RUNNING HEAD: Appraisal in Positive Emotion

**Appraisal in Positive Emotion: Differentiation Between Hope and Challenge/Determination**

Honors Psychology Thesis

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**ABSTRACT**

The object of this study was to test individual differentiation between the emotions Hope and Challenge/Determination in terms of motivational, cognitive, and behavioral components.  The former emotion requires a more globalized and potentially optimistic appraisal process while the latter is reliant on self-motivation to a greater extent in a short-term context. If individuals are asked to recall hopeful or challenging memories in open-ended and other appraisal-focused self-report measures are they more likely to be able to generally differentiate between the emotions? We found that psychological ownership and internal motivation in a task plays a pivotal role Determination while Hope relies on a relationship to external factors; both emotions utilize problem-focused coping to a greater extent than emotion-focused coping potential.

**INTRODUCTION**

One of the most important building blocks of human civilization is the concept of emotion. As humans, our interactions are defined by registering perceptual cues that then influence the resulting course of action. **Emotions, and the way we express them, defines us as humans and helps to shape our personalities. Think back to the important moments of your life: each event comes attached to a perception of how you felt at the time, and how that sensation affected both that and futures exchanges.** At a wedding we feel joy, at a funeral we feel sadness, at a difficult test we feel challenged; our emotions provide a framework for our existence and the building blocks of our interactions.

However, the importance of the emotional response often focuses on the negative side of the spectrum, while the positive side is generalized if not entirely underrated. People often assume that there are numerous states of negative emotion, which produce action-tendencies (Fredrickson & Levenson, 1998), or narrowed, outward responses to emotional stimuli for purposes of immediate survival. By comparison many believe there are only one or two designated positive states (happiness and/or interest [Fredrickson, 2000]), but positive emotions are actually more likely to produce a cognitive response (also known as a thought-action tendency), which differs depending on the specific emotional state (i.e. Challenge, Hope, Pride, Contentment, etc).  **Positive emotions have the power to influence and predict well-being** (Fredrickson, 2000; Bartlett & DeSteno, 2006; Smith, 1991) to the same extent (if not more than negative emotions) in both the short and long-term. Positive emotions are neither simple, direct responses to environmental stimuli (although the external context of a situation plays a crucial role in the appraisal process [Smith, 1991]), nor are they expressed uniformly; therefore research must concentrate on defining and analyzing their components.

At this time, negative emotions account for much of the focus of differentiation studies (Smith & Ellsworth, 1985; Fredrickson, 2000). However, research has discovered at least eight major positive emotions: Hope, Challenge/Determination, Gratitude, Contentment, Joy, Pride, Awe, and Interest (Smith, 1991) which remain vastly underexplored as compared to their negative counterparts. **Positive emotions are the effects of cognitive mental processes that help humans react, adapt, and survive on a daily basis.** We are all subject to situational construals, which reflect knowledge and interpretation of a given circumstance**. However, it is how these construals (which present themselves as emotions) potentially affect well-being that makes them important from a researcher’s perspective (Smith, 1991).**

One of the key theoretical components to studying the effects of any positive emotion of on stress levels is Barbara Fredrickson’s Broaden and Build theory. It states that positive emotions combine over time to create a number of emotional reserves. One can then use these assets as a backdrop for daily life—a significant resource, considering humans are programmed to view the world in a negative light.  **By focusing on positive emotions, one builds a foundation on which to expand, or broaden, their personal outlook.** For example, a single situation that elicits Pride expands on a preexisting foundation of confidence, which an individual may draw upon in future similar situations. The Broaden and Build articles (Fredrickson & Levenson, 1998; Fredrickson, 2000) **repeatedly find that the effect of using positive emotions also allows one to focus on objects, events, or interactions more successfully.** Unfortunately, Fredrickson considers the effect positive emotional reactions to be the same, regardless of the nuances between each feeling although other research has clearly indicated a high degree of differentiation between positive emotional states (Ellsworth & Smith, 1988; Griskevicius, Shiota, & Neufield, 2010; Smith & Lazarus, 1990). To look more closely at processing distinctions, we must turn to appraisal theories.

*The Importance of Appraisal*

All emotional responses begin with general appraisal to determine personal significance, **or whether or not the stimulus in question is worthy of acknowledgment** (Mauss & Robinson, 2009). Only after monitoring relevance does the individual experience an emotional response. There are two main perspectives for categorizing these responses, dimensional and discrete. The dimensional perspective claims that there are several mental facets that organize emotional responses, including valence, arousal, and approach/avoidance (Mauss & Robinson, 2009). While researchers know that there is certainly some interaction between these areas, the actual relationship is less clear.

By contrast, the discrete perspective states that each emotion has a specific experience and processing method (Smith & Ellsworth, 1985). It relates to the dimensional model in that each emotion is actually a combination of dimensions. However, the two perspectives have different interpretations of the same response, which affects the relationship between emotion and stress. By using one or both of these perspectives one gains a greater understanding of the basis behind positive emotions and their interaction with stress, making it more easily combatable.

**Coping, part of the response process, entails cognitions and behaviors that a person uses to monitor stress and its emotional impact** (Folkman & Lazarus, 1980). Individuals rely on a combination of problem-focused and emotion-focused coping to alleviate a stressful situation, both of which begin with an analysis of a given context to determine what action, if any, is required (Scherer, Schorr, & Johnstone, 2001). The former then takes concrete steps to alter the situation, while the latter regulates the emotions tied to the experience when action-tendencies are implausible. **We expect Determination, with its reliance on voluntary action and self-initiation, to be more highly correlated with problem-focused coping potential than Hope, which might be related to emotion-focused coping in its connection to external factors.** Eventually, one acquires the ability to cope with his or her surroundings and feel more comfortable in a given environment, releasing stress as a byproduct.

