmes & Blackwell, 2017), researchers have

suggested that the over-general style of depressed individuals deprives them of positive emotional experiences associated with future events (Roepke et al., 2016). Additionally, scarcity of positive future expectancies has been linked with diminished hope that the future is worth living (O'Connor et al., 2008).

The current study incorporated personal values into existing future plans in order to enhance the emotional impact of prospection. We hypothesized that values incorporation would enhance positive affect in response to prospection, and that this would be accomplished via increased access to details, and phenomenological qualities like greater clarity, "pre-experiencing" and ease of construction.

The present study did not reveal a significant change in positive affect for either group. One possible explanation is that events occurring in one week's time are typically not as emotionally evocative as more distant events. Consistent with this interpretation, most participants in our study produced events such as completing course work, spending time with friends, or completing job requirements. Although those events were generally rated as more positive than negative, they may not have been provocative enough to elicit detectable changes in emotion. This is somewhat consistent with naturalistic studies that have shown that more than two-thirds of day-to-day prospections fail to elicit present emotional reactions (Barsics, Van der Linden, & D'Argembeau, 2015). One reason could be that anticipated emotions are often sufficient to make decisions and plans for the future. For instance, Baumgartner, Pieters & Bagozzi (2008) demonstrated that anticipatory emotions and anticipated emotions are distinct constructs, and that in some cases people only use anticipated emotions to guide behavior. Furthermore, studies that use mood scales such as the PANAS typically use highly emotional cues, such as imagining living a life in which one has fully achieved all dreams and goals (Peters

et al., 2010), or successfully/unsuccessfully escaping a burning building (Holmes & Mathews, 2005; Holmes et al., 2006). In contrast, this study used cues that were far more neutral and therefore were likely less emotionally evocative.

A second possible explanation for the lack of significant effects of the values integration on positive affect emotion, is that the values clarification intervention was too weak to generate the kinds of affective changes that we hypothesized. A 1-week time frame was chosen for prospections in order to examine whether typically mundane events could be transformed via a link to personal values. This was based on a literature clearly showing that important events (Barsics, Van Der Linden, & D'Argembeau, 2015), self-defining events, (D'Argembeau, Lardi & Van der Linden, 2012) and current concerns (Lehner & D'Argembeau, 2016) tend to be more emotionally evocative. However, these previous studies prompted individuals to generate highly meaningful or important events, or record naturally occurring prospections, rather than find meaning in everyday events, as in the present study.

A third potential explanation for the lack of significant results on mood, pertains to the manner in which we linked values to cue events. For example, Relational Frame Theory, the basis of Acceptance and Commitment Therapy (ACT), emphasizes the importance of generating verbal links between events and their reinforcing qualities, such as recognizing why events are consistent with values (i.e., feelings of vitality, connection, etc.) (Dahl et al., 2019). In contrast, our study simply included the personal value along with the event cue. This was done to avoid explanations of *why* events were consistent with values so that prospections were consistent with the control group. However, it may have been necessary for people to first spend a short period of time thinking about why and how their values were consistent with their events, and what it would feel like to behave consistently with deeply held ideals. It is possible that some portion of

participants ignored the value cue, and instead engaged in prospection in order to plan, or make decisions about their future.

Also contrary to expectations, there were no differences in reported phenomenological experiences of the two groups. One possible explanation for this finding could be that our study design limited the emotional valence of the events resulting in events that were too neutral to produce vivid, detailed prospections. The design of the present study elicited relatively mundane events from our participants in order to see whether personal values could enhance these events to be more positive (e.g., "completing my developmental psychology paper" is more positive when paired with the value "growth" or "knowledge"). This was based on research showing that events more highly related to "current concerns" are more positive and vivid (Cole & Berntsen, 2016). Although personal values are highly self-referential, they may not have been as provocative as "current concerns" that were months into the future, as the present study restricted participants to events occuring within the next week. For the current study, analyses showed no differences in valence or phenomenological features between the groups, and a closer examination of previous studies reveal that our events were rated as more neutral than previous research examining positive prospection (D'Argembeau & Van Der Linden, 2004). This may have contributed to the absence of a significant increase in reported vividness for positive events (Cole & Berntsen, 2016; D'Argembeau & Van Der Linden, 2004; Rasmussen & Berntsen, 2013).

One significant finding was that for the experimental group, relatedness of the event to the selected value predicted positive affect change. For the experimental group participants were asked to indicate how related their event was to their selected value using a 7-point Likert scale (i.e., how related is "going on a coffee date with my friend" to the selected value of "intimacy"

with 7=completely related to my value). We observed that relatedness of events to selected values predicted positive affect change. One limitation of this finding is that this analysis could only be calculated for the experimental group, as the control group was not educated about personal values and were not asked to rate their events for values congruence. Thus, it is not possible to determine whether this effect was due uniquely to the values clarification task. This finding is, however, consistent with research suggesting that living according to personal values enhances positive outcomes like well-being (Fung et al., 2016; Sagiv & Schwartz, 2000). Interestingly, we also observed that values congruency is positively correlated with phenomenological features like clarity, pre-experiencing, and ease of construction as well as importance of the event to the self, and degree to which the event brings meaning to that person's life. This is consistent with research showing that "highly important" events (D'Argembeau & Van Der Linden, 2004; Barsics, Van der Linden, & D'Argembeau, 2015), events related to improtant goals (Lehner & D'Argembeau, 2016) and events related to current concerns (Cole & Berntsen, 2016), tend to be more positive, vivid, and emotionally evocative. Future research would need to determine whether the values clarification task uniquely enhanced one's perception of values congruency, or whether people can intuitively determine whether events are related to values without explicit instructions to link events with values.

One notable limitation was that this study utilized a nonclinical population. While this may have restricted the range possible to see changes in affect or phenomenological features, our large sample size allowed us to examine individuals with low dysphoria (BDI-2<6=N=41) versus high dysphoria (BDI-2>14, N=48) (Holmes Lang, Moulds, & Steele 2008). Consistent with previous resarch, individuals with high dysphoria produced less detailed prospections, and pre-

experienced these images to a lesser degree. However, consistent with the larger study, the experimental and control conditions did not differ on positive affect change.

Future research may generate more emotionally evocative prospections by having individuals select events that extend beyond 1 week. For instance, the time frame could be extended to 6 months or more into the future, which will likely produce the kinds of events that elicit emotional reactions (i.e., birthday parties, anniversaries, completion of important projects). However, future research should be careful about how individuals are instructed to engage in prospection. For the current study, a 1 week time-frame was chosen in part to prevent individuals from engaging in "fantasies" about unattainable or unlikely futures. This is called "painful engagement" and is linked with depression (Macleod, 2016). Painful engagement could be prevented by carefully instructing individuals to only select future events that they are sure will happen, and also to instruct individuals to savor, or imagine the steps leading up to the event. This may also serve the purpose of enhancing hope, as hope has been defined as the ability to see the "path" to positive future events (Snyder et al., 1991). In addition to extending the time-frame beyond 1 week, it may be beneficial to reverse the order of the experimental condition by first having people clarify values, and then have them produce events related to their values. This will help to establish whether or not prompts using personal values elicit events that are more emotionally evocative than other kinds of prompts, such as events that people are excited about in the future, or "current concerns" as used in previous research (Cole & Berntsen, 2016).

Additional future research should explore other downstream effects of this kind of intervention not initially proposed in this study. For instance, preliminary findings suggest that this simple intervention increased the perceived level of meaning and importance of events for

the values group as compared to the control group for events rated as highly congruent with the selected value (i.e., rated 6 or 7 on a 7 point Likert scale). This hints at exciting possibilities for individuals with depression, as perceived lack of meaning and purpose in life has been linked with hopelessness, depression, and suicide (Seligman et al., 2013). Future research could more thoroughly explore the impact of this kind of intervention on meaning and mastery, particularly in depressed populations.