As mentioned above, humans constantly employ several appraisal techniques. One of these theories, the process model of appraisal, believes that multiple cognitive processes occur to create a broad response to a stressful environment (Scherer, Schorr, & Johnstone, 2001; Smith & Kirby, 2000). Two components of this model include associative processing, or automatic activation of memories, and reasoning, which involves deliberate, accommodating thoughts (Scherer, et. al., 2001). We hope to find that the need for flexibility to overcome obstacles in Determination and the interplay between optimism and non-human aspects in Hope reflects a relationship between this appraisal model and different coping styles.

**The structural model of appraisal focuses on the evaluations that influence emotional reactions, specifically that assessments produce specific emotional responses (Smith, 1991**). It begins with primary appraisal, or the motivational relevance (how important one finds the situation) and motivational congruence, or desirability. Next the individual must consider secondary appraisals, including accountability (self, other, or non-human), coping potential (problem vs. emotion-focused), and future expectancy about how the situation will progress (Scherer, Schorr, & Johnstone, 2001). Only then can one register an emotional response, which differs based on the evaluations of the above components.

*Comparing Hope and Challenge/Determination*

**Hope and Challenge are both positive, motivational emotions that work to *sustain* coping ability in times of stress** (Snyder, 2004). Challenge plays upon the basic need to improve one’s position in a given context in order to feel a sense of accomplishment, while Hope helps the individual determine specific methods of achieving personal goals (Ellsworth & Smith, 1988; Snyder et.al., 2006). **Those who are better able to differentiate between the two emotions (as well as from the other types of positive emotion) are better able to adjust to reality and its limitations in the course of pursuing goals, consequently lowering stress levels by preventing the individual from creating unrealistic expectations** (Snyder et.al., 2006). Hope helps an individual distance his or herself from the impact of failure, while Challenge/Determination is important for confidence in situations requiring a high degree of problem solving.

One of the most prevalent themes for both Hope and Determination is that of self-agency, or the perceived capacity to use mental processes to achieve success (Snyder, 1991); one must be both proactive and self-reliant to create pathways towards goals or overcome obstacles without becoming overwhelmed. In other words, the former involves the perception of success in a given context combined with individual personality factors (Snyder et.al., 2006). Thus, the emotion itself is actually secondary to the cognitive mental process, with any action-tendency reflecting the cognitive perception of the individual as it relates to external factors. Additionally, the concept of optimism is highly correlated with that of hope. According to Optimism Theory, if one has a positive explanatory style, they are likely to make external, variable, and specific attributes—consistent with the components thought to generate hope (Seligman, 1991).

Determination, too, relies on explanatory styles to a degree, but as opposed to Hope it utilizes internal motivation to a greater extent (Snyder & Lopez, 2009). **As stated in the Oxford Handbook of Positive Psychology, the emotion is not about control over events or outcomes but the degree to which conduct is voluntary and self-initiated** (2009). Challenge/Determination is more likely to be present in short-term scenarios where the feasibility of a goal is a priority, as opposed to long-term situations where desirability plays a more direct role (Parker, Bindl, Strauss, 2010). Goal attainment depends on the feedback loop during the actual pursuit; optimistic individuals are more likely to have internally positive or neutral thoughts (and therefore less likely to be overwhelmed) while pessimists may resign themselves to negative thoughts (Snyder, 1991). **Researchers believe that Determination is what pushes one to overcome internal negativity encountered along the path of accomplishing an objective, while the role of Hope is to maintain the overarching positive outlook necessary to reach the larger, external goal** (Snyder et.al., 2006; Snyder et.al., 2009); self-accountability and higher levels of problem-focused coping should therefore associate with Determination, while non-human and other accountability relates to Hope.

**Determination relies more directly on self-efficacy it involves higher psychological risk, explaining why it is less associated with positivity than Hope (Parker, Bindl, Strauss, 2010). Self-initiation indicates subconscious ownership of a target, while Hope (with its dependence upon external factors) allows for more mental distance despite utilizing proactive behavior (Wagner, et. al., 2003). In any situation, cognitive and “objective” reflection serve to help one decide whether to continue expending emotional resources and energy on Determination, change focus to global aspects of the situation, or just abandon the goal entirely (Parker, Bindl, Strauss, 2010). The extent to which one makes these assessments indicates their level of differentiation, whether on a conscious or sub-conscious level.**

**It is in this context of emotional differentiation and its relation to stress-coping mechanisms that we would like to test Hope and Determination. Using the structural model of appraisal we hope to gain understanding about the nuances of these motivational emotions.**  If one can use primary and secondary appraisal to discriminate between Hope and Challenge by simply recalling separate memories when prompted, the findings could influence the way we teach people to distinguish and understand their positive emotions by examining the details of personally significant situations. By contextualizing the evaluative differences in intimate memories, participants more easily relate to the subject matter and are more likely to analyze and recognize differences.

*Approaches and Personality Measures*

As outlined by Mauss and Robinson, there are several approaches to measuring an emotional response, all of which can be used independently or in combination to record emotion (2009). Besides self-report, researchers can mark the Startle Response Magnitude (a universal reflex involving tensing the neck and blinking), log brain states, or monitor physical behavior and autonomic measures. However, none of these gauges succinctly provide explanations for all aspects of emotion, and in fact there are often discrepancies between articles about the effectiveness of each measure, leaving many of the studies with unfortunately narrow spectrums of analysis (Mauss & Robinson, 2009).