Another avenue for future research would be to investigate the impact of this kind of intervention on hope. Hope is defined as the belief that one will receive a future desired outcome and the ability to see the "path" or way to that outcome (Snyder et al., 1991). Preliminary analyses indicate that our intervention may have impacted perceived levels of hope; perhaps because linking events to values enhances the desirability of future outcomes. Research consistently demonstrates that a paucity of positive future expectancies predicts hopelessness and suicide (O'Connor et al., 2008). Thus, it would be important to explore whether a personal values perspective could contribute to eliciting hope for the future.

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Appendix A

Choosing Events (For both control and experimental group)

Think about this next week, starting with tomorrow. For each category below write down events that will reasonably happen. **Events should have a clear beginning and ending and not last for more than a day.** For example, "hanging out with friends" does not have a clear beginning and end, whereas "going for coffee at Market on Front with Mark" has a beginning and an end.

Events should also have a specific time, and setting. For instance, "talking with my roommate" does not have a specific time and setting. However: "talking with my roommate at the dining hall during dinner" has a specific time and setting.

Come up with at least 3 specific events for each category. It's okay if you can't come up with something you have planned, just write down something that you typically do in a given week. If you are stuck, you may use the same event for two categories if that is appropriate.

Friendships/Social life/partner

Examples: go to first Friday with friends on Friday night; Go skiing at SnowBowl with Anthony on Saturday; go to the dining hall with friends at night on Wednesday

1   Go to first friday with friends on Friday night
2   go skiing at Snowbowl with Anthony on Saturday
3   Go to the Dining Hall with friends on Wednesday night

Career/employment/school

Examples: write a paper for developmental psychology class; work a 4-7 shift at Target on Thursday; go to Introduction to Psychology on Monday morning

1   Write a paper for Developmental Psychology Class
2   Work at 4-7 shift at Target on Thursday
3   Go to Introduction to Psychology on Monday Morning

Recreation/Fun/Leisure

Example: play Volleyball on Wednesday night with intramural team; Watch the Last Kingdom on Netflix at night; go to a movie at the Roxy on Friday night

1	Play Volleyball on Wednesday night with intramural team
2	Watch the Last Kingdom on Netflix at night
3	Go to a movie at the Roxy on Friday night

Health/Physical Care

Examples: go to the gym with Billy on Tuesday; do laundry on Saturday; hike up the "M" after class on Thursday

1	Go to the gym with Billy on Tuesday
2	Do laundry on Saturday
3	Hike up to the "M" after class on Thursday

Note: if you are struggling to come up with events, you may exit the room and ask the experimenter to look at the calendar on your phone

→

Appendix B

Values Clarification Task, Event Selection and Prospection Prompt

For this study we will relate the events you chose to your personal values. However, first you need to learn what personal values are, and select which ones seem most important to you.

In this next section, we will clarify your personal values, and you will answer questions to check your understanding. Please read this information carefully so that you'll know what to do:

What are values? Values are our heart's deepest desires for the way we want to interact with and relate to other people, ourselves, and the world. Values can direct your behavior over long periods of time---say throughout your time at college and even beyond. Maybe you know that certain people, relationships or achievements in your life are important. However, we want to examine personal values in a different way. Even if you have learned from others---parents, friends, teachers, ministers, coaches---what is important in life it is also important to know what matters to you. Values are what you want out of life, and what brings your life meaning, and not how your parents, friends, or society want you to live.

What are personal values?

○ The way our parents, teachers, coaches want us to live
○ The way we want to live; our deepest desires for how we interact with the world
○ The way our society wants us to live

→

What are your values? Take a moment to think about times when you have felt your life had meaning or purpose. Perhaps you felt really alive in some area of your life, a feeling excitement, complete engagement, pure enjoyment---even if what you were doing was challenging. These qualities of feeling alive, engaged, that there was something meaning about this task---are what we mean by a value. This is not simply about happiness or excitement or that things are working out well, but rather that you feel that what you are doing is meaningful.

How might you know a behavior you are doing reflects your personal values?

○ Someone tells you it's important
○ You felt alive, engaged, it seemed meaningful
○ It was really easy to do

Values are different from goals: Values are different from goals. Goals have an end and can be completed, but values reflect how you want to live your life over time. For example, getting married might be a goal you have in life, but it would be just one action in the service of the value of being an affectionate, honest, and loving partner. To get a good grade on a test would be a goal; to be invested in gaining more knowledge could be the value it reveals.

Going on a coffee date would be a_____because it has an end, whereas intimacy would be the_____this is in service to, because it is ongoing, and does not have an end.

○ value; goal

○ goal; value

→

Now that you know what personal values are, you will think about your own personal values.

What are your values? Deep down inside, what is important to you? What do you want your life to stand for? What do you want your life to be about? Think about your value as a compass, or a guidepost for your actions. What do you want to move towards?

Below write down 5 values that you feel are really important to you. If it's helpful, you can refer to the list below for ideas It's okay if you're not 100% certain of what your values are, go with your initial instinct. Values can change and become more or less important depending on our stage in life.

1	Achievement
2	Knowledge
3	Social Connection
4	Belonging
5	Fun

Achievement: to have important accomplishments

Adventure: to have new and exciting experiences

Beauty: to appreciate beauty around me

Belonging: to have a sense of belonging, being part of

Challenge: to take on difficult tasks and problems

Compassion: to feel and act on concern for others

Creativity: to create new things or ideas

Curiosity: to seek out, experience, and learn new things

Excitement: to have a life of thrills and stimulation

Family: to have a happy, loving family

Fitness: to be physically fit and strong

Friendship: to have close, supportive friends

Forgiveness: to be forgiving of others

Fun: to play and have fun

Genuineness: to act in a manner that is true to who I am

Growth: to keep changing and growing

Health: to be physically well and healthy

Industry: to work hard and well at my life tasks

Intelligence: to keep my mind sharp and active

Intimacy: to share my innermost experiences with others

Knowledge: to learn and contribute valuable knowledge

Leisure: to take time to relax and enjoy

Mastery: to be competent in my everyday activities

Music: to enjoy or express myself in music

Non-conformity: to question and challenge authority and norms

Passion: to have deep feelings about ideas, activities, or people

Pleasure: to feel good

Romance: to have intense, exciting love in my life

Service: to be helpful and of service to others

Simplicity: to live life simply, with minimal needs

Spirituality: to grow and mature spiritually

Selecting Events:

Now that we have identified you values think again about your upcoming week. What are some of the ways your values are "showing up" in your daily activities?

Please select 3 of the events below that relates to one or more of your personal values. You will imagine these events in detail, so pick the three that feel most meaningful, and important to you. Since you chose 5 values each value will not be represented in the events that you choose. It's also okay for all of the events you chose to reflect just one of your values.

Here is a reminder of your personal values **(Achievement, Knowledge, Social Connection, Belonging, Fun)** Which events below relate to these values?

- [ ] Go to first Friday with friends on Friday night
- [ ] Go skiing at SnowBowl with Anthony on Saturday
- [ ] Go to the dining hall with friends at night on Wednesday
- [ ] Write a paper for developmental psychology class
- [ ] Work a 4-7 shift at Target on Thursday
- [ ] Go to Introduction to Psychology on Monday morning
- [ ] Play Volleyball on Wednesday night with intramural team
- [ ] Watch the Last Kingdom on Netflix at night
- [ ] Go to a movie at the Roxy on Friday night
- [ ] Go to the gym with Billy on Tuesday
- [ ] Do laundry on Saturday
- [ ] Hike up the "M" after class on Thursday

If you are struggling to select 3 events try to select the 3 events that **feel the most meaningful** to you. You can also look at your values and think about which events are consistent with one or more of those values.

Which value relates to the events you chose? Write in the value that relates to each event in the space below. It's okay to put two values in the space.

If you're not sure what value relates to each event, select that value that feels most relevant.