As a lack of overlapping research methods is one of the main limitations on positive emotion research, our lab hopes to provide a more cohesive analysis by using the Differentiation of Positive Emotional Experience Scale (DOPES). Although DOPES relies on self-report (see *Methods* subsection), it allows for a wide range of emotional level, and in this lab will act as a preliminary data set for any future studies (Kirby, Tugade, Smith & Morrow, 2009). Additionally, it provides a substantial amount of information for analyzing coping styles and their relation to the property of positive emotions, which is the main focus of our research. While pilot studies look promising it will be helpful to collect more data confirming the accuracy of DOPES as a measure of coping skills related to positive emotions.

One of the other limitations across numerous studies was the imbalance of gender in a given sample. Additionally, initial examination of articles found substantially varying sample sizes; the articles referenced in this paper include sample sizes ranging from 35 (Bartlett & DeSteno, 2006) to 397 (Griskevicius, Shiota, & Neufield, 2010). This raises several questions about the true validity of the results of previous research; what if there is an unnoticed difference between emotional coping and gender? Or what if the sample size is so varied that there is not an accurate representation of the population in question? Hopefully we will remedy these concerns in the course of our experiment.

In review, based on the background research and preliminary planning there are several queries worth investigating in our research lab. Are there significant distinctions between Hope and Challenge/Determination, and how are their cognitive processes related? How does appraisal affect the context in which each emotion is used, and how important is problem-focused versus emotion-focused coping potential as a determinate of Hope and Challenge/Determination? Are people who are better able to differentiate between emotions also able to differentiate Hope and Determination? Can these differences in the degree to which individuals differentiate positive emotional experience be reliably captured by a revised version of the DOPES?

**METHODS**

*Participants*

Adult participants (*n* = 328) were recruited from the Vanderbilt University subject pool, as well as external websites. Mean age of participants was 26.30, including 191 females, 90 males, and 47 participants who failed to report their sex; most participants did not complete the full survey, the final *n =*51.

*Design and Procedure*

The study includes several components, beginning with the self-designed questionnaire defining (and then comparing) Hope and Determination. After attaining informed consent, participants are asked to write about a specific hopeful or challenging experience in which they attempted to attain a goal (see *Measures* subsection). The within-subjects design not only provides our lab with more data but also serves to prime the subject to subconsciously compare emotions in the subsequent scales.

*Measures*

*Hope/Determination Survey--* The first measure in this study consists of a self-created questionnaire testing for the ability to differentiate and define Hope or Challenge/Determination through recollection of a specific memory about attaining a goal. This self-report measure serves to actively engage the participant and allow them to give multiple means of expressing differentiation. The survey first asks open-ended questions aimed at describing the experience, including the number of people involved in the experience, and why the person felt either hopeful or determined. This section is followed by more specific background queries, which continue to elicit detail about the situation in question (e.g. “How easy was it for you to describe this event in words, as you have just done?”).

The questionnaire also included questions about problem-focused coping (e.g. “How certain are you that you will be able to influence things to make (or keep) the situation the way you want it?”) and emotion-focused coping (e.g. “How certain are you that you will or will not be able to deal emotionally with what is happening in this situation however it turns out?”) Other key appraisals include questions on motivational relevance and congruence, future expectancy of the situation, self-accountability, other accountability, and non-human causes of accountability.

Finally, questions comparing facets of the two emotions allow us to measure the different sources of motivation, perceived relevance to interpersonal relationships, ties to optimism and pessimism, perceived capacity to control the situation. These questions also asked participants to compare their feelings of Hope or Determination to other discrete emotional clusters (e.g. surprise, happiness, anger, frustration, etc). Other than the open-ended questions, all measures were recorded on Likert-style scales, designed to quantify differentiation of emotion.

*Differentiation of Positive Emotional Experience Scale (DOPES)--* DOPES uses relatable, real-world situations to measure the effect of emotional states on overall subjective well-being. The preliminary version of this self-report scale, which has been previously tested by Smith & Kirby, asks individuals to rate their positive emotions on a 9-point Likert-type scale in response to eight hypothetical circumstances. The experimenter takes the inverse of the average intercorrelation among the positive emotion ratings for each of the eight situations to assess one’s degree of positive emotional differentiation (Kirby, Tugade, Smith & Morrow, 2009).

*Five-Facet Mindfulness Inventory (FFMI)--* In order to further observe participants’ attention to nuances between the two emotions we included questions from the Five Facet Mindfulness Inventory, specifically the “Non-Reactivity to Inner Experience” subscale. The immediate response to an emotion implies sensitivity to perceptual differences in an emotional experience by jumping to conclusions about the motivation for the experienced emotion (Baer, et.al, 2006). Those with subdued reactions are more likely to accept the situation (and emotions involved) with less intrapersonal analysis. Non-reactivity, therefore, is theoretically negatively correlated with differentiation potential.

*Toronto Alexithymia Scale (TAS-12)--* Additionally, our survey utilized selections from the Toronto Alexithymia Scale (TAS-20), designed to judge emotional clarity. Unlike the above measures, this scale focuses on the inability to identify emotions (Bagby, et.al, 1994); our survey included the “Difficulty Describing Feelings” and “Difficulty Identifying Feelings” subscales (TAS-12). The questionnaire uses a cut-off system in clinical studies, but for our purposes we simply looked at differences in score between subjects. The scale has good internal consistency (Cronbach’s alpha = .81) and test-retest reliability is .77, p < .01 (Bagby, et.al, 1994).