Here is a reminder of your values: **Achievement, Knowledge, Social Connection, Belonging, Fun**

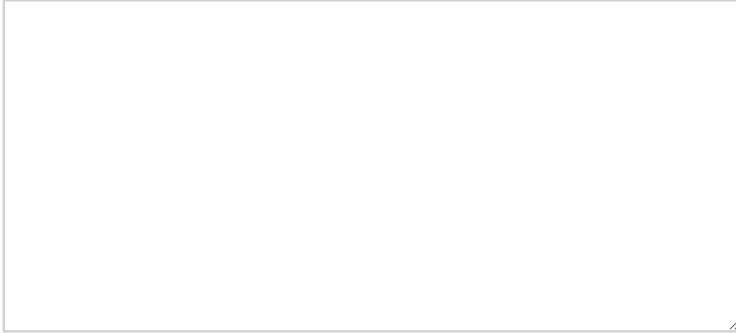| Event	Value
Go skiing at SnowBowl with Anthony on Saturday	Fun
Play Volleyball on Wednesday night with intramural team	Belonging
Hike up the "M" after class on Thursday	Achievemen

→

Event: **Go skiing at SnowBowl with Anthony on Saturday**
Related Value: **Fun**

Below, write down, **in as much detail as possible** everything that could happen during that event. Try to include details about things like the course of events, the setting, the people and objects that could be there, what people could say, and what you may be thinking or feeling. Try to imagine that you are really there. If it helps, first close your eyes and really try to picture this event with your "minds eye."

You will have three minutes to write as much as possible. Try to fill the whole page with text.

Appendix C

Control Filler Task, Event Selection and Prospection Prompt

In this section you will read various passages, and answer questions based on the content.

The "eerie" call of the Common Loon is distinct to individuals and can be heard at great distances. A fascinating bird, the loon swims underwater to catch fish, propelling itself with its feet. It swallows most of its prey underwater. The loon has sharp, rearward-pointing projections on the roof of its mouth and tongue that help it keep a firm hold on slippery fish. While loons are agile swimmers, they move pretty fast in the air, too. Migrating loons have been clocked flying at speeds more than 70 mph.

Loons hunt for most of its prey:

○ underwater
○ off rocks
○ near coral reefs

→

The "eerie" call of the Common Loon is distinct to individuals and can be heard at great distances. A fascinating bird, the loon swims underwater to catch fish, propelling itself with its feet. It swallows most of its prey underwater. The loon has sharp, rearward-pointing projections on the roof of its mouth and tongue that help it keep a firm hold on slippery fish. While loons are agile swimmers, they move pretty fast in the air, too. Migrating loons have been clocked flying at speeds more than 70 mph.

Loons keep a firm hold on slippery fish by using:

○ a deep gullet that can hold up to three fish
○ sharp, hooked talons with protruding bristles
○ rearward-pointing projections on the roof of it's mouth

→

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The "eerie" call of the Common Loon is distinct to individuals and can be heard at great distances. A fascinating bird, the loon swims underwater to catch fish, propelling itself with its feet. It swallows most of its prey underwater. The loon has sharp, rearward-pointing projections on the roof of its mouth and tongue that help it keep a firm hold on slippery fish. While loons are agile swimmers, they move pretty fast in the air, too. Migrating loons have been clocked flying at speeds more than 70 mph.

The Loon has been shown to travel at speeds as fast as:

○ 70 miles per hour
○ 80 miles per hour
○ 90 miles per hour

→

Please carefully read this new passage, and answer the following questions.

Mealworm beetles are very different from humans in how they grow up. They pass through 4 different body forms in their complete life cycle. This is called complete metamorphosis. As we have seen, the first form is the egg. A beetle remains as an egg for 7 to 10 days before hatching into the second form, the larvae. This is the body form responsible for the "worm" part of the name mealworm. They are very tiny when they first hatch, and it takes them about 3 months before they enter the next body form. During this time, the larvae eat and eat and grow. However, to grow, they must shed their skin every so often. Right after they molt, their skin is white and soft, which allows the animal to grow before their skins hardens and turns tan again in a day or two.

Larvae molt about 15 times and can get very big. Large larvae are what people buy in pet stores or bait shops to feed their reptiles or fish. When a larva has eaten enough food and grow big enough, it pupates into the third body form, the pupa. While in this form, the beetle does not eat or move very much. The pupa just sits and waits while its insides rearrange into the form needed for the fourth and final body stage. The pupal stage lasts for 7 to 10 days, and finally the pupa encloses and becomes an adult. The adult form is what we typically think of as a "beetle." In the final body form, beetles look for other mealworm beetles to mate with and produce offspring to start the life cycle over again.

The "worm" part of the mealworm refers to what life cycle of the beetle?

○ the egg
○ the larvae
○ the pupa

→

Mealworm beetles are very different from humans in how they grow up. They pass through 4 different body forms in their complete life cycle. This is called complete metamorphosis. As we have seen, the first form is the egg. A beetle remains as an egg for 7 to 10 days before hatching into the second form, the larva. This is the body form responsible for the "worm" part of the name mealworm. They are very tiny when they first hatch, and it takes them about 3 months before they enter the next body form. During this time, the larvae eat and eat and grow. However, to grow, they must shed their skin every so often. Right after they molt, their skin is white and soft, which allows the animal to grow before their skins hardens and turns tan again in a day or two.

Larvae molt about 15 times and can get very big. Large larvae are what people buy in pet stores or bait shops to feed their reptiles or fish. When a larva has eaten enough food and grow big enough, it pupates into the third body form, the pupa. While in this form, the beetle does not eat or move very much. The pupa just sits and waits while its insides rearrange into the form needed for the fourth and final body stage. The pupal stage lasts for 7 to 10 days, and finally the pupa closes and becomes an adult. The adult form is what we typically think of as a "beetle." In the final body form, beetles look for other mealworm beetles to mate with and produce offspring to start the life cycle over again.

The four life cycles of the mealworm, in order includes:

○ egg, metamorph, larvae, adult

○ egg, larvae, pupa, adult

○ larvae, pupa, metamorph, adult

→

Mealworm beetles are very different from humans in how they grow up. They pass through 4 different body forms in their complete life cycle. This is called complete metamorphosis. As we have seen, the first form is the egg. A beetle remains as an egg for 7 to 10 days before hatching into the second form, the larva. This is the body form responsible for the "worm" part of the name mealworm. They are very tiny when they first hatch, and it takes them about 3 months before they enter the next body form. During this time, the larvae eat and eat and grow. However, to grow, they must shed their skin every so often. Right after they molt, their skin is white and soft, which allows the animal to grow before their skins hardens and turns tan again in a day or two.

Larvae molt about 15 times and can get very big. Large larvae are what people buy in pet stores or bait shops to feed their reptiles or fish. When a larva has eaten enough food and grow big enough, it pupates into the third body form, the pupa. While in this form, the beetle does not eat or move very much. The pupa just sits and waits while its insides rearrange into the form needed for the fourth and final body stage. The pupal stage lasts for 7 to 10 days, and finally the pupa encloses and becomes an adult. The adult form is what we typically think of as a "beetle." In the final body form, beetles look for other mealworm beetles to mate with and produce offspring to start the life cycle over again.

A larvae's skin grow white and soft so that:

○ it can shed the skin

○ it can molt

○ it can grow

→

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Thank you for answering those questions. Now we will return to the events you wrote about earlier.

Please select 3 of the events below. You will imagine these events in detail, so pick the three that feel most meaningful, and important to you.

- ☐ Go to first friday with friends on Friday night
- ☐ go skiing at Snowbowl with Anthony on Saturday
- ☐ Go to the Dining Hall with friends on Wednesday night
- ☐ Write a paper for Developmental Psychology Class
- ☐ Work at 4-7 shift at Target on Thursday
- ☐ Go to Introduction to Psychology on Monday Morning
- ☐ Play Volleyball on Wednesday night with intramural team
- ☐ Watch the Last Kingdom on Netflix at night
- ☐ Go to a movie at the Roxy on Friday night
- ☐ Go to the gym with Billy on Tuesday
- ☐ Do laundry on Saturday
- ☐ Hike up to the "M" after class on Thursday

→

In this part of the study you will be asked to imagine each of the events you identified earlier in detail, and then you will answer questions about what you imagined.