*Life Orientation Test (LOT)--* The questionnaire also included the LOT, which brings a more generalized observation of optimism versus pessimism to the study. The 8-item test (plus 4 filler questions) monitors individuals’ assessment of generalized outcome expectancies (Scheier & Carver, 1985) in order to determine their levels of optimism. Unlike the TAS-12 there is no cut-off point for LOT; higher scores are associated with higher levels of optimism. LOT exhibits both acceptable internal consistency (Cronbach’s alpha = .76) and test-retest reliability correlation (.79).

*Anticipated Results*

The anticipated results for this study are expected to show (1) Emotional differentiation based on recalling memories of different hopeful and challenging events. (2) Differentiation responses based on structural appraisal evaluation of these specific memories. (3) Emotions rely on self-agency: Determination stems from internal motivation to overcome short-term impediments while Hope ties to external cues for sustaining a generally positive outlook. (4) Personality measures support the idea that those who are better able to generally differentiate between emotions are better able to differentiate between Hope and Determination.

**RESULTS AND DISCUSSION**

*Appraisal Ratings*

We analyzed the surveys by running a paired samples t-test on all variables (p<.05), comparing one variable across the two conditions. Of the key appraisals (see Table 1), self-accountability, non-human accountability, and amount of effort the participant expended attaining their goal turned out to be significant. Additionally, problem-focused coping and one of the emotion-focused coping questions were marginally significant (p.<.1), while the other emotion-focused coping question was not. Other accountability was not significant, nor was future expectancy, motivational relevance, or motivational congruence.

To analyze differences between the two emotions, we relied on the reported means of each condition. The mean for Challenge/Determination was higher than Hope for self-accountability, amount of effort expended, problem-focused coping and emotion-focused coping. Unsurprisingly, participants found Hope to be more pleasant than Challenge/Determination.

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| --- | --- | --- | --- |
| Key Appraisals | Challenge/Determination mean | Hope mean | Two-Tail Significance (p) |
| Self-accountability | 3.97 | 3.52 | .025 |
| Other accountability | 2.62 | 2.92 | .440 |
| Non-human accountability | 1.47 | 1.96 | .003 |
| Effort expended | 4.61 | 4.14 | .019 |
| Problem-focused coping | 3.29 | 3.11 | .053 |
| Emotion-focused coping: ability to adjust | 3.52 | 3.00 | .063 |
| Emotion-focused coping: ability to deal emotionally | 3.52 | 3.40 | .933 |
| Future expectancy | 3.82 | 3.66 | .434 |
| Motivational relevance | 4.56 | 4.74 | .242 |
| Motivational congruence—positive aspects | 3.84 | 4.96 | .340 |
| Motivational congruence—negative aspects | 3.00 | 2.57 | .289 |
| Motivational congruence-- Pleasantness | 2.54 | 3.04 | .013 |

Table 1: Key Appraisal T-Test (Means and Significance)

*Background*

Determination was both harder to describe and to recall (see Table 2), perceived to last slightly shorter than Hopeful scenarios, and found to have happened more often. Other significant questions that highlighted differences between the emotions included the observed degree to which the situation exposed the individual in a positive or generally different light, whether the situation led others to see the subject more positively or negatively, the extent that concerns over how others saw the subject influenced the outcome of their situation, and to what degree the situation led the individual to see themselves in a different light. The amount of perceived optimism or pessimism influenced their actions was also significant along with the perceived relevance of the experience to friends or interpersonal relationships. Internal motivation and the perceived need to change approaches were also significant.

|  |  |  |  |
| --- | --- | --- | --- |
| Background/Secondary Appraisals | Challenge/Determination mean | Hope mean | Two-Tail Significance (p) |
| Ability to describe | 3.67 | 3.54 | .002 |
| Ability to recall | 1.96 | 1.80 | .004 |
| Length of time | 3.98 | 4.00 | .010 |
| Frequency | 3.00 | 2.48 | .009 |
| Pleasantness | 2.54 | 3.04 | .013 |
| Subject seen positively by others | 3.76 | 3.75 | .036 |
| Subject seen in a different light by others | 3.32 | 2.98 | .022 |
| Subject seen more positively or negatively by others | 3.18 | 3.08 | .006 |
| Concern of others influenced outcome | 2.48 | 2.34 | .005 |
| Subject seen in different light by self | 3.35 | 3.20 | .001 |
| Influence of optimism/pessimism | 3.61 | 3.29 | .001 |
| Relevance to interpersonal relationships | 3.18 | 3.34 | .009 |
| Internal motivation | 4.24 | 4.10 | .019 |
| Need to change approach | 2.96 | 2.94 | .036 |

Table 2: Background/Secondary Appraisal Measures T-Test (Means and

Significance)

The significantly related emotional clusters (see Table 3) reported that “surprise/astonishment”, “relieved/unburdened”, “grateful/appreciative”, “hopeful/optimistic”, “joyful/happy”, and “eager/enthused” prompts more closely identified with Hope. “Frustrated/Exasperated”, and “irritated/annoyed” reported higher means for Determination. The results of these clusters are likely related to the ties between Hope and pleasantness (reported above), and the fear of falling short of the goal for Determination.

|  |  |  |  |
| --- | --- | --- | --- |
| Emotion Clusters | Challenge/Determination mean | Hope mean | Two-tail Significance (p) |
| Surprise/Astonishment | 4.64 | 5.88 | .036 |
| Relieved/unburdened | 4.04 | 5.06 | .012 |
| Grateful/appreciative | 5.29 | 6.51 | .002 |
| Hopeful/optimistic | 6.52 | 7.60 | .002 |
| Joyful/Happy | 5.41 | 6.31 | .071 |
| Eager/enthused | 5.60 | 6.66 | .035 |
| Frustrated/exasperated | 4.24 | 3.31 | .075 |
| Irritated/annoyed | 3.29 | 2.41 | .017 |

Table 3: Emotion Clusters T-test (Means and Significance)

Almost all of these results reflected the theories that Challenge/Determination depends upon internal motivation, increased effort in finding solutions, and smaller relation to pleasantness that Hope, which was generally characterized by reliance on external factors. Additionally, all of the significant ratings for problem-focused coping were higher for Determination than for Hope.