When you hit the arrow button below, you will see one of the events you chose, and then be asked to imagine that event in detail.

→

Thank you for answering those questions. Now we will return to the events you wrote about earlier.

Please select 3 of the events below. You will imagine these events in detail, so pick the three that feel most meaningful, and important to you.

- ☐ Go to first friday with friends on Friday night
- ☐ go skiing at Snowbowl with Anthony on Saturday
- ☐ Go to the Dining Hall with friends on Wednesday night
- ☐ Write a paper for Developmental Psychology Class
- ☐ Work at 4-7 shift at Target on Thursday
- ☐ Go to Introduction to Psychology on Monday Morning
- ☐ Play Volleyball on Wednesday night with intramural team
- ☐ Watch the Last Kingdom on Netflix at night
- ☐ Go to a movie at the Roxy on Friday night
- ☐ Go to the gym with Billy on Tuesday
- ☐ Do laundry on Saturday
- ☐ Hike up to the "M" after class on Thursday

→

Event: Go skiing at Snowbowl with Anthony on Saturday

Below, write down, **in as much detail as possible** everything that could happen during that event. Try to include details about things like the course of events, the setting, the people and objects that could be there, what people could say, and what you may be thinking or feeling. Try to imagine that you are really there. If it helps, first close your eyes and really try to picture this event with your "minds eye."

You will have three minutes to write as much as possible. Try to fill the whole page with text.

Appendix D

PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel this way right now, that is, at the present moment. Use the following scale to record your answers.

1	2	3	4	5
Very slightly or not at all	A little	Moderately	Quite a bit	extremely

_____	Interested*	_____	Irritable
_____	Distressed	_____	Alert
_____	Excited	_____	Ashamed
_____	Upset	_____	Inspired
_____	Strong	_____	Nervous
_____	Guilty	_____	Determined
_____	Scared	_____	Attentive
_____	Hostile	_____	Jittery
_____	Enthusiastic	_____	Active
	proud		Afraid

omitted due to error

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Appendix E

LOT-R

Please be as honest and accurate as you can throughout. Try not to let your response to one statement influence your responses to other statements. There are no "correct" or "incorrect" answers. Answer according to your own feelings, rather than how you think "most people" would answer.

A = I agree a lot
B = I agree a little
C = I neither agree nor disagree
D = I DISagree a little
E = I DISagree a lot

1. In uncertain times, I usually expect the best.
[2. It's easy for me to relax.]
3. If something can go wrong for me, it will.
4. I'm always optimistic about my future.
[5. I enjoy my friends a lot.]
[6. It's important for me to keep busy.]
7. I hardly ever expect things to go my way.
[8. I don't get upset too easily.]
9. I rarely count on good things happening to me.
10. Overall, I expect more good things to happen to me than bad*

Omitted due to error

Appendix F

The Trait Hope Scale

Directions: Read each item carefully. Using the scale shown below, please select the number that best describes YOU and put that number in the blank provided.

1. = Definitely False
2. = Mostly False
3. = Somewhat False
4. = Slightly False
5. = Slightly True
6. = Somewhat True
7. = Mostly True
8. = Definitely True
___ 1. I can think of many ways to get out of a jam.
___ 2. I energetically pursue my goals.
___ 3. I feel tired most of the time.
___ 4. There are lots of ways around any problem.
___ 5. I am easily downed in an argument.
___ 6. I can think of many ways to get the things in life that are important to me.*
___ 7. I worry about my health.
___ 8. Even when others get discouraged, I know I can find a way to solve the problem.
___ 9. My past experiences have prepared me well for my future.
___10. I've been pretty successful in life.
___11. I usually find myself worrying about something.
___12. I meet the goals that I set for myself.

Note. When administering the scale, it is called The Future Scale. The agency subscale score is derived by summing items 2, 9, 10, and 12; the pathway subscale score is derived by adding items 1, 4, 6, and 8. The total Hope Scale score is derived by summing the four agency and the four pathway items. *omitted due to error