*Personality Measures*

The personality measures had a lower *n* than the emotion-focused sections of the survey (*n* =50). Therefore, we were unable to compute stable means for correlation purposes (for which we would ideally need n=100). The results show generally average levels of differentiation, but data collection is ongoing for these profiles and will be studied further in future research.

**GENERAL DISCUSSION**

The two strongest recurring themes for Challenge/Determination are the idea of ownership in a situation and the reliance on internal motivation based on structural appraisal to pursue a goal (Snyder & Lopez, 2009). One might assume that the emotion entails a sense of responsibility to the method of overcoming an obstacle or using a problem-focused coping mechanism to achieve success (Scherer, Schorr, & Johnstone, 2001). Subjects reported a higher mean for Determination about feeling the need to change their approach in a given situation in order to reach a goal; such findings confirm that using a process model of appraisal to maintain motivation to reach a larger goal entails flexibility for overcoming smaller obstacles (Snyder et. al., 2006; Snyder et. al., 2009; Smith, 1991).

**The reliance on self-efficacy mentioned above involves a higher psychological risk inherent in Challenge/Determination; the emotion had lower means (as compared to Hope) for motivational congruence as related to pleasantness.** Perceived ownership of an idea in a challenging context calls an individual’s intelligence and perceptual abilities into question whenever the person sets out to accomplish a task. In our survey, challenging situations led participants to see themselves in a different light. **Their resulting self-image reflects the success or failure to adjust their perceived abilities to the perceived difficulties of undertaking the situation to make it more motivationally congruent** (Smith & Kirby, 2008). The individual remains subconsciously aware that the outcome of their plan might result in failure, so after the event they see themselves in a more positive or negative light (depending on whether or not they attained their objective) than if the experience had depended on contextual factors.

Additionally, the key appraisal regarding control of the situation for challenging memories was significant, although previous research has supported the idea that Determination does not focus on control over events but the degree to which one’s actions are voluntary or self-initiated (Snyder & Lopez, 2009). However, **the issue of control alludes to its relationship with problem-focused coping, which plays a role in situations with higher personal responsibility, ability to adjust the outcome, and increased amount of effort expended in realizing their target. This supports the idea that success connects to cognitive appraisal of motivational congruence** to acclimate to a stressful situation. Feasibility of attaining the goal in question becomes a secondary priority to the actions taken in the process, pushing the individual to focus on the procedure rather than the outcome. Responsibility and effort impel one to overcome small negative obstructions to maintain motivation regardless of the practicality of the end result.

Subjects also reported higher means for Challenge/Determination regarding the influence of optimism or pessimism in their actions, again implying a higher level of psychological ownership and differentiation of explanatory style**. Embarking on a challenge with an optimistic outlook creates a barrier against failure, and makes adjusting one’s tactics seem less of a personal slight. Pessimists lose the will to persevere after being thwarted in the attempt to reach their goal, but those who do add to the emotional reserve discussed in the Broaden and Build theory** (Fredrickson & Levenson, 1998; Fredrickson, 2000). Individuals use past experiences to increase the foundation of Determination, which they then utilize in the future. This does not mean that one needs to constantly push self-motivation to the extreme to successfully navigate a challenge, but it does imply that attitude matters; one is more likely to succeed and overcome small impediments based on their level of optimism or pessimism (Snyder, 2004).

In a related vein, **because subjects reported a higher mean for similar previous situations to the one described in the survey for Determination as opposed to Hope (though they found the latter easier to describe), it follows that they may have been more conscious of self-motivated events that occurred in the past while finding the details harder to recall**. As noted, Determination builds confidence in stressful situations requiring a high degree of problem solving (Snyder, 1994). Based on the Broaden and Build theory (Fredrickson & Levenson, 1998; Fredrickson, 2000), this is also related to the associative processing mode of appraisal, which activates quick and automatic memories based on priming from previous encounters (Scherer, Schorr, & Johnstone, 2001); because the emotion relies on internal stimuli, individuals are more likely to expect an encounter with a challenging experience. They have only themselves to thank (or blame) in the evaluation of the eventual outcome, and need not wait for external cues to perceive a challenging predicament.

Conversely, hopeful situations tend to be more rare and more intense, making them easier to describe and remember. **Although they do not occur as often, participants reported hopeful memories as more motivationally congruent as related to pleasantness than challenging ones, as structural appraisal of the situation confirms that the psychological burden of responsibility for a solution is not entirely on the individual.** Such findings corroborate the theory that the Hope maintains a generally positive mindset after the individual assesses the potential to change the prospects of the situation (Smith, 1991) in order to reach a larger, external goal (Wagner, et. al., 2003). One regards an experience as more pleasant if external factors allow for mental distance; the resulting decreased psychological ownership allows the person to maintain positive or neutral well-being in the long-term.

**Taking the full burden of decision making off of the individual accounts for many of the results reported by subjects in our questionnaires regarding Hope.** Not only did the surveys show that participants understood the emotion associate with non-human accountability, but they also felt less of a need to change their approach to achieving a goal, which relates to emotion-focused coping to a higher degree than Determination (although only one of our key appraisals regarding emotion-focused coping was marginally significant). In situations where one feels he or she has less control, one attempts to mentally distance themselves from the situation; for Hope, the subject depends upon external factors so they let go of the need to change their approach but use the emotion as a support system for the stressful event (Wagner, et. al., 2003). The method one utilizes to achieve an end is a secondary concern; the priority lies in reaching the finish line. **While Determination adapts to adverse conditions in accomplishing a feat, Hope keeps the individual focused on the larger picture** (Parker, Bindl, & Strauss, 2010).

Perhaps it is for this reason that Hope is more highly rated with inspiration than is Determination. The emotion draws on past experience and builds reserves for the future, meaning that success in a promising situation builds a foundation inspiring confidence for the next time (Snyder, 2004, Fredrickson & Levenson, 1998). The memories from these experiences are more likely to remain in the conscious mind because they are based on environmental cues and help one regularly sustain a positive outlook. In the survey questions about emotion-focused coping, participants reported lower means for Hope about the amount of effort expended in attaining a goal; because the emotion is tied to contextual reminders, each time one encounters a stressful experience he or she becomes more likely to remember their foundation of Hope through appraisal rather than reaching to remember a source of internal motivation.

Surprisingly, our questionnaires did not find that optimism or pessimism significantly influenced subjects’ actions in hopeful versus challenging situations (although Hope had a slightly higher mean), nor did desirability. According to Parker, Bindl, and Strauss (2010), desirability plays more of a role in hopeful long-term situations, helping to maintain morale until one reaches the given goal. However, while desirability and explanatory styles are revealing to a degree they do not account for all of the components of a positive emotion. External sources of faith or belief in the destiny of a particular outcome may have a larger influence on appraisal than we accounted for in this study. Such variables should be taken into account by future studies in determining all the facets of Hope.

The findings from both our results and previous research have several applications in the real world. Understanding the nuances of each valence and their respective appraisal influences (both problem and emotion-focused) may prove useful in a clinical setting. Therapists can help patients analyze counter-productive or self-hindering actions exhibited in the attempt to achieve a goal if they have an understanding of what inspires one to feel Hope or Determination. Additionally, we can create concrete teaching methods for encouraging and maintaining the positive sense of self-agency that comes with both Hope and Challenge (in different gradations). If there is a zero or one hundred percent chance of success in a given situation, the predetermined outcome makes both Hope and Challenge/Determination unnecessary (Snyder, 2004). For the experiences in between, helping people understand and actively construct self-agency resources plays into the Broaden and Build theory, and could help individuals assemble internal support systems by using these emotions to sustain coping ability in stressful situations.

**As both of the problem-focused coping questions proved significant as compared to only one of the emotion-focused coping measures, it seems that conceptual factors as well as perceived control and motivation play a crucial role in defining both Hope and Challenge/Determination. How one interprets their environment is key to understanding not only appraisal of Hope and Challenge/Determination but also of the emotional experience in general.** One can objectively list components of each emotion, but ten people reading a uniform classification of an emotion might take away ten different interpretations.

Our findings have the potential to add considerable depth to the study of positive emotions. In recent years Psychology as a whole has begun to pay more attention to the positive side of the emotional spectrum, but there remains far less insight into the topic than in comparative areas (e.g. depression, anxiety, etc [Smith, 1991; Fredrickson, 2000; Fredrickson, 1998). Support of our hypotheses calls for increased research focus on analysis of environment and the importance of appraisal on different positive emotions. The significant findings in the present study could help support a field that needs far more research by providing a foundation for additional hypotheses about how our appraisals affect different specific environments or demographics.

Several limitations shaped the validity and reliability of this study. Most importantly, many participants complained about the length of the survey, which affected not only final *n* but also potentially the quality of responses. As subjects began to lose focus they skimmed through questions or lost concentration, which makes the validity of later personality measures especially questionable. Additionally, the mood of participants may have been dictated by the context in which they took the survey; environmental factors and current events may have biased the attitude of the participant as the filled out the questionnaires.

Additionally, there may be more to the emotion that we did not find because we were not specifically looking for it (Smith & Lazarus, 1985). Future studies will take this into account by asked more general questions about emotion differentiation or using a wider variety of rating scales to measure responses. We are planning to run the open-ended questions of the Hope/Determination survey through Linguistic Inquiry and Word Count (LIWC) text analysis to assess the content participant memories and definitions, in order to further understand how people differentiate the two emotions.

**Hope and Challenge/Determination result from appraisals of the environment that require maintenance of motivation or positive outlook.** The two differ slightly in their focus: we use Challenge when voluntary action is necessary to overcome internal obstacles, while Hope encourages a broader mindset to reach a goal contingent on external factors. Both factors entail high motivational relevance, although Hope has higher motivational congruence than Determination as related to the level of psychological ownership that each emotion entails. Both emotions help us persevere to achieve success on a daily basis, and are part of the building blocks of emotion that form human personality.

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Appendix A

Hope/Determination Survey

Instructions: In the next two parts of this survey you'll be asked to recall, describe, and answer questions about two different experiences that you had in the past. For each experience in turn, you will be asked to recall a situation of a particular type, to remember the experience as vividly as you can, and then answer some questions about that experience. Read through the instructions that follow to see what type of experience you should recall.

For this experience, please try to recall a past experience in which you felt

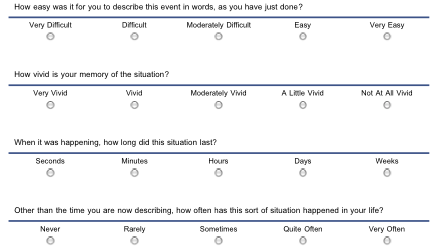
***hopeful/determined*** about achieving a goal.

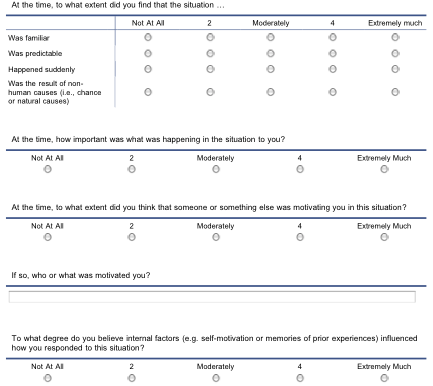
Please concentrate on a single incident or event. If more than one comes to mind, select the one that you remember best. If this particular incident is one that extended over several different episodes, focus your attention on the single episode you remember best. Finally, incidents sometimes have several aspects or parts to them. For example, having car trouble could mean unexpected expenses, being late to an appointment, extra demands on your time, and so on. If the incident you select has more than one aspect, focus your attention, as much as possible, on the single aspect you think is most central or important to the incident, and your feelings of ***hope***. Then answer the questions that follow with respect to this aspect.

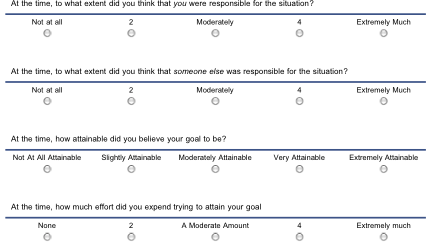
Try and remember as vividly as you can what this past incident was like. Think back and re-experience your thoughts and feelings during the original incident. When you are ready, and have recalled this situation to your mind as completely and as vividly as you can, answer the questions that follow on the next few pages. Please answer these questions as accurately as you can by indicating the best response to every question.

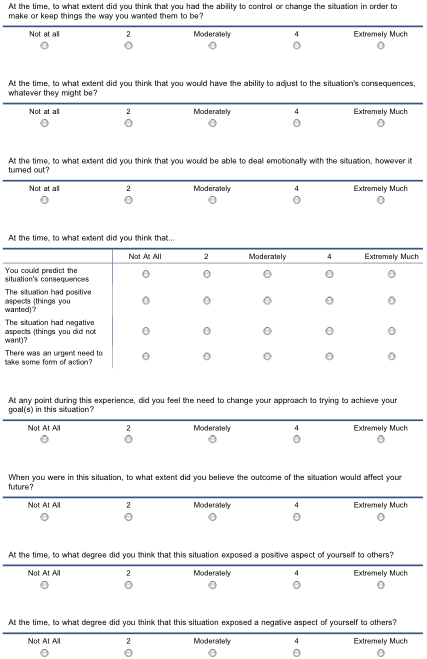
First, as you remember the experience, we would like for you to answer a few questions to help you describe this experience in your own words. Then, following these open-ended questions, you will be asked a series of more specific questions about your thoughts and feelings during the experience.

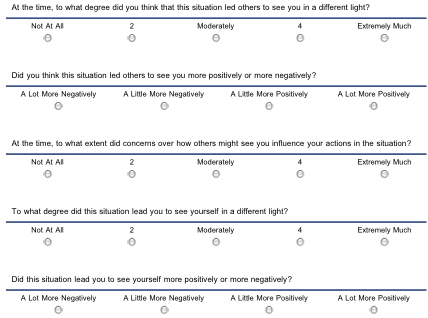
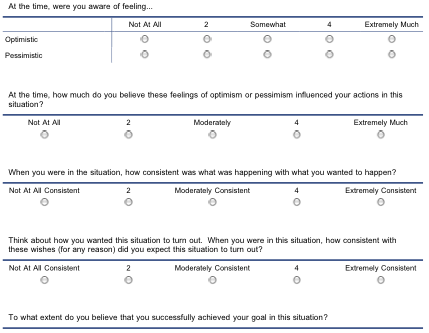
1. Please describe what happened during this experience, in as much detail as you can remember. Please try to write several paragraphs --about a page's worth. Don't worry about filling up the text box, you can type in as much text as you want.
2. Were there other people involved in this situation? If so, how were they involved?
3. Why did you feel **hopeful** in this situation?

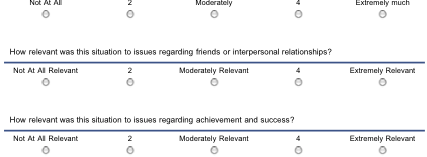


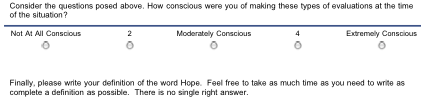












Appendix B:

Differentiation of Positive Emotional Experience Scale

**Awe Vignette:**

You are walking through thick woods. It was raining earlier, but the rain stopped a short time ago, and the sun is now shining. All of a sudden, you come to a clearing near the top of the hill, and enter a beautiful meadow filled with wildflowers and butterflies. A clear stream is running through the meadow, and there is a rainbow in the sky. Off in the distance you can see some snow-capped peaks from a nearby mountain range.

**Challenge Vignette:**

You have been spending a fair bit of time trying to solve a difficult problem that is part of an important project you have been working on. So far you have been unable to solve the problem, but you believe that a solution is possible and you know that if you keep at it, you will be able to solve the problem and make the project a success.

**Contentment Vignette**

After working very hard for several weeks, you are finally able to take some time off. Right now you are relaxing on the beach. There is a nice breeze, you have a drink, and you are relishing the knowledge that there’s nothing at all you need to be doing right now.

**Gratitude Vignette**

You are walking around in a strange city, and suddenly realize that you are lost. As you are standing at a street corner, intensely studying your map to try to figure out where you are, someone comes up to you and asks you in a friendly way where you are trying to go. After you tell this person, s/he says that s/he is headed that way and suggests you go together. Within a few minutes this person has taken you to your destination, having pointed out some interesting sights along the way.

**Happiness Vignette**

You’re at a party on Saturday night in honor of your friend’s wedding anniversary. You’re with a group of close friends and family members, and the atmosphere is festive. You generally like special occasions like this when everyone comes together to have fun. Everyone, including you, is laughing and dancing, and having a great time.

**Hope Vignette**

Things in your life have been somewhat difficult lately, but you are optimistic about what lies ahead. You know that there are new opportunities available to help things get better, and they seem promising. You trust that things will be better soon. You are looking forward to good things to come and a bright future ahead. You are thinking about the positive change that can happen.

**Interest Vignette**

A public figure that you admire has come to town, and you have the opportunity to hear this person speak. You are out for the evening to attend the talk. It is on a topic you have wanted to know more about for a long time. You have settled into your chair. The speaker, who has just been introduced, is beginning the presentation.

**Pride Vignette**

You have been working very hard on a group project. The rest of your group members have been contributing, but you have gone the extra distance for the project. You know that the project wouldn’t be nearly as good as it is had you not worked so hard. Your group has just presented the project and it is extremely well received. As your group is receiving praise for an excellent job, a member of your group speaks up and indicates that the group owes its success to you; that you had really pulled the project together. The other members of the group start spontaneously applauding you and your efforts.

**Rating Scales for Each Vignette**

Below are several adjectives that describe different emotions or feelings. Please indicate the extent to which each adjective characterizes your feelings and emotions in the situation you are imagining yourself in.

interested/curious hopeful

proud happy

grateful awed

challenged/determined/motivated content/satisfied

Appendix C

Discrete Emotion Adjective List

Below are a number of clusters of adjectives that describe different emotions or feelings. Each group of adjectives is meant to get at a single basic feeling or emotion. Please indicate the extent to which each cluster of adjectives characterizes your feelings and emotions within the situation you just described, at the particular time you described. Please use the nine-point scale depicted below. Indicate your ratings by writing the appropriate number (1 to 9) in the space provided next to EACH cluster of adjectives.

1-----------2-----------3-----------4-----------5----------6-----------7-----------8-----------9

did not characterize characterized characterized

my feelings at all my feelings my feelings

somewhat extremely well

1. \_\_\_\_\_ surprised 10) \_\_\_\_\_ grateful

astonished thankful

appreciative

1. \_\_\_\_\_ guilty

culpable 11) \_\_\_\_\_ interested

engaged

1. \_\_\_\_\_ defeated inspired

resigned

beaten 12) \_\_\_\_\_ mad

angry

1. \_\_\_\_\_ relieved irate

unburdened

13)\_\_\_\_\_ hopeful

1. \_\_\_\_\_ tranquil optimistic

calm

serene 14) \_\_\_\_\_ bored

detached

1. \_\_\_\_\_ frustrated uninterested

thwarted

exasperated 15) \_\_\_\_\_ nervous

anxious

1. \_\_\_\_\_ regretful apprehensive

remorseful

sorry 16) \_\_\_\_\_overwhelmed

overloaded

1. \_\_\_\_\_ determined rattled

challenged

motivated 17) \_\_\_\_\_ proud

triumphant

1. \_\_\_\_\_ shy

timid 18) \_\_\_\_\_ afraid

bashful frightened

1-----------2-----------3-----------4-----------5----------6-----------7-----------8-----------9

did not characterize characterized characterized

my feelings at all my feelings my feelings

somewhat extremely well

19) \_\_\_\_\_ sad 24) \_\_\_\_\_ joyful

downhearted happy

blue glad

20) \_\_\_\_\_ ashamed 25) \_\_\_\_\_ eager

disgraced enthused

excited

21) \_\_\_\_\_ disgusted

repulsed 26) \_\_\_\_\_ embarrassed

revolted humbled

22) \_\_\_\_\_ irritated 27) \_\_\_\_\_ disappointed

annoyed let down

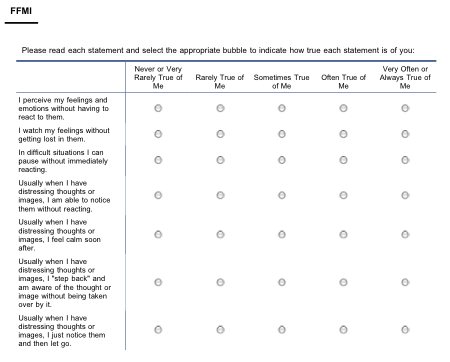
23) \_\_\_\_\_ awed 28) \_\_\_\_\_ content

wondrous satisfied

amazed

Appendix D

Five Facet Mindfulness Inventory: Non-reactivity Scale



Appendix E

Toronto-Alexithymia Scale-12 & Life Orientation Test

